

# 3200 Series End Drive Flat and Cleated Belt Conveyors

Installation, Maintenance & Parts Manual





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3200 Series End Drive Flat and Cleated Belt Conveyors

# 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.

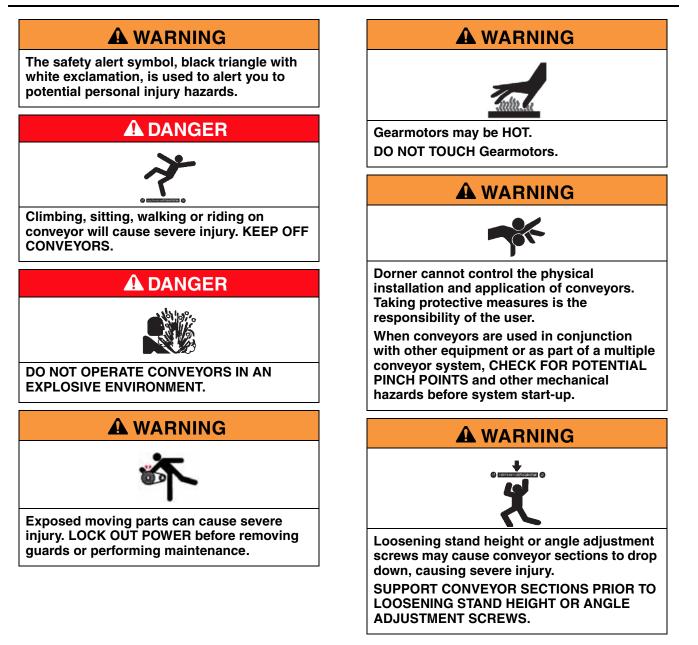
Dorner's Limited Warranty applies.

Dorner 3200 series conveyors are covered by Patent Numbers 5,156,260, 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  $\square$ .

# Warnings – General Safety



# **Product Description**

Refer to Figure 1 for typical components.

#### **Typical Components:**

А	Conveyor
В	Gearmotor Mounting Package
С	Gearmotor
D	Guiding & Accessories
Е	Mounting Brackets
F	Return Rollers
G	Support Stand
Н	Variable Speed Controller
I	Drive End
J	Idler/Tension End

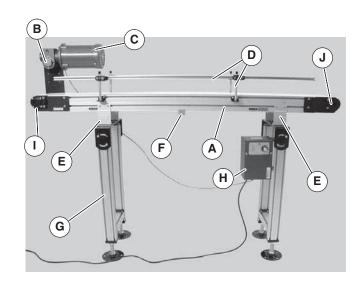
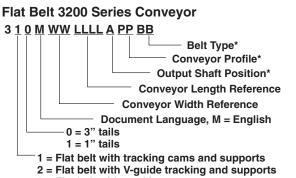


Figure 1

# **Specifications**

## Models:

## Flat Belt 3200 Series Conveyor

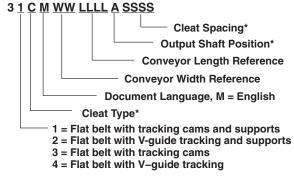


3 = Flat belt with tracking cams

#### 4 = Flat belt with V–guide tracking

## **Cleated Belt 3200 Series Conveyor**

#### **Cleated Belt 3200 Series Conveyor**



\* See Ordering and Specifications Catalog for details.

# **Specifications**

## **Conveyor Supports:**

#### **Maximum Distances:**

K = 24" (610 mm) (Drive End) L = 12 ft (3658 mm) M = 36" (914 mm) (Idler End)

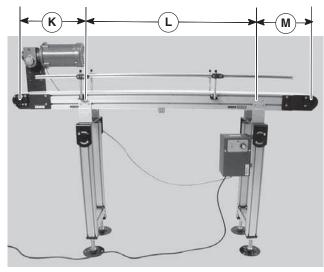


Figure 2

# **Specifications:**

Conveyor Width Reference ( <u>WW</u> )	04	06	08	10	12	18	24	30	36	48
Conveyor Belt Width	3.75" (95mm)	6" (152mm)	8" (203mm)	10" (254mm)	12" (305mm)	18" (457mm)	24" (609mm)	30" (762mm)	36" (915mm)	48" (1220mm)
Maximum Conveyor Load* (See NOTE Below)	200 lb (91kg)	250 lb (113kg)	300 lb (136kg)	350 lb (159kg)	400 lb (181kg)					
Conveyor Startup Torque*	7 in-lb (0.8Nm)	8 in-lb (0.9Nm)	10 in-lb (1.1Nm)	13 in-lb (1.5Nm)	15 in-lb (1.7Nm)	25 in-lb (2.8Nm)	30 in-lb (3.9Nm)	35 in-lb (3.9Nm)	38 in-lb (4.2Nm)	40 in-lb (4.4Nm)
Conveyor Length Reference ( <u>LLLL)</u>		0300 to 4000 in 0001 increments								
Conveyor Length		3 ft (914mm) 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									

\* See Ordering and Specifications Catalog for details.

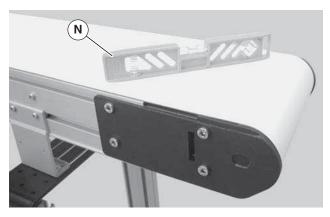
## NOTE

- Maximum conveyor loads based on:
- Non-accumulating product
- Product moving towards gearmotor
- Conveyor being mounted horizontal

# Installation

## NOTE

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





## **Required Tools**

- Hex-key wrenches:
- 4 mm, 5 mm
- Level
- Torque wrench

# Recommended Installation Sequence

- Install support stands (see accessory instructions)
- Assemble conveyor (if required)
- Attach mounting brackets to conveyor
- Attach conveyor to stands
- Install return rollers on conveyor (optional)
- Mount gearmotor mounting package (see accessory instructions)
- Attach guides/accessories (see page 20 through 33 of "Service Parts" section for details)

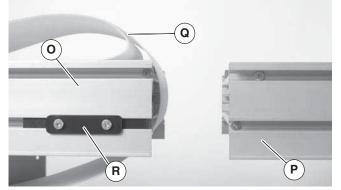
# Conveyors Up to 13 ft (3962 mm)

No assembly is required. Install mounting brackets and return rollers. Refer to "Mounting Brackets" on page 7 and "Return Rollers" on page 8.

# Conveyors Longer Than 13 ft (3962 mm)

#### Installation Component List:

- O Conveyor frame with drive end
- P Conveyor frame with idler end
- Q Belt
- R Connector bracket
- 1. Locate conveyor sections (Figure 4, item O)



#### Figure 4

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

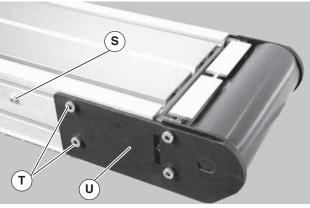


Figure 5

# Installation



Figure 6

3. Roll out conveyor belt and place conveyor frame sections (Figure 7, item O) into belt loop.



Figure 7

 Join conveyor sections and install connector brackets (Figure 8, item W) or connector/mount brackets (WA) and screws (X) on both sides as indicated. Tighten screws to 60 in-lb (7 Nm).

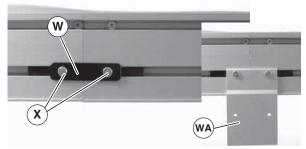


Figure 8

## NOTE

For Conveyors longer than 20 ft (6096 mm) use the process outlined in the "Conveyor Belt Tensioning" section on page 12. Extend the Drive End Tail Assembly to the zero mark of the tension indicator (Figure 9, item AR) before proceeding to step 5. The zero mark for the tension indicator is when the indicator begins to turn black.

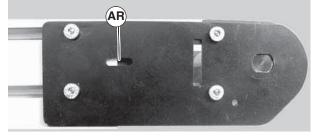
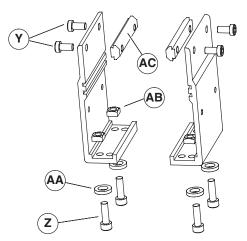


Figure 9

- 5. Tighten conveyor belt, refer to "Conveyor Belt Tensioning" on page 12.
- 6. Install mounting brackets and return rollers. Refer to "Mounting Brackets" on page 7 and "Return Roller" on page 8.

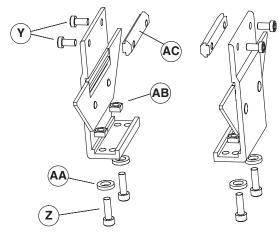
## **Mounting Brackets**

1. Locate brackets. Exploded views shown in Figure 10 & Figure 11.



Mounting Brackets for Flat Belt Conveyor

Figure 10



Mounting Brackets for Cleated Belt Conveyor

Figure 11

# Installation

- Remove screws (Figure 10, item Y & Z) & (Figure 11, item Y & Z), washers (AA), nuts (AB) and T-bars (AC) from brackets.
- Insert T-bars (Figure 10, item AC) & (Figure 11, item AC) into conveyor side slots (Figure 12, item AC). Fasten brackets (Figure 12, item AD) to conveyor with mounting screws (Y).

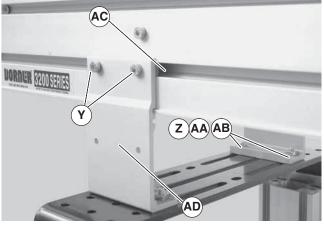
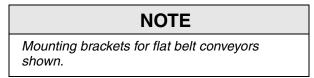


Figure 12

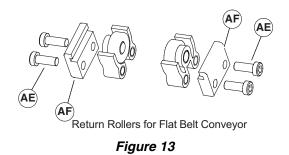


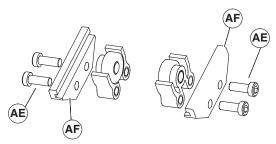
- 4. Fasten brackets to support stand with mounting screws (Figure 12, item Z), washers (AA) and nuts (AB).
- 5. Tighten screws (Figure 12, item Y & Z) to 60 in-lb (7 Nm).

## **Return Rollers**

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

1. Locate return rollers. Exploded views shown in Figure 13 & Figure 14.





#### Figure 14

- 2. Remove screws (Figure 13, item AE) & (Figure 14, item AE) and clips (AF) from roller assembly.
- 3. Install roller assemblies (Figure 15, item AG) as shown. Tighten screws (AE) to 60 in-lb (7 Nm).

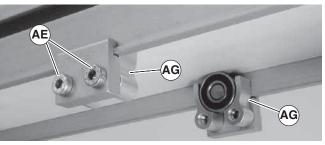


Figure 15

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

1. Locate return rollers. Exploded view shown in Figure 16.

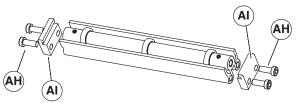


Figure 16

- 2. Remove screws (Figure 16, item AH) and clips (AI) from roller assembly.
- 3. Install roller assembly as shown (Figure 17, item AJ). Tighten screws (AH) to 60 in-lb (7 Nm).

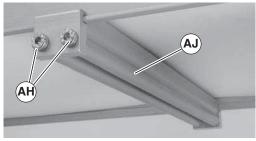


Figure 17

## **Required Tools**

#### **Standard Tools**

- Hex-key wrenches:
  - 2.5 mm, 4 mm, 5 mm

## Checklist

- Keep service parts on hand (see "Service Parts" section for recommendations)
- Keep supply of belt cleaner (part # 625619)
- 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

#### NOTE

Visit www.dorner.com for complete list of troubleshooting solutions.

#### Cleaning

## IMPORTANT

Do not use belt cleaners that contain alcohol, acetone, Methyl Ethyl Ketone (MEK) or other harsh chemicals.

Use Dorner Belt Cleaner (part # 625619). 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**

Exposed moving parts can cause severe

guards or performing maintenance.

## **Conveyor Belt Replacement Sequence**

- 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.
- On tension end of the conveyor, identified by the pinion locking screw (Figure 18, item S), push in head plate assembly (U): Loosen the pinion locking screw (S), adjust the pinion torque screw (Figure 19, item V). On both sides of conveyor, loosen the two tail clamp bolts (Figure 18, item T), and push head plate assembly (U) inward.

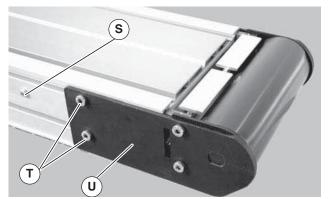


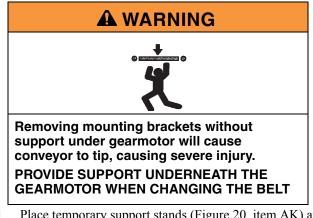
Figure 18



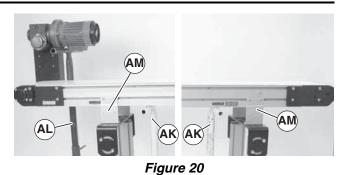


3. Remove conveyor belt.

# Belt Removal for Conveyor With Stands and Gearmotor Mounting Package



1. Place temporary support stands (Figure 20, item AK) at both ends of the conveyor. Place an additional support stand under the drive motor (AL), if equipped. See WARNING.



- Remove mounting brackets (Figure 20, item AM) from one side of conveyor. (Reverse steps 3 & 4 of "Mounting Brackets" section on page 7).
- 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 21, item S), push in head plate assembly (U): Loosen the pinion locking screw (S), adjust the pinion torque screw (Figure 22, item V). On both sides of conveyor, loosen the two tail clamp bolts (Figure 21, item T), and push head plate assembly (U) inward.

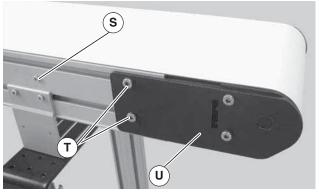


Figure 21



Figure 22

5. Remove belt (Figure 23, item AN) from conveyor.

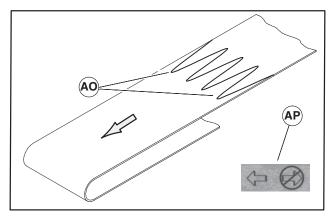


Figure 23

#### 3200 Series End Drive Flat and Cleated Belt Conveyors

# Belt Installation for Conveyor without Stands or Gearmotor Mounting Package

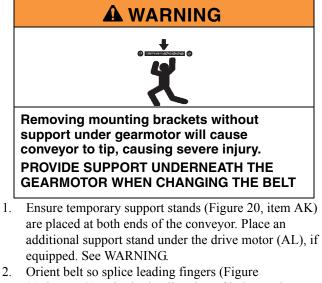
 Orient belt so splice leading fingers (Figure 24, item AO) point in the direction of belt travel as identified by the conveyor directional label (AP).



#### Figure 24

- 2. Slide belt onto the conveyor frame assembly.
- 3. Tension belt. Refer to "Conveyor Belt Tensioning" on page 12.
- 4. If equipped, install wipers, return rollers and guiding

Belt Installation for Conveyor with Stands and Gearmotor Mounting Package



- 24, item AO) point in the direction of belt travel as identified by the conveyor directional label (AP).
- 3. Install belt (Figure 25, item AN) on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.

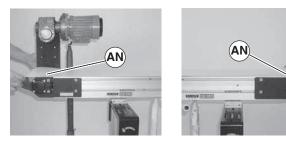
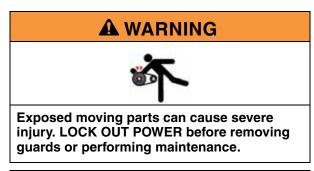


Figure 25

- 4. Re-install conveyor mounting brackets. Refer "Mounting Brackets" on page 7, steps 3 through 5.
- 5. Tension belt. Refer to "Conveyor Belt Tensioning" on page 12.
- 6. If equipped, re-install return rollers and guiding.

## **Conveyor Belt Tensioning**



## NOTE

For conveyors longer than 20 ft (6096 mm) the belt tensioning proceedure outlined below may be preformed on both the Drive and Idler Ends of the conveyor.

1. On tension end of the conveyor, identified by the pinion locking screw (Figure 26, item S), loosen the two tail clamp bolts(T), on both sides of conveyor.

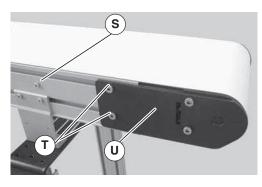


Figure 26

 With 5mm hex wrench, hold pinion torque screw (Figure 27, item V). Loosen the pinion locking screw (Figure 26, item S) and turn the pinion torque screw(V) to extend head plate assembly.

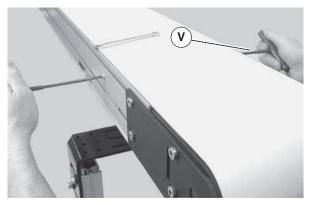
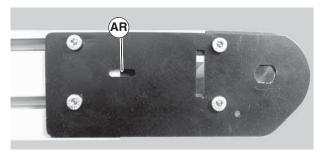


Figure 27

## 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.

 Extend head plate assembly until proper tension in the belt is achived. If proper tensioning can not be obtained before the belt life indicator is all black (Figure 28, item AR) the belt must be replaced.



#### Figure 28

- 4. After adjusting proper tensioning, tighten the pinion locking screw (Figure 26, item S) to 69 in–lbs (7.8 N–m), and tighten tail clamp bolts (Figure 26, item T) on both sides of conveyor to 146 in-lb (16.5 N–m).
- 5. If belt tracking is neccesary, refer to "Conveyor Belt Tracking" on page 13.

## **Conveyor Belt Tracking**

## **V-Guided Belts**

V-guided belts do not require tracking adjustment.

## **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 26, item S) and rotate the pinion torque screw (Figure 27, item V) clockwise until contact with the head plate is made, then tighten the pinion locking screw (S) to 69 in–lbs (7.8 N–m)
- 2. On the side of conveyor to be adjusted, loosen two (2) tail clamp screws (Figure 29, item T).

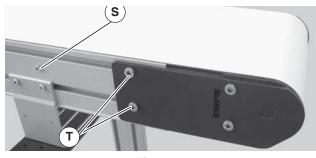


Figure 29

With the conveyor running, use wrench (Figure 30, item AS) to rotate the tracking screw (Figure 31, item AT) in small increments until the belt tracks in the center of the conveyor.

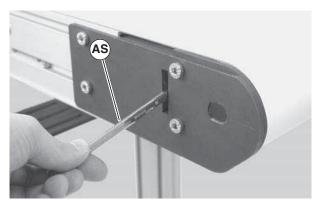


Figure 30

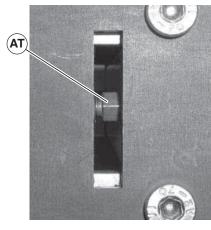


Figure 31

4. Re-tighten the head plate fastening screws (T) with a 5 mm hex-key wrench to 146 in-lb (16.5 Nm).

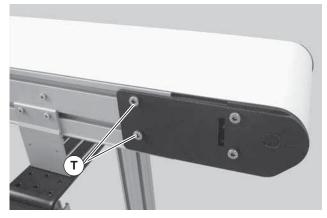
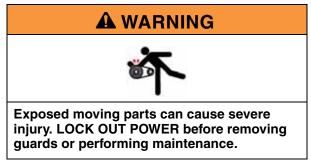


Figure 32

## Pulley Removal



Remove conveyor belt to access pulley(s). See "Conveyor Belt Replacement" on page 9. Remove the desired pulley following the corresponding instructions below:

- A Idler Pulley Removal
- **B** Drive Pulley Removal
- C Transfer Tail Pulley Removal

## A – Idler Pulley Removal

1. Temporarily support the idler pulley.



Figure 33

2. On one side of conveyor, loosen the two (2) back fastening screws (Figure 34, item T) and remove two (2) front fastening screws (AU).

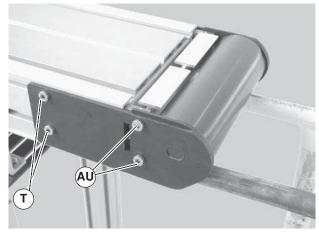
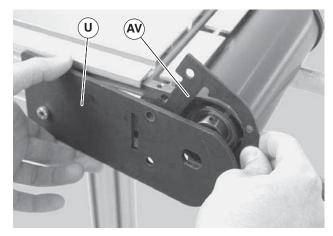


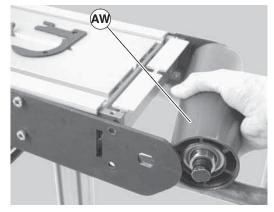
Figure 34

3. Pull back the outer headplate (Figure 35, item U) and remove the inner spacer (AV).



#### Figure 35

4. Slide the idler pulley assembly (Figure 36, item AW) out of the headplate on the opposite side.



#### Figure 36

5. Remove the pulley shaft assembly: remove the clip ring (Figure 37, item AX) and washer (AY) from one side of the pulley assembly.

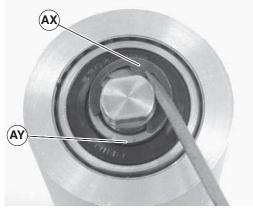


Figure 37

6. Slide the shaft assembly (Figure 38, item AZ) out of the pulley (AW).

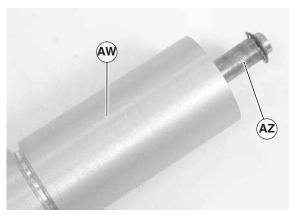


Figure 38

#### **B** – Drive Pulley Removal



- Top and Bottom Mount Packages
- Side Mount Packages

## NOTE

Bottom Mount Package shown, Top Mount Package similar.

#### **Top and Bottom Mount Packages**

a. Use a temporary support (Figure 39, item BA) to support Gearmotor.

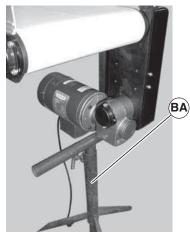
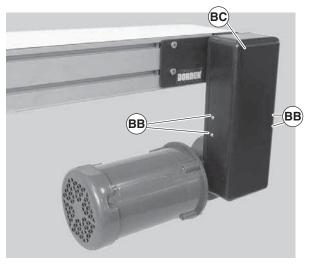


Figure 39

b. Remove four (4) screws (Figure 40, item BB) and remove cover (BC).



#### Figure 40

c. Loosen tensioner (Figure 41, item BD).

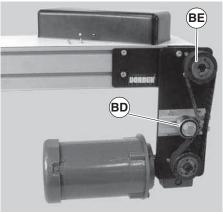


Figure 41

d. Remove taper-lock screws (Figure 42, item BF) on the driven pulley (Figure 41, item BE). Insert one (1) of taper lock screws (Figure 42, item BF) in remaing hole (BG). Tighten screw (BF) until pulley is loose. Remove pulley, taper hub assembly and timing belt.

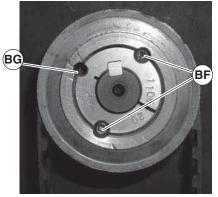
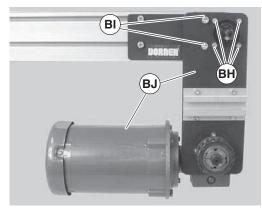


Figure 42

e. Remove four (4) M5 mounting screws (Figure 43, item BH) and two (2) M8 mounting screws (BI).





f. Remove gearmotor and mounting plate assembly (Figure 43, item BJ).

#### Side Mount Package

- a. Temporarily support Gearmotor.
- b. Loosen the four (4) lock screws (Figure 44, item BK).



Figure 44

c. Rotate and remove the gear motor and guard assembly (Figure 45, item BL).

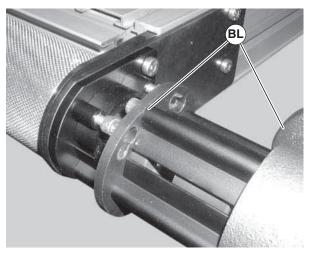
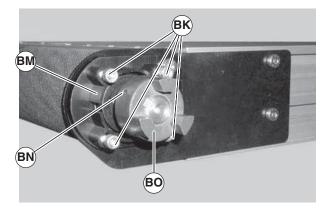


Figure 45

d. Remove the four (4) lock screws (Figure 46, item BK) and the short side drive guard (BM).



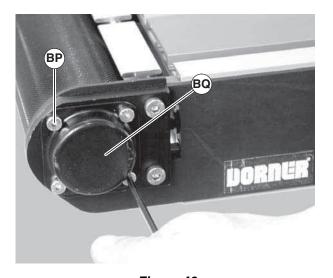
#### Figure 46

- 2. Loosen set screw (Figure 46, item BN) and remove 3– jaw coupling (BO).
- 3. Temporarily support the drive pulley.



Figure 47

4. Remove four shaft cover screws (Figure 48, item BP). Remove the shaft cover (BQ).



6. On the drive headplate, remove two (2) screws (Figure 51, item T).

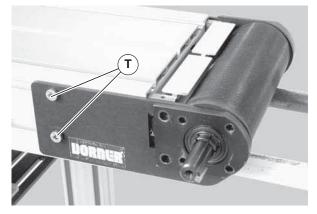


Figure 51

7. Remove the outer headplate assembly (Figure 52, item BT), and inner spacer (AV).



 Loosen the bearing collar set screw (Figure 49, item BR) and remove bearing collar (BS). Repeat on drive shaft side of pulley (Figure 50, item BR and BS)../ mn

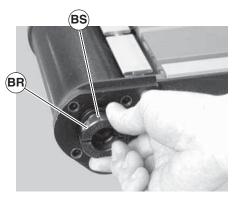


Figure 49

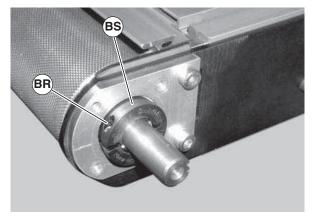


Figure 50

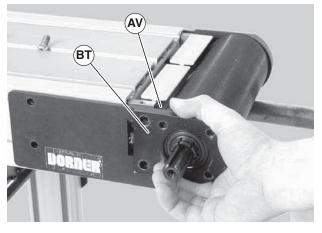


Figure 52

8. Slide the drive pulley (Figure 53, item BU) out of the headplate on the opposite side.

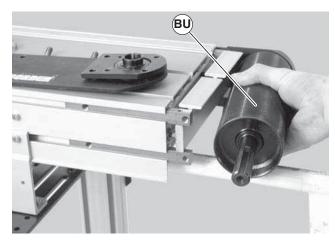


Figure 53

## C – Transfer Tail Pulley Removal

1. Temporarily support the transfer tail assembly.



Figure 54

2. On one side of conveyor, remove the two (2) back fastening screws (Figure 55, item T), and the two (2) front fastening screws (AU)

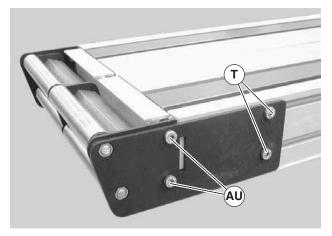


Figure 55

3. Remove the inner spacer (Figure 56, item AV).

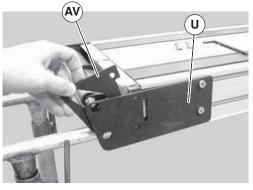


Figure 56

4. Slide the transfer tail pulley assembly (Figure 57, item BV) out of the headplate on the opposite side.

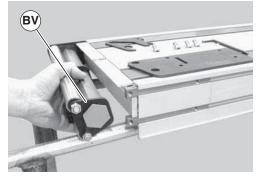


Figure 57

5. Remove hex nuts (Figure 58, item BW).



#### Figure 58

6. Remove support plates (Figure 59, item BX) and washers (BY).

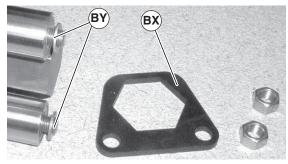
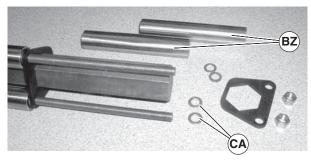


Figure 59

7. Remove pulleys (Figure 60, item BZ) and additional washers (CA).



## Figure 60

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

## **Bearing Replacement**



- B Drive Bearing
- C Transfer Tail 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 61, item CB) to align with slots (CC) in bearing housing. Then remove bearing.

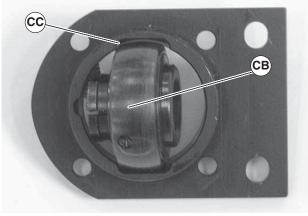


Figure 61

#### Replacement

- 1. Inspect bearing housing bearing surface. If worn or damaged, replace. See "Service Parts" on page 20.
- 2. Insert bearing (Figure 62, item CB) into housing slot (CC). Locate anti–rotation nub (CD) to align with slot (CE), and twist bearing into housing.

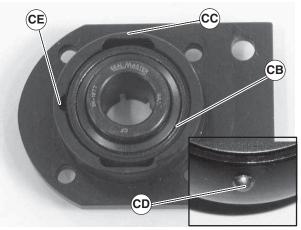


Figure 62

## 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.

## **Pulley Replacement**

## **Idler Pulley**

To replace the idler pulley, reverse the "Idler Pulley Removal" proceedure on page 14.

## **Drive Pulley**

To replace the drive pulley, reverse the "Drive Pulley Removal" proceedure on page 15.

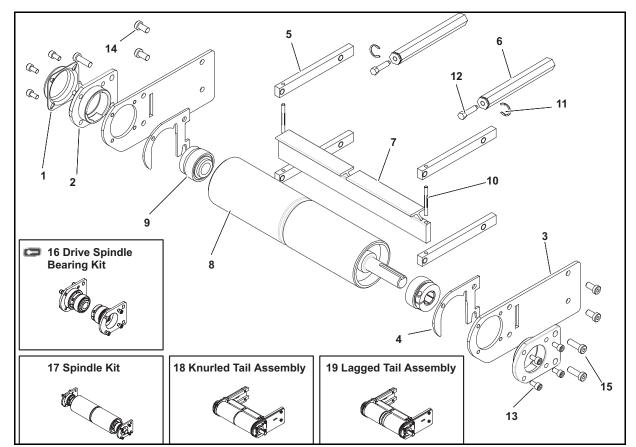
## **Transfer Tail Pulley**

To replace the transfer tail pulley, reverse the "Transfer Tail Pulley Removal" proceedure on page 18.

## 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.

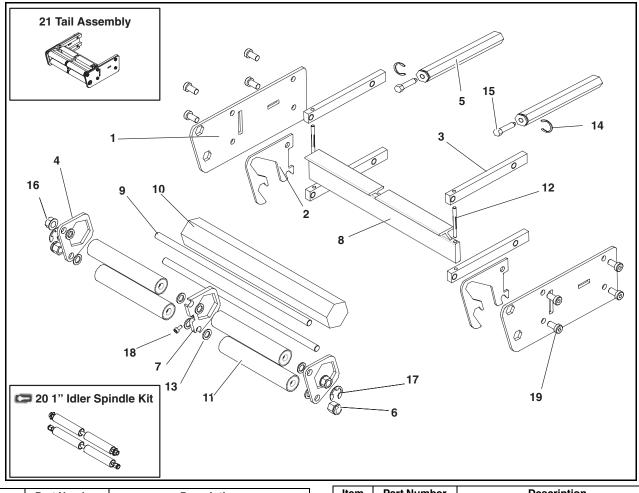
## **Drive End Tail Assembly**



lte	m	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		807–1125	Groove Pin			
11		807–1151	Retaining Ring			
12		807–1152	Hex Head Cap Screw M6 x 20mm			
13		920612M	Socket Head Screw M6 x 12mm			
14		920893M	Low Head Socket Screw M8x16mm			
15		920895M	Low Head Socket Screw M8x25mm			
16		32D	Drive Spindle Bearing Kit (Includes Items 2, 9 and 13)			

Item	Part Number	Description		
17	32KD– <u>WW</u>	Knurled Spindle Kit (Includes Items 2, 8, 9 and 13)		
	32LD– <u>WW</u>	Lagged Spindle Kit (Includes Items 2, 8, 9 and 13)		
18	32KDTA– <u>WW</u>	Knurled Tail Assy. Position A and B (Includes items 1 through 5, 7 through 10 and 13 through 15)		
	32KDTD– <u>WW</u>	Knurled Tail Assy. Position C and D (Includes items 1 through 5, 7 through 10 and 13 through 15)		
19	32LDTA– <u>WW</u>	Lagged Tail Assy. Position A and B (Includes items 1 through 5, 7 through 10 and 13 through 15)		
	32LDTD– <u>WW</u>	Lagged Tail Assy. Position C and D (Includes items 1 through 5, 7 through 10 and 13 through 15)		
<u>WW</u> =	<u>WW</u> = Conveyor width reference: 04 – 48 in 02 increments			

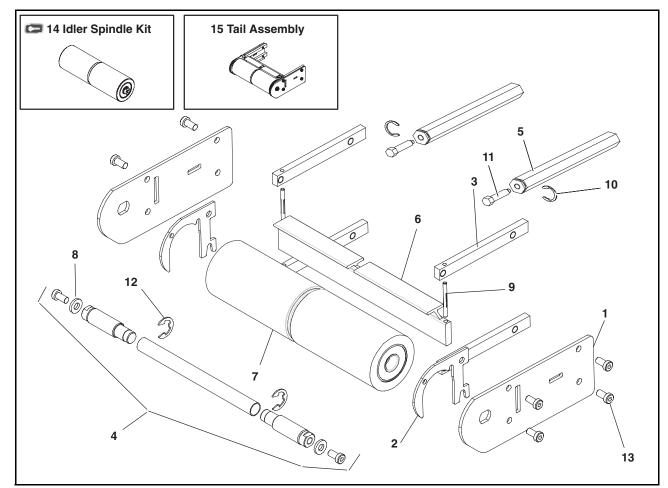
# Transfer Tail Assembly



Item	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 Axel 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	807–1125	Groove Pin			
13	807–1136	Washer			
14	807–1151	Retaining Ring			

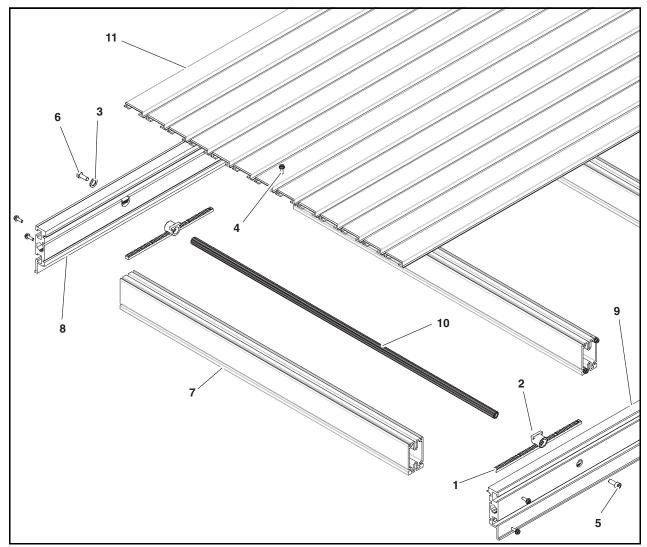
1	Item	Part Number	Description		
	15	807–1152	Hex Head Cap Screw M6 x 20mm		
	16	910–203	3/8" Hex Nut		
	17	915–319	Retaining Ring		
	18	920408M	Hex Head Cap Screw M4 x 8mm		
	19	920893M	Low Head Socket Screw M8 x 16mm		
0	20	32T1– <u>WW</u>	1" Idler Spindle Kit (includes items 6, 9, 11, 13, 16 and 17)		
	21	32TT1– <u>WW</u>	Tail Assembly (includes items 1 through 4, 6 through 13, 16 and 19)		
	<u>WW</u> = Conveyor width reference: 04 – 48 in 02 increments				

# **Idler End Assembly**



Item	Part Number	Description	1	Item	Part Number	Description
1	301049	Idler Cover Plate		9	807–1125	Groove Pin
2	301083	Inner 3" Tail Plate		10	807–1151	Tracking Shaft Retaining Ring
3	301088	Tail Bar Clamp		11	807–1152	Hex Head Cap Screw M6 x 20mm
4	3282WW	Idler Spindle Wand Assembly (includes	1	12	915–235	Stub Shaft Retaining Ring
		items 8 and 12)		13	920893M	Low Head Socket Screw M8 x 16mm
5	301196	Hex Tension Tracking Shaft		14	32T3– <u>WW</u>	Idler Spindle Kit (includes items 4 and
6	3202 <u>WW</u>	Tail Articulation Bar	1			7)
7	3289 <u>WW</u>	3" Idler Pulley		15	32TT3- <u>WW</u>	Tail Assembly (including items 1
8	605280P	Hard Washer	1			through 4, 6, 7, 9 and 13)
<u>WW</u> = Conveyor width reference: 04 – 48 in 02 increments				eference: 04 – 48 in 02 increments		

# Frame Assembly



Item	Part Number	Description		
1	240420	Rack Gear		
2	301091	Pinion Bearing		
3	605279P	Washer		
4	920483M	Flange Socket Screw M4 x 16mm		
5	920616M	Socket Head Screw M6 x 16mm		
6	920693M	Low Head Socket Screw M6 x 16mm		
7	3245 <u>WW</u>	Cross Support Rail		
8	301041-	RH Side Rail		
	<u>LLLLL</u>			
9	301042-	LH Side Rail		
	LLLLL			
10	3229 <u>WW</u>	Pinion		
11	Bed Plate Rail			
<u>WW</u> =	WW = Conveyor width reference: 04 – 48 in 02 increments			
LLLLL	LLLLL = Frame Length (see Bed Plate & Frame Formulas)			

Item 11: Bed Plate Rail				
Width	Part Number			
1.75" (mm)	300887– <u>LLLLL</u>			

Item 11: Bed Plate Rail			
Width	Part Number		
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)			

## **Bed Plate and Frame Formulas**

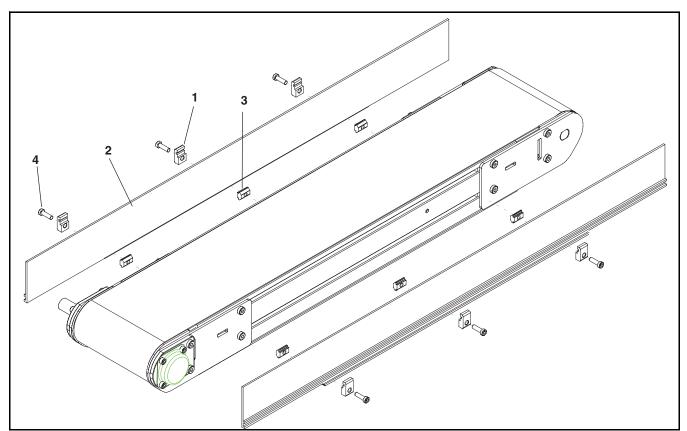
#### **Bed Plate and Frame Formulas**

Bed Plate <u>LLLLL</u> =	Frame <u>LLLLL</u> – 00013
Frame IIIII =	Conveyor Length LLLL X 12

Frame <u>LLLLL</u>	=	Conveyor Length LLLL X 12 – Tail Adder # of Sections of Conveyor
Tail Adder	=	00600 for each Tension End 00425 for each Non-Tension End

Width						Bed F	late Confi	guration					
4"							1.75"						
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"					
22"					4"	4"	4"	4"	4"				
24"					4"	4"	6"	4"	4"				
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"

# -04 3" (76mm) Aluminum Side



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380400– <u>LLLLL</u> (see Formulas)	3200 Guide 3" (76mm) HS
3	639971M	Single Drop-in Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

## Length Formulas

<u>LLLLL</u> =	·	eyor Length XXXX) X 12 – Tail Factor of Sections of Conveyor
		•
Tail Factor =	00000	for center drive with transfer tail both ends
	00100	for end drive with one transfer tail
	00200	for end drive and center drives with standard tails
	00325	for All Cleated Conveyors
# of Convoyor	Continuo	(Conveyor Length <u>XXXX</u> – 0100)
# of Conveyor	Sections =	1200

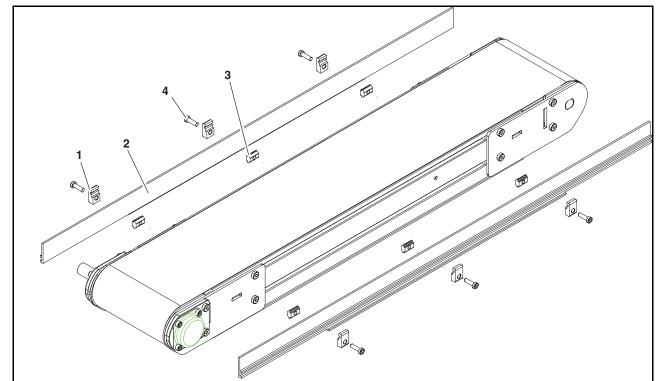
1200

XXXX = Conveyor Length (XX.XX ft)

#### Example

17'4" End Drive Conveyor with Standard Tails Conveyor Length = 1733 Tail Factor = 00200 # of Sections (round up)=  $\frac{(1733 - 0100)}{1000}$  = 1.36 = 2 Sections 1200  $\frac{1}{1}$ = 10298 2

# -05 1.5" (38mm) Aluminum Side



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380500– <u>LLLLL</u> (see Formulas)	3200 Guide .5" (13mm) HS
3	639971M	Single Drop-in Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

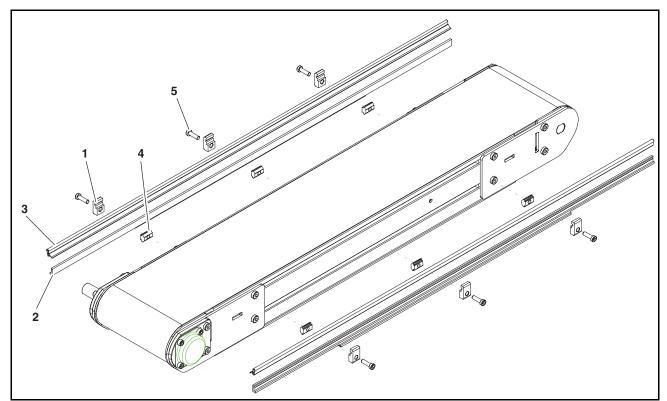
## Length Formulas

LLLLL =	(Conve	eyor Length XXXX) X 12 – Tail Factor
	#	of Sections of Conveyor
Tail Factor =	00000	for center drive with transfer tail both ends
	00100	for end drive with one transfer tail
	00200	for end drive and center drives with standard tails
	00325	for All Cleated Conveyors
# of Commencer	Continue	(Conveyor Length XXXX – 0100)
# of Conveyor Sections =		1200
XXXX = Conve	yor Length	(XX.XX ft)

#### Example

17'4" End Drive Conveyor with Standard Tails Conveyor Length = 1733 Tail Factor = 00200 # of Sections (round up)=  $\frac{(1733 - 0100)}{1200}$  = 1.36 = 2 Sections <u>LLLLL</u> =  $\frac{(1733 \times 12) - 00200}{2}$  = 10298

## -07 Low to Side Wiper



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380900– <u>LLLLL</u> (see Formulas)	3200 Guide .5" (13mm) HS
3	41-00-24	Side Wiper Nylatron (per foot)
4	639971M	Single Drop–in Tee Bar
5	920694M	Socket Head Screw M6 x 20mm

## Length Formulas

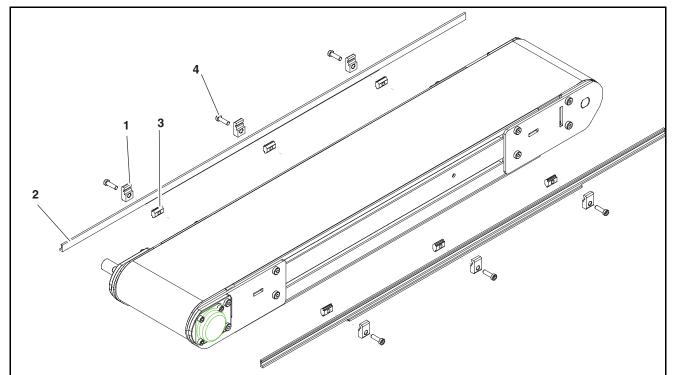
<u>LLLLL</u> =	·	eyor Length XXXX) X 12 – Tail Factor of Sections of Conveyor
Tail Factor =	00000	for center drive with transfer tail both ends
	00100	for end drive with one transfer tail
	00200	for end drive and center drives with standard tails
	00325	for All Cleated Conveyors
# of Conveyor Sections =		(Conveyor Length XXXX – 0100)
		1200

XXXX = Conveyor Length (XX.XX ft)

#### Example

17'4" End Drive Conveyor with Standard Tails Conveyor Length = 1733 Tail Factor = 00200 # of Sections (round up)=  $\frac{(1733 - 0100)}{1200}$  = 1.36 = 2 Sections LLLLL =  $\frac{(1733 \times 12) - 00200}{2}$  = 10298

# -09 Low to High Side



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380900– <u>LLLLL</u> (see Formulas)	2200 Guide .5" (13mm) HS
3	639971M	Single Drop-in Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

## Length Formulas

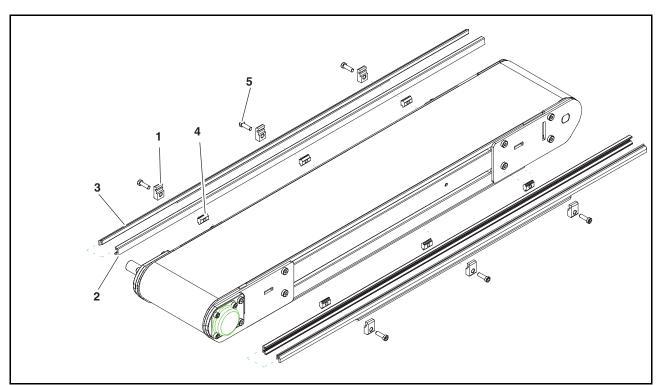
<u>LLLLL</u> =	·	eyor Length <u>XXXX</u> ) X 12 – Tail Factor
Tail Factor =	00000	for center drive with transfer tail both ends
	00100	for end drive with one transfer tail
	00200	for end drive and center drives with standard tails
	00325	for All Cleated Conveyors
# of Opensources	Castiana	(Conveyor Length XXXX – 0100)
# of Conveyor Sections =		1200
XXXX - Convoyor Longth (XX XX ft)		

XXXX = Conveyor Length (XX.XX ft)

## Example

17'4" End Drive Conveyor with Standard Tails Conveyor Length = 1733 Tail Factor = 00200 # of Sections (round up)=  $\frac{(1733 - 0100)}{1200}$  = 1.36 = 2 Sections <u>LLLLL</u> =  $\frac{(1733 \times 12) - 00200}{2}$  = 10298

# -10 .5" (13mm) Extruded Plastic



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	200054P	Snap-On Guide (per foot)
3	3810000– <u>LLLLL</u> (see Formulas)	2200 Guide
4	639971M	Single Drop-in Tee Bar
5	920694M	Socket Head Screw M6 x 20mm

#### Length Formulas

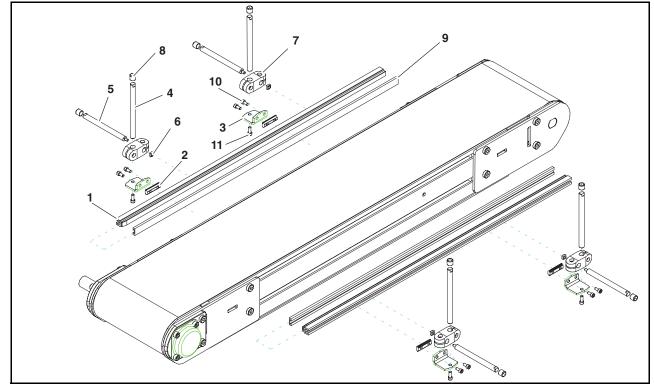
<u>LLLLL</u> =	·	eyor Length XXXX) X 12 – Tail Factor of Sections of Conveyor
Tail Factor =	00000	for center drive with transfer tail both ends
	00100	for end drive with one transfer tail
	00200	for end drive and center drives with standard tails
	00325	for All Cleated Conveyors
# of Convoyor	Sections -	(Conveyor Length <u>XXXX</u> – 0100)
# of Conveyor Sections =		1200

XXXX = Conveyor Length (XX.XX ft)

#### Example

17'4" End Drive Conveyor with Standard Tails Conveyor Length = 1733 Tail Factor = 00200 # of Sections (round up) =  $\frac{(1733 - 0100)}{1200}$  = 1.36 = 2 Sections <u>LLLLL</u> =  $\frac{(1733 \times 12) - 00200}{2}$  = 10298

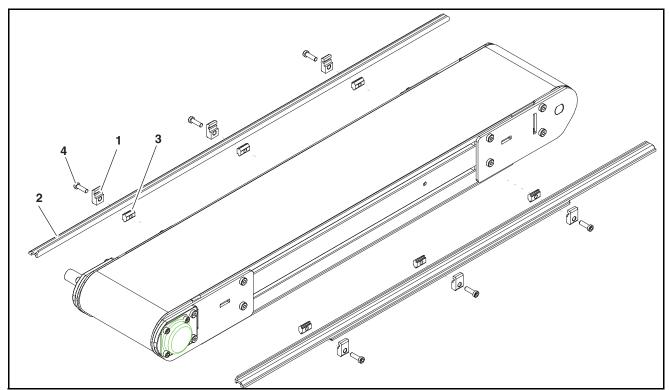
# -13 Adjustable Guiding



Item	Part Number	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)

Vertical
Horizontal
per foot)
l6 x 12mm
l6 x 16mm
1

# .5" (13mm) Cleated Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	381600– <u>LLLLL</u> (see Formulas)	2200 Guide .47" (13mm) Cleated
3	639971M	Drop–In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

## Length Formulas

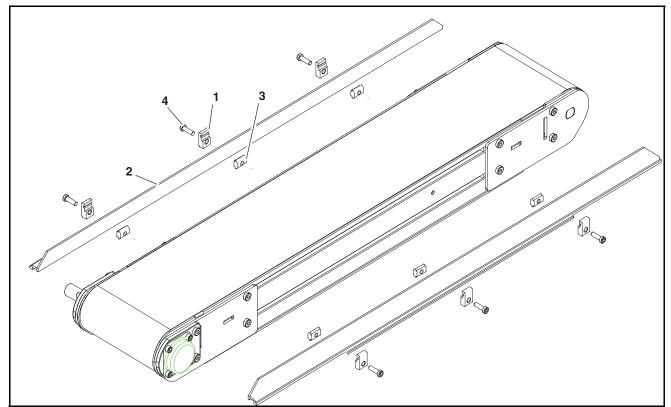
LLLLL =	(Conveyor Length XXXX) X 12 – Tail Factor	
<u>LLLLL</u> =	#	of Sections of Conveyor
Tail Factor =	00000	for center drive with transfer tail both ends
	00100	for end drive with one transfer tail
	00200	for end drive and center drives with standard tails
	00325	for All Cleated Conveyors
# of Convoion	Castiana	(Conveyor Length XXXX – 0100)
# of Conveyor Sections =		1200

XXXX = Conveyor Length (XX.XX ft)

## Example

17'4" End Drive Conveyor with Standard Tails Conveyor Length = 1733 Tail Factor = 00200 # of Sections (round up)=  $\frac{(1733 - 0100)}{1200}$  = 1.36 = 2 Sections <u>LLLLL</u> =  $\frac{(1733 \times 12) - 00200}{2}$  = 10298

# 1" (25mm) Cleated Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	3200 Guide 1" (25mm) Cleated
3	639971M	Drop–In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 3200 Guide			
# of Sections (see Formulas)		End Guide (for <u>LLLLL</u> See Formulas)	
1	Each Side	381735– <u>LLLLL</u>	
2	Left Hand	381736– <u>LLLLL</u>	
	Right Hand	381737– <u>LLLLL</u>	
3 or More	Left Hand	381736– <u>LLLLL</u>	
	Middle Sections	381700– <u>LLLLL</u>	
	Right Hand	381737– <u>LLLLL</u>	

#### Length Formulas

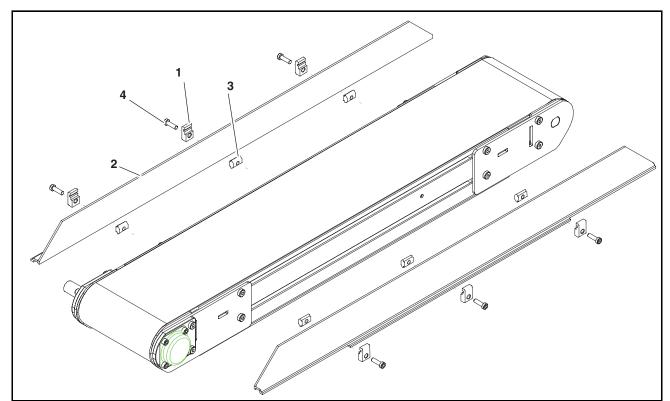
LLLLL =	(Conveyor Length XXXX) X 12 – Tail Factor			
	# of Sections of Conveyor			
Tail Factor =	00000	for center drive with transfer tail both ends		
	00100	for end drive with one transfer tail		
	00200	for end drive and center drives with standard tails		
	00325	for All Cleated Conveyors		
# of <b>O</b> ommone	Castiana	(Conveyor Length XXXX – 0100)		
# of Conveyor Sections =		1200		
XXXX = Conve	yor Length	(XX.XX ft)		

#### Example

17'4" End Drive Conveyor with Standard Tails Conveyor Length = 1733 Tail Factor = 00200 # of Sections (round up)=  $\frac{(1733 - 0100)}{1200}$  = 1.36 = 2 Sections

$$\frac{\text{LLLLL}}{2} = \frac{(1733 \times 12) - 00200}{2} = 10298$$

# 2" (51mm) Cleated Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	3200 Guide 2.3" Cleated
3	639971M	Drop–In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 3200 Guide			
# of Sections (see Formulas)		End Guide (for <u>LLLLL</u> See Formulas)	
1	Each Side	381935– <u>LLLLL</u>	
2	Left Hand	381936– <u>LLLLL</u>	
	Right Hand	381937– <u>LLLLL</u>	
3 or More	Left Hand	381936– <u>LLLLL</u>	
	Middle Sections	381900– <u>LLLLL</u>	
	Right Hand	381937– <u>LLLLL</u>	

## Length Formulas

<u>LLLLL</u> =	·	veyor Length XXXX) X 12 – Tail Factor # of Sections of Conveyor
Tail Factor =	00000	for center drive with transfer tail both ends
	00100	for end drive with one transfer tail
	00200	for end drive and center drives with standard tails
	00325	for All Cleated Conveyors
# ={ 0=======	Castiana	(Conveyor Length XXXX – 0100)
# of Conveyor	Sections =	1200

XXXX = Conveyor Length (XX.XX ft)

#### Example

17'4" End Drive Conveyor with Standard Tails

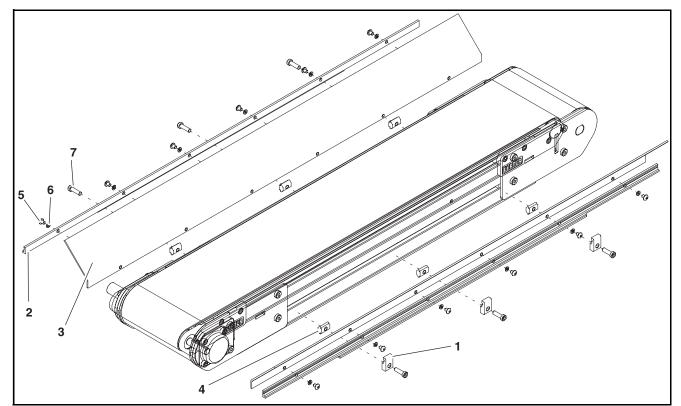
Conveyor Length = 1733 Tail Factor = 00200

# of Sections (round up)=  $\frac{(1733 - 0100)}{1200}$  = 1.36 = 2 Sections (1733 x 12) - 00200

LLLLL = 
$$\frac{(1100 \times 12)^{-00200}}{2} = 10298$$

Figure 63

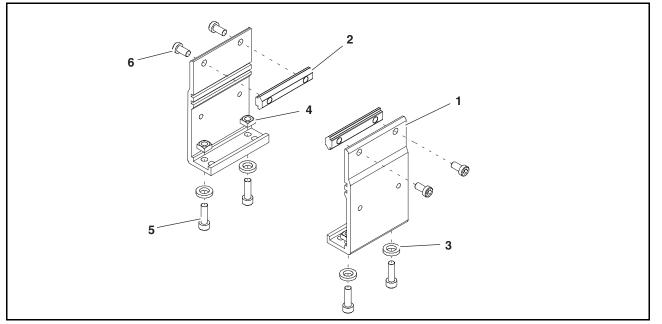
# Flared Side Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	202212	Side-Flare Mounting Guide 2' (610mm)
	202213	Side-Flare Mounting Guide 3' (914mm)
	202214	Side-Flare Mounting Guide 4' (1219mm)
	202215	Side-Flare Mounting Guide 5' (1524mm)
	202216	Side-Flare Mounting Guide 6' (1829mm)

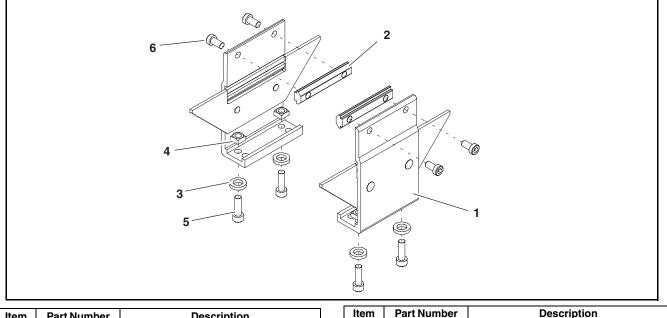
Part Number	Description
202522M	Flared Guide 45° 2' (610mm)
202523M	Flared Guide 45° 3' (914mm)
202524M	Flared Guide 45° 4' (1219mm)
202525M	Flared Guide 45° 5' (1524mm)
202526M	Flared Guide 45° 6' (1829mm)
639971	Drop–In Tee Bar
910506M	Button Head Screw M5 x 6mm
911–512	Washer
920694M	Cap Low–Head Screw M6 x 20mm
	202523M 202524M 202525M 202526M 639971 910506M 911–512

# Flat Belt Mounting Brackets



Item	Part Number	Description	Item	Part Number	Description
1	240831	Stand Mount	4	807–920	Square Nut M6 5mm x 10mm
2	300150M	Drop–In Tee Bar	5	920620M	Socket Head Screw M6 x 20mm
3	605279P	Washer	6	920692M	Socket Head Screw M6 x 12mm

## **Cleated Belt Mounting Brackets**



Item	Part Number	Description
1	240836	Cleated Mounting Assembly
2	300150M	Drop–In Tee Bar
3	605279P	Washer

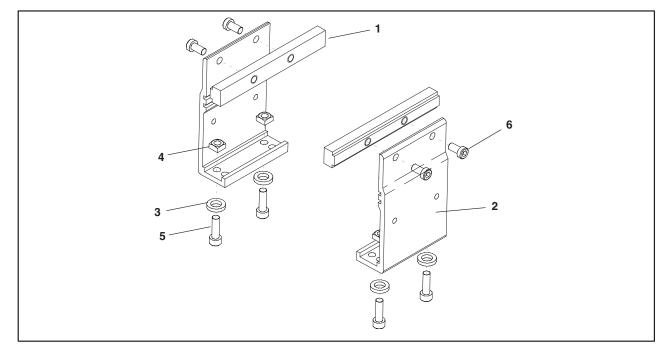
Item	Part Number	Description
4	807–920	Square Nut M6 5mm x 10mm
5	920620M	Socket Head Screw M6 x 20mm
6	920692M	Socket Head Screw M6 x 12mm

# **Connecting Assembly without Stand Mount**

i	2 0			3
Item Part Number	Description	Item	Part Number	Description

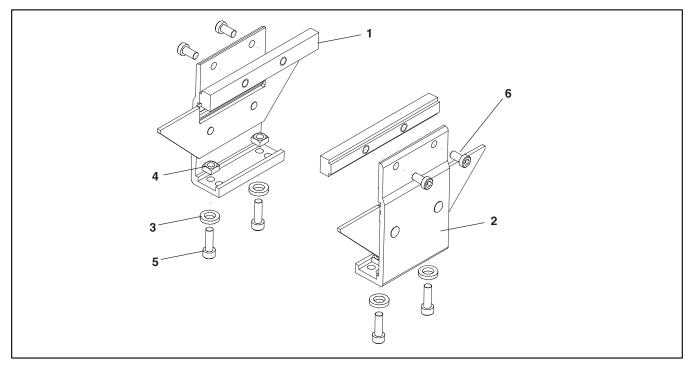
Item	Part Number	Description	Item	Part Number	Description
1	240858	Frame Bar Connector	3	920692M	Socket Head Screw M6 x 12mm
2	240859	Intermediate Clamp Plate			

## Flat Belt Connecting Assembly with Stand Mount



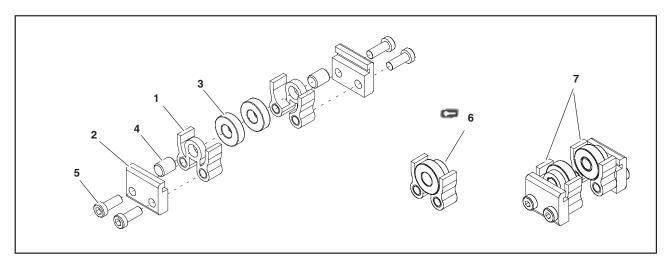
Item	Part Number	Description	Item	Part Number	Description
1	240858	Frame Connector Bar	4	807–920	Square Nut M6 5mm x 10mm
2	240837	Stand Mount Joint	5	920620M	Socket Head Screw M6 x 20mm
3	605279P	Washer	6	920692M	Socket Head Screw M6 x 12mm

# **Cleated Belt Connecting Assembly with Stand Mount**



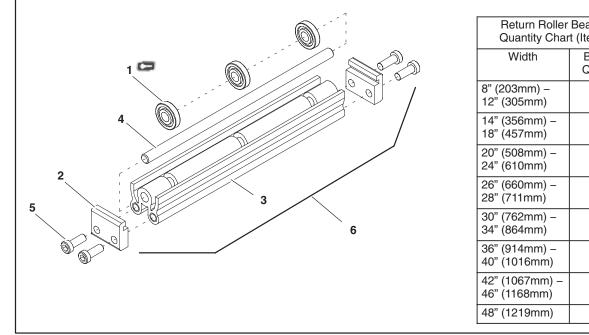
Item	Part Number	Description	Item	Part Number	Description
1	240858	Frame Connector Bar	4	807–920	Square Nut M6 5mm x 10mm
2	240846	Cleat Stand Bracket Assembly	5	920620M	Socket Head Screw M6 x 20mm
3	605279P	Washer	6	920692M	Socket Head Screw M6 x 12mm

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



ltem	Part Number	Description	1	Item	Part Number	Description
1	240825	Return Roller Guard – Short		5	920693M	Socket Low Head Screw M6 x 16mm
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" (203mm) to 48" (1219mm) Flat Belt Return Roller

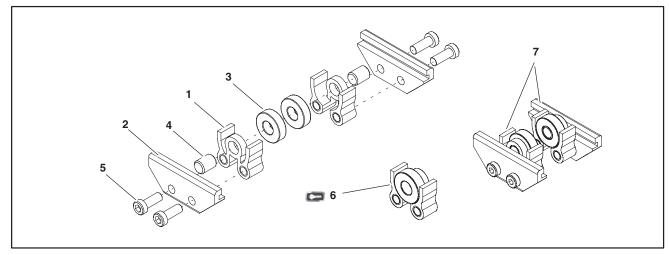


Return Roller Bearing Quantity Chart (Item 1)			
Width	Bearing Quantity		
8" (203mm) – 12" (305mm)	3		
14" (356mm) – 18" (457mm)	4		
20" (508mm) – 24" (610mm)	5		
26" (660mm) – 28" (711mm)	6		
30" (762mm) – 34" (864mm)	7		
36" (914mm) – 40" (1016mm)	8		
42" (1067mm) – 46" (1168mm)	9		
48" (1219mm)	10		

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

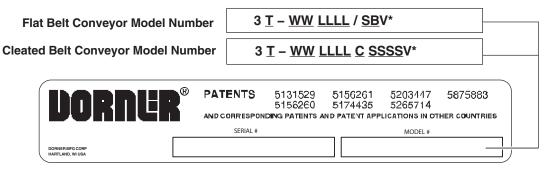
Item	Part Number	Description				
5	920693M	Socket Head Screw M6 x 16mm				
6	2408 <u>WW</u>	8" (203mm) – 48" (1219mm) Flat Belt Return Roller Assembly				
WW = Conveyor width reference: 08 – 48 in 02 increments						

## **Cleated Belt Return Roller**



Item	Part Number	Description	]	Item	Part Number	Description
1	240825	Return Roller Guard – Short	0	5	920693M	Socket Low Head Screw M6 x 16mm
2	240828	Cleated Return Roller Clip		6	240840	Roller Assembly (Includes Items 1, 3 and 4)
3	802-027	Bearing				
4	913-100	Dowel Pin	1	7	240832	Cleated Belt Return Roller Assembly

## **Conveyor Belt Part Number Configuration**



#### Figure 64

#### Flat Belt Part Number Configuration

Refer to Dorner patent plate (Figure 64). 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.

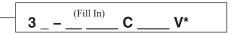
#### C 3T - WW LLLL / SBV \*



#### **Cleated Belt Part Number Configuration**

Refer to Dorner patent plate (Figure 64). From the model number determine, cleated belt ("T"), width ("WW"), length ("LLLL"), cleat type ("C"), and cleat spacing ("SSSS"). Use data to configure belt part number as indicated below. \*Add "V" for V-guided belt.

#### 3 T – <u>WW</u> <u>LLLL</u> C SSSS V\*



# **Return Policy**

Returns must have prior written factory authorization or they will not be accepted. Items that are returned to Dorner without authorization will not be credited nor returned to the original sender. When calling for authorization, please have the following information ready for the Dorner factory representative or your local distributor: 1. Name and address of customer. 2. Dorner part number(s) of item(s) being returned. 3. Reason for return. 4. Customer's original order number used when ordering the item(s). 5. Dorner or distributor invoice number. A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization number for reference. There will be a return charge on all new undamaged items returned for credit where Dorner was not at fault. Dorner is not responsible for return freight on such items. Conveyors and conveyor accessories Standard catalog conveyors 30% MPB Series, cleated and specialty belt conveyors 50% 7400 & 7600 Series conveyors non-returnable items Engineered special products case by case Drives and accessories 30% Sanitary stand supports non-returnable items Parts Standard stock parts 30% MPB, cleated and specialty belts non-returnable items

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

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

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

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

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

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



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