

# 3200 Series Modular Belt Straight Conveyors

Installation, Maintenance and Parts Manual



Flat Modular Belt Conveyor

Modular Belt Z-Frame Conveyor

# Available with: SmartSlot

DORNER MFG. CORP. P.O. Box 20 • 975 Cottonwood Ave. Hartland, WI 53029-0020 USA INSIDE THE USA TEL: 1-800-397-8664 FAX: 1-800-369-2440 OUTSIDE THE USA TEL: 262-367-7600 FAX: 262-367-5827

For other service manuals visit our website at: www.dorner.com/service\_manuals.asp

# **Table of Contents**

Introduction	
Warnings – General Safety	
Product Description	
Specifications 4	
3200 Series Flat Modular Belt Straight Conveyors 4	
3200 Series Cleated Modular Belt Straight Conveyors 4	
3200 Series Modular Belt Z-Frame Conveyors 4	
Conveyor Supports 5	
Specifications	
Installation	
Required Tools	
Recommended Installation Sequence	
Conveyor Sections Longer than 12 ft (3658 mm)	
Connecting Components 6	
Z-Frame Conveyors 7	
Upper Knuckle 7	
Lower knuckle	
All Conveyors	
Mounting Brackets for T-Slot Conveyors	
Brackets for SmartSlot Conveyors	
Belt Installation	
Proper Methods of Attaching Guiding to Side Rails	
(SmartSlot Frames Only) 11	
Self-Drilling Screws	
Pre-Drill for Standard Screws 12	
Guiding (SmartSlot Frames Only) 13	
Guiding (T-Slot Frames Only)	
Fully Adjustable Guiding 14	
Drive Package Installation 14	
Preventive Maintenance and Adjustment 15	
Required Tools	
Checklist	
Lubrication	
Maintaining the Conveyor Belt 15	
Troubleshooting	
Conveyor Belt Replacement 15	
Replacing a Section of Belt 15	
Replacing the Entire Belt 16	
Conveyor Belt Tensioning 16	
Wear Strips 16	
Removal of Top Mid Clip-On Wear Strips 16	
Removal of Outer Top Wear Strips 17	
Removal of J-Leg Wear Strips 17	

Removal of Tenting Wear Strips	17
Wear Strip Installation	18
Tail Component Removal	18
A - Drive Tail Component Removal	18
B - Nose Bar Drive Tail Component Removal	21
C - Idler Tail Component Removal	24
D - Nose Bar Idler Tail Component Removal	26
Maintenance of Knuckles	28
Guides	28
Lower Knuckle	28
Upper Knuckle	29
Weighted Take-Up	32
Service Parts	34
Drive End Tail Assembly	
Nose Bar Drive End Tail Assembly	36
Idler Tail Assembly	38
Nose Bar Idler Tail Assembly	40
Weighted Take-Up Assembly	42
Upper Knuckle	44
Lower Knuckle	
Frame Assembly	47
Connecting Assembly	48
1.5" (38 mm) High Sides	49
3" (76 mm) High Sides	50
Fully Adjustable Guiding	51
Tool-Less Fully Adjustable Guiding	52
Adjustable Outboard Guiding	53
4.00" (102 mm) High Side Profiles	54
6.00" (152 mm) High Side Profiles	55
1.00" (25 mm) Cleated High Side Profiles	56
3.00" (76 mm) Cleated High Side Profiles	57
4.00" (102 mm) Cleated High Side Profiles	58
<ul><li>4.00" (102 mm) Cleated High Side Profiles</li><li>6.00" (152 mm) Cleated High Side Profiles</li></ul>	59
Flat Belt Returns	60
Flat Belt Mounting Brackets for T-Slot Conveyors	
Flat Belt Mounting Brackets for SmartSlot Conveyors .	
Cleated Belt Mounting Brackets for T-Slot Conveyors.	62
Cleated Belt Mounting Brackets	
for SmartSlot Conveyors	62
Ordering a Replacement Chain	63
Flat Belt Chain Repair Kit	63
Cleated Belt Chain Repair Kit	63
Return Policy	64

# Introduction

### **CAUTION**

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.

The Dorner Limited Warranty applies.

Dorner 3200 Series conveyors have patents pending.

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.

#### Typical Components

- 1 Conveyor
- 2 Gearmotor
- 3 Belt (Flat Belt Shown)
- 4 Support Stands
- 5 Drive End
- 6 Idler End





# **Specifications**

### 3200 Series Flat Modular Belt Straight Conveyors



### 3200 Series Cleated Modular Belt Straight Conveyors



# 3200 Series Modular Belt Z-Frame Conveyors



# **Specifications**

### **Conveyor Supports**

#### Maximum Distances:

- 1 = Support Stand on Idler End = 3 ft (914 mm)
- 2 = Between Support Stands = 12 ft (3658 mm)\*\*
- 3 = Support Stand on Drive End = 3 ft (914 mm)
- \*\* For conveyors longer than 12 ft (3658 mm), install stand mount kit at frame joint.
- \* LPZ stand positions may vary, please consult factory.



Figure 2

## **Specifications**

Flat Belt Conveyor Width Reference (WW)	06 - 48 in 02 increments
Flat Belt Conveyor Belt Width	6" (152 mm) - 48" (1219 mm) in 2" (51 mm) increments
Cleated Belt Conveyor Width Reference (WW)	08 - 24 in 02 increments
Cleated Belt Conveyor Belt Width	8" (203 mm) - 24" (610 mm) in 2" (51 mm) increments
LPZ Conveyor Width Reference (WW)	06 - 24 in 02 increments
LPZ Conveyor Belt Width	6" (152 mm) - 24" (610 mm) in 2" (51 mm) increments
Maximum Conveyor Load	20 lbs. / ft <sup>2</sup> (97 kg/ $m^2$ ) with a maximum of 1000 lbs. (454 kg)
Belt Travel	12" (305 mm) per revolution of pulley
Maximum Belt Speed	250 ft/minute (76 m/minute)
Conveyor Length Reference (LLL)	036 - 999 in 001 increments
Conveyor Length	36" (914 mm) - 999" (25.4 m) in 1" (25 mm) increments
LPZ Section Length ( <u>LLL</u> )	024 - 288 in 001 increments
LPZ Section Length	24" (610 mm) - 288" (7315 mm) in 1" (25 mm) increments

### **IMPORTANT**

Maximum conveyor loads are based on:

- Non-accumulating product
- Product moving toward gearmotor
- Conveyor being mounted horizontally
- Conveyor being located in a dry environment
- Conveyor equipped with standard belt only



Conveyor MUST be mounted straight, flat and level within confines of conveyor. Use a level (Figure 3, item 1) during setup.



Figure 3

### **Required Tools**

- Level
- Torque wrench
- 4 mm hex wrench
- 5 mm hex wrench

# Recommended Installation Sequence

- Assemble the conveyor (if required). Refer to "Conveyor Sections Longer than 12 ft (3658 mm)" on page 6 and "All Conveyors" on page 8.
- 2. Attach the stands. Refer to "All Conveyors" on page 8.
- 3. Install the belt. Refer to "Brackets for SmartSlot Conveyors" on page 9.
- 4. Install the guiding. Refer to "Guiding (SmartSlot Frames Only)" on page 13 or Refer to "Guiding (T-Slot Frames Only)" on page 13.
- 5. Install the gearmotor. Refer to "Drive Package Installation" on page 14.

# Conveyor Sections Longer than 12 ft (3658 mm)

#### **Connecting Components**

Typical Connecting Components (Figure 4)



Figure 4

1 Clamp Plate	

- 2 Cover Plate
- 3 Conveyor frames
- 4 Inner Channel
- 5 Outer Channel
- 6 Button Head Screw, M10-1.50 x 16 mm
- 1. Locate and arrange conveyor sections by section labels (Figure 5, item 1).



Figure 5

- Loosely assembly each side clamp plate (Figure 4, item 1) and cover plate (Figure 4, item 2) with two button head screws (Figure 4, item 6).
- Line up conveyor sections, and install clamp plates (Figure 4, item 1) into inner channel (Figure 4, item 4) of conveyor section and cover plate (Figure 4, item 2) into outer channel (Figure 4, item 4). Secure with two button head screws (Figure 4, item 3) on each side. Tighten screws to 84 in-lb (9 Nm).

### **Z-Frame Conveyors**

### NOTE

Be sure all frame sections are properly supported during Z-Frame assembly.

#### **Upper Knuckle**

 Attach upper frame (Figure 6, item 1) to upper knuckle (Figure 6, item 2), taking care to install both lower wearstrips (Figure 6, item 3) onto frame channels (Figure 6, item 4).



2. Tighten two socket head screws (Figure 7, item 1). Repeat on other side.



Figure 7

3. Tighten all screws to 60 in-lb (7 Nm).

#### Lower knuckle

 Attach lower frame (Figure 8, item 1) to lower knuckle (Figure 8, item 2) taking care to install both lower wearstrips (Figure 8, item 3) onto frame channels (Figure 8, item 4).



Figure 8

2. Tighten two socket head screws (Figure 9, item 1). Repeat on other side.



3. Tighten all screws to 60 in-lb (7 Nm).

# All Conveyors

### Mounting Brackets for T-Slot Conveyors

Locate brackets. Exploded views shown in (Figure 10) and (Figure 11).



T-Slot Mounting Brackets for Cleated Belt Conveyors

#### Figure 11

- Loosen screws (Figure 10, item 1) or (Figure 11, item 1) from nuts (Item 2), and leave on brackets (Item 3).
- Remove screws (Figure 10, item 4) or (Figure 11, item 4) and washers (Item 5) from T-bars (Item 6). Leave T-bars (Item 6) in bracket slots (Item 7).

# NOTE

Mounting brackets for flat belt conveyors shown below.

 Insert nut (Figure 12, item 1) into conveyor side slots (Figure 12, item 2). Fasten brackets (Figure 12, item 3) to conveyor with mounting screws (Figure 12, item 4).



Figure 12

- 4. Fasten brackets to support stand bracket (Figure 12, item 5) with mounting screws (Figure 12, item 6), washers (Figure 12, item 7) onto T-bar (Figure 12, item 8).
- Tighten screws (Figure 12, item 4 & 6) to 60 in-lb (7 Nm).

### **Brackets for SmartSlot Conveyors**

Locate brackets. Exploded views shown in (Figure 13) and (Figure 14).



#### SmartSlot Mounting Brackets for Cleated Belt Conveyors

Figure 14

 Remove screws (Figure 13, item 1) or (Figure 14, item 1), washers (Item 2), nuts (Item 3) a from brackets.

# IMPORTANT

For proper methods of attachment to conveyor side rail see page 11.

2. Locate and retain self-drilling screws (Figure 13, item 4) or (Figure 14, item 4).

### NOTE

For maximum support distance see page 5.

 Measure an equal distance from end of head plate (on both sides of conveyor) and mark placement of mounting brackets (Figure 15, item 1). Fasten mounting brackets to conveyor with mounting screws (Figure 15, item 2) following proper methods of attachment instructions on page 11.

### NOTE

Mounting brackets for flat belt conveyors shown.



Figure 15

 Fasten brackets (Figure 16, item 1) to support stand (Figure 16, item 2) with mounting screws (Figure 16, item 3), washers (Figure 16, item 4) and nuts (Figure 16, item 5).



Figure 16

5. Tighten screws (Figure 16, item 3) to 60 in-lb (7 Nm).

# **Belt Installation**

Typical Belt Components (Figure 17).

- 1 Chain Belt
- 2 Belt Rod



Figure 17

- 1. Position the belt on the conveyor frame.
- Standard Drive Tail: Wrap the belt around the drive end of the conveyor, making sure the sprocket teeth have engaged the belt, with concave teeth (Figure 18, item 1) mating with rounded section (Figure 18, item 2) of belt.



Standard Drive Tail Figure 18

3. Nose Bar Drive Tail: Wrap belt around bottom of drive tail around both return rollers (Figure 19, item 1) and (Figure 19, item 2) as shown.



Nose Bar Drive Tail Figure 19

4. Nose Bar Idler Tail: Wrap belt around idler tail (Figure 20).



5. Weighted Take-Up: Wrap belt (Figure 21, item 1) over pucks (Figure 21, item 2) and around bottom of weighted shaft (Figure 21, item 3).



 Weighted Take-Up: Continue wrapping belt (Figure 22, item 1) over top of pucks (Figure 22, item 2) and on top of J-Leg wear strips (Figure 22, item 3).



### NOTE

For conveyors with weighted take-up units, push up on the weighted shaft to remove belt tension.

7. Bring the ends of the belt together (Figure 23).





8. Insert the belt rod (Figure 24, item 1).



Figure 24

- 9. Push the belt rod in as far as possible.
- 10. Lightly tap the head of the rod with a hammer until it snaps into position.

### Proper Methods of Attaching Guiding to Side Rails (SmartSlot Frames Only)



The 3200 SmartSlot side rail is designed for self-drilling attachment of brackets and accessories. This can be done in two methods: self-drilling screws or pre-drill for standard screws.

### Self-Drilling Screws

All Dorner accessories are provided with 1/4-20 self-drilling screws.

1. Locate guide (Figure 25, item 1) and retaining clip (Figure 25, item 2) and hold to side rail. Hole should line up with notch (Figure 25, item 3) in side rail.



Figure 25

2. With a cordless drill or equivalent install self-drilling screw (Figure 25, item 4). Use high speed setting to drill through side wall. Once the tap portion is started switch drill power to a lower speed. Do not fully tighten with drill.

3. Hand tighten the screws to secure (Figure 26). Recommended torque is 150 in-lb (17 Nm).





### **Pre-Drill for Standard Screws**

The 3200 SmartSlot side rail will also accept standard screws. M6-1.0 and 1/4-20 are acceptable. Strength grade 8 is recommended.

 Locate guide (Figure 27, item 1) and retaining clip (Figure 27, item 2) and hold to side rail. Hole should line up with notch (Figure 27, item 3) in side rail. Mark the hole locations with a center punch (Figure 27, item 4) and remove the bracket.



Figure 27

2. Drill the hole locations (Figure 28, item 1) with a 3/16" drill bit (Figure 28, item 2).



Figure 28

3. Position and hold bracket (Figure 29, item 1) to side rail. With a standard M6-1.0 or 1/4-20 screw, install screws (Figure 29, item 2) with cordless drill or equivalent. Do not fully tighten with drill.



Figure 29

4. Hand tighten the screws to secure (Figure 30). Recommended torque is 150 in-lb (17 Nm).



Figure 30

### Guiding (SmartSlot Frames Only)

### WARNING

Installing self-drilling screws into the SmartSlot side rail requires substantial force.

Failure to properly support the conveyor while installing self-drilling screws may cause the operator or conveyor to slip, causing severe injury.

SUPPORT CONVEYOR FRAMES WHILE INSTALLING SELF-DRILLING SCREWS.

Due to the SmartSlot construction ALL guiding must be located and installed by the end user. Take care in locating retaining clips prior to final installation.

 Lay out retaining clip (Figure 31, item 1) locations. The end clips should be no greater than 12" from end of the conveyor. Hole should line up with notch (Figure 31, item 2) in side rail.



Figure 31

 Hold guide (Figure 31, item 3) and retaining clip (Figure 31, item 1) to conveyor side rail. Install selfdrilling screws (Figure 31, item 4) following the "Proper Methods of Attaching Guiding to Side Rails (SmartSlot Frames Only)" on page 11 procedure.

### Guiding (T-Slot Frames Only)

1. Install guide block (Figure 32, item 1) with drop-in tee bar (Figure 32, item 2) in conveyor slot



Figure 32

- 2. Tighten socket head screw (Figure 32, item 3) to secure position.
- Install guide (Figure 33, item 1) onto top slot in guide block (Figure 33, item 2) and secure with set screw (Figure 33, item 3).



Figure 33

# Fully Adjustable Guiding

Fully adjustable guiding may be shipped from the factory in various stages of assembly. If necessary, assemble the components in the manner shown in (Figure 34).



Figure 34

 Insert drop-in tee bars (Figure 35, item 1) into the conveyors t-slot (Figure 35, item 2), if applicable, and attach fully adjustable brackets (Figure 35, item 3). Evenly space along length of conveyor.



Figure 35

# NOTE

For SmartSlot conveyors attach with selfdrilling screws as shown in Proper Methods for Attaching Guiding to Side Rails (SmartSlot Frames Only) section on page 11. 2. Install extruded guide (Figure 36, item 1) onto end of mounting guide shaft (Figure 36, item 2).



Figure 36

3. Install guiding (Figure 36, item 3) onto extruded guide (Figure 36, item 1).

# **Drive Package Installation**

### NOTE

For detailed assembly instructions, refer to the appropriate Drive Packages Installation, Maintenance and Parts Manual.

1. Attach the motor (Figure 37, item 1) to the gear reducer (Figure 37, item 2). (End Drive shown below.)



Figure 37

851-765 Rev. C

## **Required Tools**

- 3 mm hex wrench
- 4 mm hex wrench
- 5 mm hex wrench
- 6 mm hex wrench
- 8 mm hex wrench
- 19 mm combination wrench
- Adjustable wrench
- T20 Torx
- Punch and hammer (to remove belt rod)

### Checklist

- Keep service parts on hand. Refer to the "Service Parts" section starting on page 34 for recommendations.
- Replace any worn or damaged parts.

## Lubrication

No lubrication is required. Replace bearings if worn.

### Maintaining the Conveyor Belt

### Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear
- Skipping

Damage to belt links or rods, surface cuts and / or wear indicate:

- Sharp or heavy parts impacting belt
- · Jammed parts
- Accumulated dirt
- · Foreign material inside the conveyor
- Improperly positioned accessories

Skipping indicates:

- Excessive load on belt
- Worn spindle or impacted dirt on drive spindle

### **Conveyor Belt Replacement**





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

#### **Replacing a Section of Belt**

 Use a punch and hammer to push the belt rod (Figure 38, item 1) out by striking the rod end opposite the retaining head (Figure 38, item 2).



#### SEVERE HAZARD!

If conveyor belt is damaged or worn, replace belt section.



Figure 38

- 2. Remove the belt rods on both sides of the section of belt being replaced.
- 3. Replace old section of belt.



Do NOT reuse belt rods that are damaged or show signs of wear.

### **Replacing the Entire Belt**

 Use a punch and hammer to push the belt rod (Figure 39, item 1) out by striking the rod end opposite the retaining head (Figure 39, item 2).



Figure 39

- 2. Slide the old belt (Figure 39, item 3) off the conveyor frame.
- 3. Replace the old belt with a new one. Refer to "Brackets for SmartSlot Conveyors" on page 9.

#### 

Do NOT reuse belt rods that are damaged or show signs of wear.

# **Conveyor Belt Tensioning**



Belt should not be stretched during installation. A proper length of belt can be installed by interlocking the ends by hand without excess links.

- 1. If applicable, check weighted take-up unit to see if belt is at bottom of travel.
- 2. Remove one or more belt links to take up tension. Refer to "Replacing a Section of Belt" on page 15.

### Wear Strips

Replace the wear strips if they become worn. Typical Standard Wear Strips (Figure 40)

- 1 Wear Strips, Top Mid Clip-On
- 2 Wear Strips, Outer Top
- 3 Wear Strips, J-Leg
- 4 Wear Strips, Tenting



Figure 40

### Removal of Top Mid Clip-On Wear Strips

1. Remove belt. See "Conveyor Belt Replacement" on page 15.

### NOTE

The top clip-on wearstrips (Figure 41, item 1) have a screw (Figure 41, item 2) on end of wearstrip on idler end (Figure 41, item 3) of conveyor so wearstrips do not move too far toward drive end.

2. Remove top clip-on wear strips (Figure 41, item 1).



Figure 41

#### **Removal of Outer Top Wear Strips**

1. Using T20 torx tool, remove torx screws (Figure 42, item 1) and clamps (Figure 42, item 2) holding outer top wear strip (Figure 42, item 3) to frame.



Figure 42

2. Remove outer top wear strip (Figure 43, item 1) from frame assembly.



Figure 43

#### **Removal of J-Leg Wear Strips**

Slide J-leg wear strips (Figure 44, item 1) from lower 1. frame (Figure 44, item 2).



#### **Removal of Tenting Wear Strips**

- Remove drive tail. Refer to "Tail Component Removal" 1. on page 18.
- Slide tenting wear strips (Figure 45, item 1) from frame 2. assembly (Figure 45, item 2).



#### Wear Strip Installation

### NOTE

The top clip-on wearstrips (Figure 46, item 1) have a screw (Figure 46, item 2) on end of wearstrip on idler end (Figure 46, item 3) of conveyor so wearstrips do not move too far toward drive end.

1. Install top clip-on wear strips (Figure 46, item 1).



Figure 46

2. Slide tenting wear strips (Figure 47, item 1) into frame assembly (Figure 47, item 2) on discharge end of conveyor.



Install remaining components reverse of removal.

### **Tail Component Removal**



Remove conveyor belt to access spindle(s). See "Replacing the Entire Belt" on page 16. Remove the desired spindle following the corresponding instructions below:

- A Drive Tail Component Removal
- B Nose Bar Drive Tail Component Removal
- C Idler Tail Component Removal
- **D** Nose Bar Idler Tail Component Removal

#### A – Drive Tail Component Removal



Drive shaft keyway may be sharp. HANDLE WITH CARE.

- 1. Remove the gearmotor. For detailed instructions, refer to the appropriate drive package manual.
- 2. Loosen the two socket head screws (Figure 48, item 1). Repeat on opposite side.



Figure 48

3. Remove the drive tail assembly (Figure 49, item 1) from the frame (Figure 49, item 2).



Figure 49

4. Remove the two flat head screws (Figure 50, item 1) and cover (Figure 50, item 2).



Figure 50

5. Remove bearing stop plate (Figure 51, item 1).



Figure 51

6. Remove two socket head screws (Figure 52, item 1) from bearing housing (Figure 52, item 2).



Figure 52

7. Remove bearing housing (Figure 53, item 1) from crossmember (Figure 53, item 2).



Figure 53

8. Remove from drive backing plate (Figure 54, item 1).



Figure 54

9. Remove components on opposite side, as shown.



Figure 55

10. Remove gap filler plates (Figure 56, item 1) from crossmember (Figure 56, item 2).



Figure 56

### IMPORTANT

You must replace with a new bearing after it is removed from shaft.

 Using puller (Figure 57, item 1), as shown, remove bearing (Figure 57, item 2) from shaft assembly. Repeat on opposite side, if needed.



Figure 57

 Remove washer (Figure 58, item 1), as shown, making note of flange area (Figure 58, item 2) of washer. Repeat on opposite side, if needed.



Figure 58

13. Remove sprockets (Figure 59, item 1) off the drive spindle (Figure 59, item 2). Inspect and replace if worn.



Figure 59

- 14. Press new bearing onto drive pulley.
- 15. To assemble sprockets onto drive spindle, slide all sprockets spaced evenly onto drive spindle and alignment key.
- 16. Assemble components reverse of removal.

### NOTE

When reinstalling the drive spindle tail assembly, the drive tail assembly (*Figure 60, item 1*) should mate flush with the conveyor frame (*Figure 60, item 2*).



Figure 60

# B – Nose Bar Drive Tail Component Removal



- WITH CARE.
- 1. Remove the gearmotor. For detailed instructions, refer to the appropriate drive package manual.
- Loosen two socket head bolts (Figure 61, item 1) on each side of nose bar drive tail assembly (Figure 61, item 2).



Figure 61

3. Remove the drive tail assembly (Figure 62, item 1) from the frame (Figure 62, item 2).



Figure 62

 Remove the three socket head screws (Figure 63, item 1) from cover plate (Figure 63, item 2).



Figure 63

5. Remove cover assembly (Figure 64, item 1).



Figure 64

6. Remove bearing stop plate (Figure 65, item 1).



Figure 65

 Remove two socket head screws (Figure 66, item 1) holding nose bar spacer (Figure 66, item 3)and nose bar backing plate (Figure 66, item 2) from crossmember.



Figure 66

8. Remove bearing housing (Figure 67, item 1), nose bar spacer (Figure 67, item 2), and nose bar backing plate assembly (Figure 67, item 3) from crossmember.



Figure 67

9. Remove center spindle assembly (Figure 68, item 1).



Figure 68

10. Remove shaft assembly (Figure 68, item 2).

## IMPORTANT

You must replace with a new bearing after it is removed from shaft.

 Using puller (Figure 69, item 1), as shown, remove bearing (Figure 69, item 2) from shaft assembly. Repeat on opposite side, if needed.



Figure 69

12. Remove washer (Figure 70, item 1), as shown, making note of flange area (Figure 70, item 2) of washer. Repeat on opposite side, if needed.



#### Figure 70

 Slide entire sprocket assembly slightly outward, and remove the first sprocket (Figure 71, item 1) off the drive spindle (Figure 71, item 2) and alignment bar (Figure 71, item 3). Inspect and replace if worn.



Figure 71

14. Remove remaining sprockets (Figure 71, item 4) off the alignment bar as you slide entire assembly off the drive spindle.

- 15. To assemble sprockets onto drive spindle, slide one sprocket onto alignment bar and slide assembly onto drive spindle.
- 16. Install second sprocket and subsequent sprockets (Figure 71, item 4) one by one, while sliding entire assembly onto alignment bar (Figure 71, item 2) and spindle (Figure 71, item 3), making certain each sprocket is locked into retaining tab cut out (Figure 72, item 1) on alignment bar (Figure 72, item 2).



#### Figure 72

- 17. Press new bearing onto drive pulley.
- Remove socket head screw (Figure 73, item 1) holding return rollers (Figure 73, item 2) onto drive cover plate (Figure 73, item 3).



Figure 73

19. Remove two return rollers (Figure 74, item 1) and idler stub (Figure 74, item 2) from cover plate.



Figure 74

20. Remove nose bar spacer (Figure 75, item 1) from nose bar backing plate (Figure 75, item 2).



Figure 75

21. Remove socket head screw (Figure 76, item 1) holding return rollers (Figure 76, item 2) on nose bar backing plate (Figure 76, item 3).



Figure 76

22. Remove two return rollers and idler stub from nose bar backing plate.

23. Remove spindle retainer (Figure 77, item 1), and each spindle assembly (Figure 77, item 2). from hex shaft (Figure 77, item 3).



Figure 77

- 24. Repeat for remaining spindle retainers and each spindle assembly.
- 25. Remove gap filler plates (Figure 78, item 1) from crossmember (Figure 78, item 2).



Figure 78

26. Assemble components reverse of removal.

### NOTE

When reinstalling the nose bar drive spindle tail assembly, the drive tail assembly (Figure 79, item 1) should mate flush with the conveyor frame (Figure 79, item 2).



Figure 79

#### **C** – Idler Tail Component Removal

- 1. Be sure the conveyor is supported.
- 2. Loosen the two socket head screws (Figure 80, item 1). Repeat on opposite side.



Figure 80

3. Remove the idler tail assembly (Figure 81, item 1) from the frame (Figure 81, item 2).



Figure 81

4. Remove the two flat head screws (Figure 82, item 1) and cover (Figure 82, item 2).



Figure 82

5. Remove two socket head screws (Figure 83, item 1) and filler plate (Figure 83, item 2).



Figure 83

 Remove filler plate (Figure 84, item 1) and idler backing plate (Figure 84, item 2) from crossmember (Figure 84, item 3) and roller assembly (Figure 84, item 4).



Figure 84

7. Use wrenches to remove both bolts (Figure 85, item 1) from each side of roller assembly.



Figure 85

8. Remove idler pucks (Figure 86, item 1) and tube spacers (Figure 86, item 2), as needed, from each side of assembly.



Figure 86

9. Remove gap filler plates (Figure 87, item 1) from crossmember (Figure 87, item 2).



Figure 87

 Install components reverse of removal, making sure idler pucks (Figure 88, item 1) and gap filler plates (Figure 88, item 2) are evenly spaced on assembly.



Figure 88

11. Assemble components reverse of removal.

### NOTE

When reinstalling the idler spindle assembly, the idler tail assembly (Figure 89, item 1) should mate flush with the conveyor frame (Figure 89, item 2).



Figure 89

# D – Nose Bar Idler Tail Component Removal

- 1. Be sure the conveyor is supported.
- 2. Loosen the two socket head screws (Figure 90, item 1). Repeat on opposite side.



Figure 90

3. Remove idler tail assembly (Figure 91, item 1).



Figure 91

4. Remove two flat head screws (Figure 92, item 1) and cover plate (Figure 92, item 2). Repeat procedure on opposite side.



Figure 92

5. Remove two low head cap screws (Figure 93, item 1) and nose bar spacer (Figure 93, item 2). Repeat procedure on opposite side. Check nose bar spacer on each side for wear. If worn, replace.



Figure 93

6. Remove backing plate assembly (Figure 94, item 1) from center spindle assembly (Figure 94, item 2) and half round assembly (Figure 94, item 3).



Figure 94

 Remove spindle assembly (Figure 95, item 1) from opposite side backing plate assembly (Figure 95, item 2).



Figure 95

8. Remove spindle retainer (Figure 96, item 1), and spindle assembly (Figure 96, item 2). from hex shaft (Figure 96, item 3).



Figure 96

- 9. Repeat for remaining spindle retainers and each spindle assembly.
- Remove nose bar half round shaft (Figure 97, item 1) and cover (Figure 97, item 2) from opposite side backing plate assembly (Figure 97, item 3).



Figure 97

11. Remove gap filler plates (Figure 98, item 1) from crossmember (Figure 98, item 2).



Figure 98

12. Install components reverse of removal, making sure gap filler plates (Figure 99, item 1) are evenly spaced on assembly.



Figure 99

13. Install nose bar idler spindle assembly onto frame.

### NOTE

When reinstalling the idler spindle assembly, the idler tail assembly (Figure 100, item 1) should mate flush with the conveyor frame (Figure 100, item 2).



Figure 100

### Maintenance of Knuckles

### NOTE

Be sure all frame sections are properly supported.

#### Guides

 Loosen set screw (Figure 101, item 1) on guide block (Figure 101, item 2) and remove guide (Figure 101, item 3). Repeat on opposite side.



T-Slot Frame Shown Figure 101

### Lower Knuckle

1. Remove two socket head screws (Figure 102, item 1) and guide plate (Figure 102, item 2) (if applicable).



Figure 102

2. Remove wear bar (Figure 103, item 1).



*Figure 103* 3. Remove lower wear strip (Figure 104, item 1).



Figure 104

#### **Upper Knuckle**

1. Remove two socket head screws (Figure 105, item 1) and guide plate (Figure 105, item 2) (if applicable).



Figure 105

3200 Series Modular Belt Straight Conveyors

2. Remove wear bar (Figure 106, item 1).



Figure 106

- 3. Remove belt. See "Conveyor Belt Replacement" on page 15.
- 4. Remove two socket head screws (Figure 107, item 1). Repeat on other side.



Figure 107

5. Remove upper frame (Figure 108, item 1) from upper knuckle (Figure 108, item 2) and off of wearstrips (Figure 108, item 3).



6. Remove two socket head screws (Figure 109, item 1) and remove cover plate (Figure 109, item 1) from knuckle assembly.



Figure 109

 Remove cover plate (Figure 110, item 1), along with two socket head screws and spacer block (Figure 110, item 2). Repeat on other side.



Figure 110

8. Loosen two socket head screws (Figure 111, item 1), holding upper knuckle to frame. Repeat on other side.



Figure 111

9. Remove upper knuckle assembly (Figure 112, item 1), from frame (Figure 112, item 2).





10. Remove four socket head screws (Figure 113, item 1) from upper knuckle assembly.



Figure 113

11. Remove backing plate (Figure 114, item 1), from both cross supports (Figure 114, item 2) and roller assembly (Figure 114, item 3).



Figure 114

12. Remove roller assembly (Figure 115, item 1), from opposite end backing plate (Figure 115, item 2).



Figure 115

13. Use wrenches to remove both bolts (Figure 116, item 1) from each side of roller assembly.



Figure 116

14. Remove idler pucks (Figure 117, item 1) and tube spacers (Figure 117, item 2), as needed, from each side of assembly.



Figure 117

- 15. Replace parts as necessary.
- 16. Install parts reverse of removal.
- 17. To install each frame portion on lower and upper part of knuckles, attach upper frame (Figure 118, item 1) to upper knuckle (Figure 118, item 2), taking care to install both lower wearstrips (Figure 118, item 3) onto frame channel (Figure 118, item 4).



Figure 118

# Weighted Take-Up

1. Remove two socket head screws (Figure 119, item 1) securing side plate (Figure 119, item 2) to weighted take-up plate from one side of conveyor.



Figure 119

## IMPORTANT

Avoid injury. Assembly is heavy and may fall when remaining hardware is removed.

 Remove two socket head screws (Figure 120, item 1) holding weighted take-up assembly (Figure 120, item 2) to conveyor frame (Figure 120, item 3).



Figure 120

3. While holding belt from underneath, remove weighted take-up plate assembly (Figure 121, item 1) from weighted pulley assembly (Figure 121, item 2).



Figure 121

4. Remove weighted pulley assembly (Figure 122, item 1) from belt (Figure 122, item 2).



Figure 122

5. Use wrenches to remove bolt (Figure 123, item 1) from each side of roller assembly.



Figure 123

6. Remove tube spacer (Figure 124, item 1), as needed, from each side of assembly.



Figure 124

7. Remove idler puck (Figure 125, item 1) and weight (Figure 125, item 2) off of shaft, as needed, from belt.



Figure 125

8. Remove socket head screw (Figure 126, item 1) on weighted take-up plate assembly (Figure 126, item 2).



Figure 126

9. On opposite side of socket head screw just removed, remove idler puck (Figure 127, item 1), idler stub (Figure 127, item 1), and spacer (Figure 127, item 2).



Figure 127

10. Install components reverse of removal.

# **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.

## **Drive End Tail Assembly**



# **Service Parts**

Item	Part Number	Description
1	802-126	Bearing
2	807-1444	Sprocket (for 1" pitch belt)
	807-1443	Sprocket (for .5" pitch belt)
3	350365	Bearing Stop Plate
4	350372	Nut Clamp Plate
5	350394	Washer
6	350459- <u>WW</u>	Crossmember
7	350462	Drive Backing Plate
8	350463	Gap Filler Plate
9	350464- <u>WW</u>	Spindle
	350554- <u>WW</u>	Dual Shaft Spindle
10	350466	Bearing Housing - Left hand
11	350467	Bearing Housing - Right hand
12	350661	Drive Plate - Right Hand
13	350662	Drive Plate - Left Hand

ltem	Part Number	Description
14	350768- <u>WW</u>	Sprocket Alignment Key
		(for 1" pitch belt)
	350438- <u>WW</u>	Sprocket Alignment Key
		(for .5" pitch belt)
15	911016M	Button Head Screw, M10-1.50 x
		16mm
16	950616M	Low Head Cap Screw,
		M6-1.00 x 16 mm
17	930516M	Flat Head Screw, M580 x 16 mm
18	351003	Spacer Plate
19	32CSK- <u>WW</u>	Sprocket Kit
		(Includes Items 1 and 2)
20	32CSAK- <u>WW</u>	Spindle Assembly Kit (Includes
•		items 1, 2, 5, 9, and 14)
	32CDSSAK- <u>WW</u>	Dual Shaft Spindle Assembly Kit
		(Includes items 1, 2, 5, 9, and 14)
<u>WW</u> = Conveyor width reference: 06 – 48 in 02 increments		

Quantity Chart		
Conveyor Width	Item #2 Sprocket	Item #8 Gap Filler Plate
6"	2	2
8"	2	2
10"	3	3
12"	3	3
14"	4	3
16"	4	4
18"	5	4
20"	5	4
22"	6	4
24"	6	5
26"	7	5
28"	7	5
30"	8	5
32"	8	6
34"	9	6
36"	9	6
38"	9	6
40"	9	6
42"	9	7
44"	9	7
46"	9	7
48"	9	7

# **Service Parts**

## Nose Bar Drive End Tail Assembly



Item	Part Number	Description
1	802-126	Ball Bearing
2	807-1443	Sprocket
3	350365	Bearing Stop Plate
4	350372	Nut Clamp Plate
5	350389- <u>WW</u>	Hex Shaft
6	350390	Spindle Retainer
7	350390-LEFT	Spindle Retainer - Left Hand
8	350390-RIGHT	Spindle Retainer - Right Hand
9	350391	Drive Cover Plate - Left Hand
10	350393	Bearing Housing
•		
11	350394	Washer
12	350396	Nose Bar Spacer
•		

ltem	Part Number	Description
13	350397	Nose Bar Backing Plate
14	350400	Gap Filler Plate
15	350401	Return Roller
<b>•</b>		
16	350422	Drive Cover Plate - Right Hand
17	350423	Nose Bar Spacer
18	See Spindle Part	Spindle Assembly
	Number Chart	
19	350432- <u>WW</u> C	Center Spindle Assembly
		(for widths 8" - 36")
20	350436- <u>WW</u>	Crossmember
21	350437	Idler Stub (for Conveyors 6" - 24"
		wide)

3200 Series Modular Belt Straight Conveyors
Item	Part Number	Description	
22	350438- <u>WW</u>	Sprocket Key	
23	350464- <u>WW</u>	Drive Spindle	
24	911016M	Button Head Screw,	
		M10-1.50 x 16 mm	
25	950616M	Low Head Cap Screw,	
		M6-1.00 x 16 mm	
26	930514M	Flat Head Screw, M580 x 14 mm	
27	930614M	Flat Head Screw, M6-1.00 x 14 mm	
28	351003	Spacer Plate	
29	350461- <u>WW</u>	Spacer Tube (for Conveyors wider	
		than 24" only)	
30	532379	Bushing (for Conveyors wider than	
		24" only)	
31	351075	Support Bracket (for Conveyors	
		wider than 24" only)	
32	990603M	Square Nut (for Conveyors wider	
		than 24" only)	
33	351076- <u>WW</u>	Return Roller Shaft - In	
		(for Conveyors wider than 24" only)	
34	351077- <u>WW</u>	Return Roller Shaft - Out	
		(for Conveyors wider than 24" only)	
35	32CNSK- <u>WW</u>	Nose Bar Sprocket Kit (Includes	
		items 1 and 2)	
36	32CNSAK- <u>WW</u>	Nose Bar Spindle Assembly Kit	
		(Includes items 1, 2, 6, 7, 8, 11, 18,	
		19, 22, and 23)	
<u>WW</u> =	Conveyor width refe	erence: 06 – 48 in 02 increments	

	ly Part Number Chart	
Conveyor Width Item #2 Sprocket		
6"	350432-06	
8"	350432-01	
10"	350432-01	
12"	350432-01	
14"	350432-04	
16"	350432-04	
18"	350432-04	
20"	350432-06	
22"	350432-06	
24"	350432-04	
26"	350432-04	
28"	350432-04	
30"	350432-04	
32"	350432-04	
34"	350432-06	
36"	350432-06	
38"	350432-06	
40"	350432-06	
42"	350432-08	
44"	350432-08	
46"	350432-08	
48"	350432-08	

	Quantity Chart					
Conveyor	Item #2	Item # 6 Spindle	ltem # 14	Item # 18 Spindle		
Width	Sprocket	Retainer	Gap Filler Plate	Assembly		
6"	2	0	2	0		
8"	2	2	3	2		
10"	3	2	3	2		
12"	3	2	3	2		
14"	3	2	3	2		
16"	3	2	3	2		
18"	5	2	3	2		
20"	5	2	3	2		
22"	5	2	3	2		
24"	5	4	5	4		
26"	7	4	5	4		
28"	7	4	5	4		
30"	7	4	5	4		
32"	7	4	5	4		
34"	9	4	5	4		
36"	9	4	5	4		
38"	9	4	5	4		
40"	9	4	5	4		
42"	11	4	5	4		
44"	11	4	5	4		
46"	11	4	5	4		
48"	11	4	5	4		

### Idler Tail Assembly



ltem	Part Number	Description
1	807-2383	Hex Flange Screw, 1/2"-13 x 0.75"
2	350372	Nut Clamp Plate
3	350453	Gap Filler Plate
4	350456	Idler Backing Plate
5	350457	Cover Plate - Right Hand
6	350458	Cover Plate - Left Hand
7	350459- <u>WW</u>	Crossmember
8	350460- <u>WW</u>	Idler Tube
9	350461- <u>WW</u>	Tube Spacer
10	350566	Filler Plate - Right Hand
11	350567	Filler Plate - Left Hand
12	506296	Idler Puck
13	911016M	Button Head Screw, M10-1.50 x 16 mm
14	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
15	930516M	Flat Head Screw, M580 x 16 mm
16	32CCESK- <u>WW</u>	Idler Spindle Kit
		(Includes items 1, 8, 9, and 12)
<u>WW</u> =	Conveyor width ref	erence: 06 – 48 in 02 increments

	Quan	tity Chart	
Conveyor Width	Item # 3 Gap Filler Plate	Item # 9 Tube Spacer	Item # 12 Idler Puck
6"	2	1	2
8"	2	2	3
10"	2	2	3
12"	2	2	3
14"	3	3	4
16"	3	3	4
18"	3	3	4
20"	4	4	5
22"	4	4	5
24"	4	4	5
26"	5	5	6
28"	5	5	6
30"	5	5	6
32"	6	6	7
34"	6	6	7
36"	7	7	8
38"	7	7	8
40"	7	7	8
42"	8	8	9
44"	8	8	9
46"	8	8	9
48"	9	9	10

#### Nose Bar Idler Tail Assembly



Item	Part Number	Description	
1	350372	Nut Clamp Plate	
2	350383	Cover Plate - Right Hand	
3	350385	Nose Bar Spacer - Right Hand	
	050000	Deal is a Dista	
4	350386	Backing Plate	
5	350387	Gap Filler Plate	
6	350388- <u>WW</u>	Nose Bar Half Round Shaft	
7	350389- <u>WW</u>	Hex Shaft	
8	350390	Spindle Retainer	
9	350390-LEFT	Spindle Retainer - Left Hand	
10	350390-RIGHT	Spindle Retainer - Right Hand	
11	350420	Nose Bar Spacer - Left Hand	
12	350421	Cover Plate - Left Hand	
13	See Spindle Part Number Chart	Spindle Assembly	
14	350432- <u>WW</u> C	Center Spindle Assembly (for widths 8" - 36")	
15	350434- <u>WW</u>	Cover	
16	350459- <u>WW</u>	Crossmember	
17	911016M	Button Head Screw, M10-1.50 x 16 mm	
18	950616M	Low Head Cap Screw, M6-1.00 x 16 m	
19	930514M	Flat Head Screw, M580 x 16 mm	
20	32CNESK-WW	Nose Bar Idler Spindle Kit (Includes	
		items 6, 8, 9, 10, 13, 14, and 15)	
<u>WW</u> =	Conveyor width refe	rence: 06 – 48 in 02 increments	

#13 Spindle Assembly Part Number Chart		
Spindle Assembly		
350432-04		
350432-01		
350432-01		
350432-01		
350432-04		
350432-04		
350432-04		
350432-06		
350432-06		
350432-04		
350432-04		
350432-04		
350432-04		
350432-04		
350432-06		
350432-06		
350432-06		
350432-06		
350432-08		
350432-08		
350432-08		
350432-08		

Quantity Chart				
Conveyor Width	Item # 5 Gap Filler Plate	Item # 8 Spindle Retainer	Item # 13 Spindle Assembly	
6"	2	0	0	
8"	3	2	2	
10"	3	2	2	
12"	3	2	2	
14"	3	2	2	
16"	3	2	2	
18"	3	2	2	
20"	3	2	2	
22"	3	2	2	
24"	5	4	4	
26"	5	4	4	
28"	5	4	4	
30"	5	4	4	
32"	5	4	4	
34"	5	4	4	
36"	5	4	4	
38"	5	4	4	
40"	5	4	4	
42"	5	4	4	
44"	5	4	4	
46"	5	4	4	
48"	5	4	4	

### Weighted Take-Up Assembly



Item	Part Number	Description	
1	807-2383	Hex Flange Screw, 1/2"-13 x 0.75"	
2	350469	Weighted Take-up Plate (for Conveyors 6" - 24" wide)	
	351070	Weighted Take-up Plate (for Conveyors wider than 24" only)	
3	350471- <u>WW</u>	Cross Support	
4	350472	Idler Stub (for Conveyors 6" - 24" wide)	
	350475- <u>WW</u>	Tube (for Conveyors wider than 24" only)	
5	350473	Weight	
6	350474- <u>WW</u>	Mid Spacer Tube	
7	See Spacer Part Number Chart	Outer Spacer Tube	

ltem	Part Number	Description
8	350474-STUB	Stub Spacer (for Conveyors 6" - 24" wide)
	532379	Bushing (for Conveyors wider than 24" only)
9	350475- <u>WW</u>	Tube
10	350524	Cover
11	506296	Idler Puck
12	639971M	Single Drop-In T-Bar
13	950612M	Low Head Cap Screw, M6-1.00 x 12 mm
14	950625M	Low Head Cap Screw, M6-1.00 x 25 mm
15	350461- <u>WW</u>	Spacer (for Conveyors wider than 24" only)
WW = Conveyor Width Reference: 06 - 48 in 02 increments		

3200 Series Modular Belt Straight Conveyors

#7 Outer Spacer Tube Part Number Chart			
Conveyor Width	Outer Spacer Tube		
6"	350474-06		
8"	350474-08		
10"	350474-10		
12"	350474-OUTER		
14"	350474-OUTER		
16"	350474-OUTER		
18"	350474-OUTER		
20"	350474-OUTER		
22"	350474-OUTER		
24"	350474-OUTER		
26"	350474-OUTER		
28"	350474-OUTER		
30"	350474-OUTER		
32"	350474-OUTER		
34"	350474-OUTER		
36"	350474-OUTER		
38"	350474-OUTER		
40"	350474-OUTER		
42"	350474-OUTER		
44"	350474-OUTER		
46"	350474-OUTER		
48"	350474-OUTER		

Quantity Chart				
Conveyor Width	Item # 5 Weight	Item # 6 Mid Spacer Tube	Item # 11 Idler Puck	
6"	1	0	6	
8"	2	0	6	
10"	2	0	8	
12"	2	1	8	
14"	2	1	8	
16"	4	1	8	
18"	4	1	10	
20"	4	1	10	
22"	4	1	10	
24"	4	1	10	
26"	4	1	10	
28"	4	1	10	
30"	4	1	10	
32"	4	1	10	
34"	4	1	10	
36"	4	1	10	
38"	4	1	10	
40"	4	1	10	
42"	4	1	10	
44"	4	1	10	
46"	4	1	10	
48"	4	1	10	

### Upper Knuckle



Item	Part Number	Description	
1	807-2383	Hex Flange Screw, 1/2"-13 x 0.75"	
2	350496	Clamp Plate	
3	350515	Spacer Block	
4	350518- <u>AA</u>	Backing Plate for T-Slot Frames	
	350810- <u>AA</u>	Backing Plate for SmartSlot Frames	
5	350519- <u>WW</u>	Tube	
6	350529- <u>AA</u>	Cover Plate	
7	350530- <u>AA</u>	Guard Bar	
8	350532- <u>AA</u>	1" Guide Plate	
	350531- <u>AA</u>	3" Guide Plate	
	350630- <u>AA</u>	4" Guide Plate	
	350631- <u>AA</u>	6" Guide Plate	
9	350622- <u>AA</u>	Wear Strip	
10	350793- <u>WW</u>	Cross Support	
11	350801- <u>WW</u>	Tube Spacer	
12	506296	Idler Puck	
13	911016M	Button Head Screw,	
		M10-1.50 x 16 mm	
14	950616M	Low Head Cap Screw,	
		M6-1.00 x 16 mm	
15	950825M	Low Head Cap Screw,	
10	00004014	M8-1.25 x 25 mm	
16	930640M	Flat Head Screw, M6-1.00 x 40 mm	
17	32CUKK- <u>WW-AA</u>	Upper Knuckle Kit (Includes items 7, 9 and 12)	
	Convoyor Width Pof		
	<u>WW</u> = Conveyor Width Reference: 06 - 24 in 02 increments		
<u>AA</u> = Angle 05, 10, 15, 30, 45, and 60			

Quantity Chart			
Conveyor Width	Item # 11 Tube Spacer	Item # 12 Idler Puck	
6"	1	2	
8"	2	3	
10"	2	3	
12"	2	3	
14"	3	4	
16"	3	4	
18"	3	4	
20"	4	5	
22"	4	5	
24"	4	5	

#### Lower Knuckle



Item	Part Number	Description
1	350496	Clamp Plate
2	350512- <u>AA</u>	Backing Plate for T-Slot Frames
	350811- <u>AA</u>	Backing Plate for SmartSlot Frames
3	350515	Spacer Block
4	350525- <u>AA</u>	Cover Plate
5	350526- <u>AA</u>	Wear Bar
6	350528- <u>AA</u>	1" Guide Plate
	350527- <u>AA</u>	3" Guide Plate
	350628- <u>AA</u>	4" Guide Plate
	350629- <u>AA</u>	6" Guide Plate

350623- <u>AA</u>	Maan Otnin	
	Wear Strip	
350793- <u>WW</u>	Cross Support	
911016M	Button Head Screw, M10-1.50 x 16 mm	
950616M	Low Head Cap Screw, M6-1.00 x 16 mm	
950825M	Low Head Cap Screw, M8-1.25 x 25 mm	
930640M	Flat Head Screw, M6-1.00 x 40 mm	
32CLKK- <u>AA</u>	Lower Knuckle Kit	
	(Includes items 5 and 7)	
WW = Conveyor Width Reference: 06 - 24 in 02 increments		
<u>AA</u> = Angle 05, 10, 15, 30, 45, and 60		
0	911016M 950616M 950825M 930640M 32CLKK- <u>AA</u> Conveyor Width	

#### 3200 Series Modular Belt Straight Conveyors

### Frame Assembly



Item	Part Number	Description
1	807-1102	J-Leg Wear Strip
2	807-1926	Pan Screw, 7/16"
3	807-2302	Clip On Wear Strip
•		
4	350336- <u>LLLLL</u>	Outer Top Wear Strip
5	350337- <u>LLLLL</u>	Tenting Wear Strip
6	350341- <u>LLLLL</u>	Wear Strip Support
7	350342	Retaining Clip

ltem	Part Number	Description
8	350307- <u>LLLLL</u>	T-Slot Side Rail
	350319- <u>LLLLL</u>	SmartSlot Side Rail
9	350309	Top Clip
10	350310	Bottom Clip
11	350327- <u>WW</u>	Crossmember
12	920484M	Flange Screw, M4-0.70 x 16 mm
13	920850M	Socket Head Screw, M8-1.25 x 25 mm
WW = Conveyor width reference: 06 - 48 in 02 increments		
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 35.25" LLLLL = 03525		

3200 Series Modular Belt Straight Conveyors

### Connecting Assembly



Item	Part Number	Description
1	350580	Cover Plate
2	350581	Clamp Plate for T-Slot Frames
	350808	Clamp Plate for SmartSlot Frames
3	911014M	Button Head Screw, M10-1.50 x 14 mm

### 1.5" (38 mm) High Sides



Item	Part Number	Description	
1	380500- <u>LLLLL</u>	1.50" Guides	
2	350491	Guide Clip	
3	950620M	Low Head Cap Screw, M6-1.00 x 20 mm for T-Slot Frames	
	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1" For SmartSlot Frames	
4	639971MK10	Single Drop-In Tee Bar (x10)	
LLLLL	LLLLL = Length in inches with 2 decimal places.		
Lengt	Length Example: Length = 35.25" LLLLL = 03525		

### 3" (76 mm) High Sides



Item	Part Number	Description	
1	380400- <u>LLLLL</u>	3.00" Guides	
2	350491	Guide Clip	
3	950620M	Low Head Cap Screw, M6-1.00 x 20 mm for T-Slot Frames	
	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1" For SmartSlot Frames	
4	639971MK10	Single Drop-In Tee Bar (x10)	
LLLLL	LLLLL = Length in inches with 2 decimal places.		
Lengt	Length Example: Length = 35.25" LLLLL = 03525		

### Fully Adjustable Guiding



Item	Part Number	Description
1	807-948	Shaft Cap
2	807-652	Cross Block
3	202004	Mounting Bracket
4	202027M	Vertical Mounting Guide Shaft
5	202028M	Horizontal Mounting Guide Shaft
6	674175MP	Square Nut, M6-1.00
7	920612M	Socket Head Screw, M6-1.00 x 12 mm for T-Slot Frames
	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1" For SmartSlot Frames
8	200830M	Drop-In Tee Bar for T-Slot Frames Only
9	920616M	Socket Head Screw, M6-1.00 x 16 mm
10	460063- <u>LLLLL</u>	Aluminum Profile Guide
11	614068P- <u>LLLLL</u>	Extruded Guide
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 35.25" LLLLL = 03525		

### **Tool-Less Fully Adjustable Guiding**



Item	Part Number	Description	
1	807-948	Shaft Cap	
2	807-1470	Cross Block	
3	202004	Mounting Bracket	
4	202027M	Vertical Mounting Guide Shaft	
5	202028M	Horizontal Mounting Guide Shaft	
6	674175MP	Square Nut, M6-1.00	
7	920612M	Socket Head Screw, M6-1.00 x 12 mm for T-Slot Frames	
	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1" For SmartSlot Frames	
8	200830M	Drop-In Tee Bar for T-Slot Frames Only	
9	920616M	Socket Head Screw, M6-1.00 x 16 mm	
10	460063- <u>LLLLL</u>	Aluminum Profile Guide	
11	614068P- <u>LLLLL</u>	Extruded Guide	
12	352056	Tool-Less Guiding Assembly (Includes items 1 thru 9)	
LLLLL	LLLLL = Length in inches with 2 decimal places.		
Length	Length Example: Length = 35.25" LLLLL = 03525		

### Adjustable Outboard Guiding



Item	Part Number	Description
1	920612M	Socket Head Screw, M6-1.00 x 12 mm for T-Slot Frames
	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1" For SmartSlot Frames
2	639971M	Drop-In Tee Bar for T-Slot Frames Only
3	807-920	Square Nut, M6-1.00
4	913-051	Roll Pin
5	210846-00600	Base Extrusion
6	210847	Mounting Bracket
7	210849	Сар
8	350791	Mounting Block
9	605279P	Washer
10	920616M	Socket Head Screw, M6-1.00 x 16 mm
11	920620M	Socket Head Screw, M6-1.00 x 20 mm
12	460063- <u>LLLLL</u>	Aluminum Profile Guide
13	614068P- <u>LLLLL</u>	Extruded Guide
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 35.25" LLLLL = 03525		

### 4.00" (102 mm) High Side Profiles



Item	Part Number	Description				
1	807-2121	Set Screw				
2	350445-04- <u>LLLLL</u>	4.00" Guides				
3	350514	Guide Block				
4	950630M	Low Head Cap Screw, M6-1.00 x 30 mm for T-Slot Frames				
	807-1944	Self-Drilling Hex Head Screw, 1/4-20 x 1.50" For SmartSlot Frames				
5	639971MK10	Single Drop-In Tee Bar (x10)				
LLLLL	LLLLL = Length in inches with 2 decimal places.					
Lengt	h Example: Length =	= 35.25" <u>LLLLL</u> = 03525				





Item	Part Number	Description				
1	807-2121	Set Screw				
2	350445-06- <u>LLLLL</u>	6.00" Guides				
3	350514	Guide Block				
4	950630M	Low Head Cap Screw, M6-1.00 x 30 mm for T-Slot Frames				
	807-1944	Self-Drilling Hex Head Screw, 1/4-20 x 1.50" For SmartSlot Frames				
5	639971MK10	Single Drop-In Tee Bar (x10)				
LLLLL	LLLLL = Length in inches with 2 decimal places.					
Lengt	h Example: Length =	= 35.25" <u>LLLLL</u> = 03525				

### 1.00" (25 mm) Cleated High Side Profiles



Item	Part Number	Description			
1	807-2121	Set Screw			
2	352486- <u>LLLLL</u>	1.00" Cleated Guides Right Hand			
3	352487- <u>LLLLL</u>	1.00" Cleated Guides Left Hand			
4	350514	Guide Block			
5	950630M	Low Head Cap Screw, M6-1.00 x 30 mm for T-Slot Frames			
	807-1944	Self-Drilling Hex Head Screw, 1/4-20 x 1.50" For SmartSlot Frames			
6	639971MK10	Single Drop-In Tee Bar (x10)			
LLLLL	= Length in inches	with 2 decimal places.			
Lengt	h Example: Length	= 35.25" LLLLL = 03525			





Item	Part Number	Description				
1	807-2121	Set Screw				
2	352473- <u>LLLLL</u>	3.00" Cleated Guides Right Hand				
3	352474- <u>LLLLL</u>	3.00" Cleated Guides Left Hand				
4	350514	Guide Block				
5	950630M	Low Head Cap Screw,				
		M6-1.00 x 30 mm for T-Slot Frames				
	807-1944	Self-Drilling Hex Head Screw,				
		1/4-20 x 1.50" For SmartSlot Frames				
6	639971MK10	Single Drop-In Tee Bar (x10)				
LLLLL	LLLLL = Length in inches with 2 decimal places.					
Lengt	h Example: Length	= 35.25" LLLLL = 03525				





Item	Part Number	Description				
1	807-2121	Set Screw				
2	350625-04- <u>LLLLL</u>	4.00" Cleated Guides Right Hand				
3	350626-04- <u>LLLLL</u>	4.00" Cleated Guides Left Hand				
4	350514	Guide Block				
5	950630M	Low Head Cap Screw,				
		M6-1.00 x 30 mm for T-Slot Frames				
	807-1944	Self-Drilling Hex Head Screw,				
		1/4-20 x 1.50" For SmartSlot Frames				
6	639971MK10	Single Drop-In Tee Bar (x10)				
LLLLL	LLLLL = Length in inches with 2 decimal places.					
Lengt	Length Example: Length = 35.25" LLLLL = 03525					





Item	Part Number	Description				
1	807-2121	Set Screw				
2	350625-06- <u>LLLLL</u>	6.00" Cleated Guides Right Hand				
3	350626-06- <u>LLLLL</u>	6.00" Cleated Guides Left Hand				
4	350514	Guide Block				
5	950630M	Low Head Cap Screw,				
		M6-1.00 x 30 mm for T-Slot Frames				
	807-1944	Self-Drilling Hex Head Screw,				
		1/4-20 x 1.50" For SmartSlot Frames				
6	639971MK10	Single Drop-In Tee Bar (x10)				
LLLLL	LLLLL = Length in inches with 2 decimal places.					
Length	n Example: Length =	35.25" LLLLL = 03525				

#### Flat Belt Returns



Item	Part Number	Description				
1	350578- <u>WW</u>	Return Bar				
WW = Conveyor Width Reference: 24 - 36 in 02 increments						

#### Flat Belt Mounting Brackets for T-Slot Conveyors



Item	Part Number	Description	]	ltem	Part Number	Description
1	350533	Stand Mount		5	920620M	Socket Head Screw, M6-1.00 x 20 mm
2	350534	Nut		6	920816M	Socket Head Screw, M8-1.25 x 16 mm
3	605279P	Washer		7	350702	Flat Belt Mounting Assembly for T-Slot
4	639971M	Single Drop-In T-Bar				Conveyors

#### Flat Belt Mounting Brackets for SmartSlot Conveyors

|--|

Item	Part Number	Description	] [	ltem	Part Number	Description
1	240831	Stand Mount		4	807-1937	Drilling Screw, 1/4"-20 x 1"
2	605279P	Washer	1	5	920620M	Socket Head Screw, M6-1.00 x 20 mm
3	807-920	Square Nut, M6-1.0		6	715642	Flat Belt Mounting Assembly for
	•	•	-			SmartSlot Conveyors

#### **Cleated Belt Mounting Brackets for T-Slot Conveyors**



ltem	Part Number	Description	ltem	Part Number	Description
1	914-006	Rivet	6	639971M	Single Drop-In T-Bar
2	350533	Stand Mount	7	920620M	Socket Head Screw, M6-1.00 x 20 mm
3	350534	Nut	8	920816M	Socket Head Screw, M8-1.25 x 16 mm
4	350897	Cleated Mount Plate	9	350898	Cleated Belt Mounting Bracket
5	605279P	Washer			Assembly for T-Slot Conveyors

### **Cleated Belt Mounting Brackets for SmartSlot Conveyors**



ltem	Part Number	Description	ltem	Part Number	Description
1	240836	Cleated Stand Mount	5	920620M	Socket Head Screw, M6-1.00 x 20 mm
2	605279P	Washer	6	715645	Cleated Belt Mounting Bracket
3	807-920	Square Nut, M6-1.0			Assembly for SmartSlot Conveyors
4	807-1937	Drilling Screw, 1/4"-20 x 1"			

#### 3200 Series Modular Belt Straight Conveyors

#### **Ordering a Replacement Chain**

Determine the length of chain required for the conveyor and round up to the nearest foot length. Order the proper number of chain repair kits (1' long each) for your conveyor. Dorner will ship chain kits that are of a reasonable length fully assembled

#### Example:

Overall chain length = 42' 5'' (rounded up = 43')

Order: Qty (43) of 52<u>BB-WW</u>

 $\underline{BB}$  = Chain reference number

 $\underline{WW}$  = Conveyor width ref: 06-36 in 02 increments

#### Flat Belt Chain Repair Kit



Item	Part Number	Description					
1	52 <u>BB-WW</u>	Flat Belt Chain Repair Kit (Includes 1 ft (305 mm) of flat belt chain and assembly pins)					
BB = Chain Reference number							
WW = Conveyor width ref: 06 - 48 in 02 increments							

#### **Cleated Belt Chain Repair Kit**



Item	Part Number	Description					
1	52 <u>BB-WW</u>	Cleated Belt Chain Repair Kit (Includes cleats on 1 ft (305mm) of belt chain and assembly pins)					
BB = Chain Reference number							
WW = Conveyor width ref: 06 - 24 in 02 increments							

### **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	30% return fee for all products except: 50% return fee for conveyors with modular belt, cleated belt or specialty belts non-returnable									
3200								case-by-case		
3200 LPZ							turnable			
3200 Precision Move										
4100										
5200										
5300										
6200										
Controls										
7200 / 7300	50% return fee for all products									
7350							1			
7360										
7400	non-returnable									
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.



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. 2015 DORNER MFG. CORP.

975 Cottonwood Ave., PO Box 20 Hartland, WI 53029-0020 USA TEL 1-800-397-8664 (USA) FAX 1-800-369-2440 (USA) Internet: www.dorner.com

Outside the USA: TEL 1-262-367-7600 FAX 1-262-367-5827

Printed in U.S.A.