Ready-To-Run Mini Conveyors

Installation, Maintenance & Parts Manual
(Version 2)

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851-822 Rev. A

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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 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 .

Dorner 2200 series conveyors are covered by Patent Numbers 5,174,435, 6,298,981, 6,422,382 and corresponding patents and patent applications in other countries.

Dorner reserves the right to make changes at any time without notice or obligation.

Warnings – General Safety

⚠ WARNING

The safety alert symbol, black triangle with white exclamation, is used to alert you to potential personal injury hazards.

⚠ DANGER

Climbing, sitting, walking or riding on conveyor will cause severe injury. KEEP OFF CONVEYORS.

⚠ DANGER

DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.

⚠ WARNING

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

⚠ WARNING

Gearmotors may be HOT.

DO NOT TOUCH Gearmotors.

⚠ WARNING

Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.

When conveyors are used in conjunction with other equipment or as part of a multiple conveyor system, CHECK FOR POTENTIAL PINCH POINTS and other mechanical hazards before system start-up.

⚠ WARNING

Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing severe injury.

SUPPORT CONVEYOR SECTIONS PRIOR TO LOOSENING STAND HEIGHT OR ANGLE ADJUSTMENT SCREWS.

Product Description

Refer to Figure 1 for typical components.

1	Drive End
2	Gearmotor Mounting Package
3	Guiding & Accessories
4	Idler/Tension End
5	Conveyor
6	Mounting Brackets
7	Variable Speed Controller
8	Support Stand
9	Caster Wheels

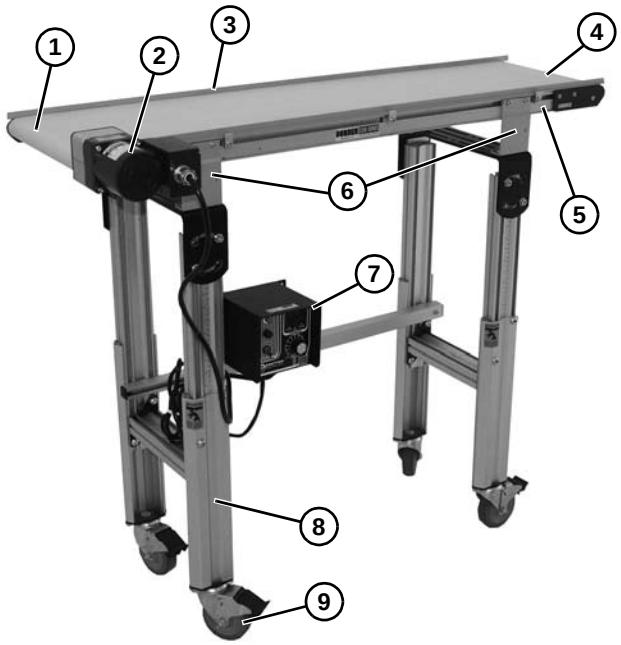


Figure 1

Specifications

Models:

Conveyor Assembly Model Number:

Fixed Speed Control: 9 ft/min

Length	1.75"	2.75"	3.75"	6"	8"	12"
3 foot	75009199	75009203	75009207	75009211	75009215	75009219
5 foot	75009223	75009227	75009231	75009235	75009239	75009243
8 foot	75009247	75009251	75009255	75009259	75009263	75009267

Fixed Speed Control: 15 ft/min

Length	1.75"	2.75"	3.75"	6"	8"	12"
3 foot	75009200	75009204	75009208	75009212	75009216	75009220
5 foot	75009224	75009228	75009232	75009236	75009240	75009244
8 foot	75009248	75009252	75009256	75009260	75009264	75009268

Fixed Speed Control: 21 ft/min

Length	1.75"	2.75"	3.75"	6"	8"	12"
3 foot	75009201	75009205	75009209	75009213	75009217	75009221
5 foot	75009225	75009229	75009233	75009237	75009241	75009245
8 foot	75009249	75009253	75009257	75009261	75009265	75009269

Specifications

Fixed Speed Control: 35 ft/min

Length	1.75"	2.75"	3.75"	6"	8"	12"
3 foot	75009202	75009206	75009210	75009214	75009218	75009222
5 foot	75009226	75009230	75009234	75009238	75009242	75009246
8 foot	75009250	75009254	75009258	75009262	75009266	75009270

Variable Speed Control: 3 to 15 ft/min

Length	1.75"	2.75"	3.75"	6"	8"	12"
3 foot	75009271	75009274	75009277	75009280	75009283	75009286
5 foot	75009289	75009292	75009295	75009298	75009301	75009304
8 foot	75009307	75009310	75009313	75009316	75009319	75009322

Variable Speed Control: 6 to 35 ft/min

Length	1.75"	2.75"	3.75"	6"	8"	12"
3 foot	75009272	75009275	75009278	75009281	75009284	75009287
5 foot	75009290	75009293	75009296	75009299	75009302	75009305
8 foot	75009308	75009311	75009314	75009317	75009320	75009323

Variable Speed Control: 10 to 58 ft/min

Length	1.75"	2.75"	3.75"	6"	8"	12"
3 foot	75009273	75009276	75009279	75009282	75009285	75009288
5 foot	75009291	75009294	75009297	75009300	75009303	75009306
8 foot	75009309	75009312	75009315	75009318	75009321	75009324

Adjustable Height Stand Models:

Height	
24 to 36 inches high	75009327
30 to 48 inches high	75009328

(Note: The stand bracket and conveyor add 5" to Top of Belt Height.)

Support Stand Cross Brace Models:

Height	
For 3' Long Conveyor	75009329
For 5' Long Conveyor	75009330
For 8' Long Conveyor	75009331

Surface Mounting Bracket Models:

Height	
2" to 3" Top of Belt Height	75009325
3" to 5" Top of Belt Height	75009326

Conveyor Supports:

Maximum Distances:

1 = 18" (457 mm)

2 = 6 ft (1829 mm)

3 = 18" (457 mm)

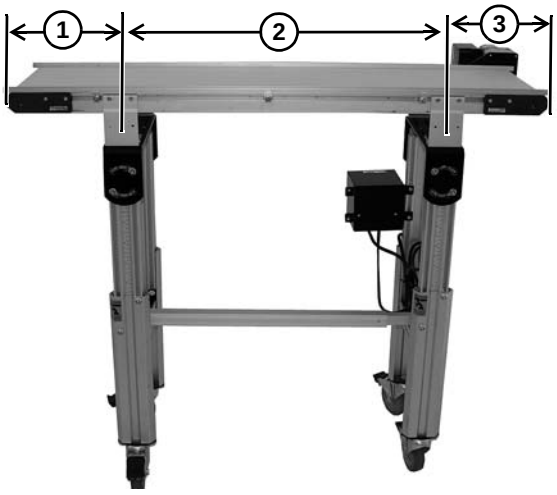


Figure 2

Specifications:

Table 1: Conveyor Speed / Maximum Load Capacity

Fixed Speed Gearmotors

Load Capacity (lbs)	Belt Width (in)					
Speed (ft/min)	**1.75**	**2.75**	**3.75**	**6**	**8**	**12**
9	30	35	42	60	70	80
15	30	35	42	60	70	80
21	30	35	42	57	52	43
35	30	35	34	29	24	14

Variable Speed Motors

Load Capacity (lbs)	Belt Width (in)					
Speed (ft/min)	**1.75**	**2.75**	**3.75**	**6**	**8**	**12**
3 to 15	30	35	42	60	70	80
6 to 35	30	35	42	52	47	37
10 to 58	30	35	27	22	17	8

NOTE

Maximum conveyor loads based on:

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

Table 2: Gearmotor Specifications

Part Number	Output Hp	Input Volts	Input Phase	Input Hz	Amps FLA	Ratio	RPM	Torque in-lb
62M060PL411FN	0.03	115V	1	60	0.46	60	25	38
62M036PL411FN	0.03	115V	1	60	0.46	36	42	26
62M025PL411FN	0.03	115V	1	60	0.46	25	60	18
62M015PL411FN	0.03	115V	1	60	0.46	15	100	12
62M036PL423EN	0.03	230V	3	10 to 60	0.22	36	42	37
62M015PL423EN	0.03	230V	3	10 to 60	0.22	15	100	16.8
62M009PL423EN	0.03	230V	3	10 to 60	0.22	9	167	10.6

Table 3: Variable Speed Controller Specification

Part Number	Input Volts	Input Phase	Input Hz	Output Volts	Output Phase	Output Hz	Max Amps
22MV1106BR	115V	1	60	230	3	10 to 60	0.6

Installation

NOTE

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

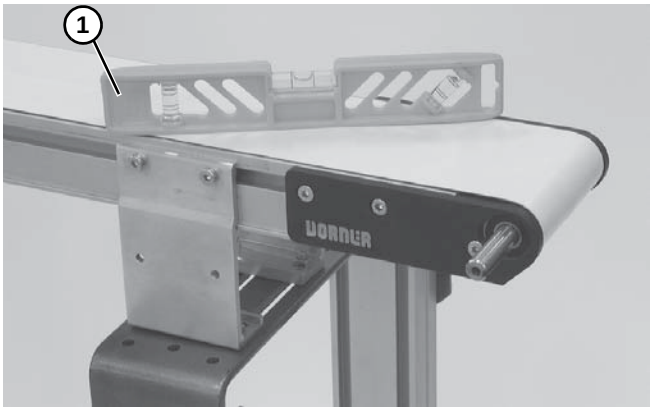


Figure 3

Installation Component List

1	Conveyor with Gearmotor Mounting Package
2	Variable Speed Controller (Optional)
3	Support Stand (Optional)
4	Support Stand Mounting Brackets (Optional)
5	Adjustable Stand Cross Bracket (Optional)
6	Surface Mount Brackets (Optional)

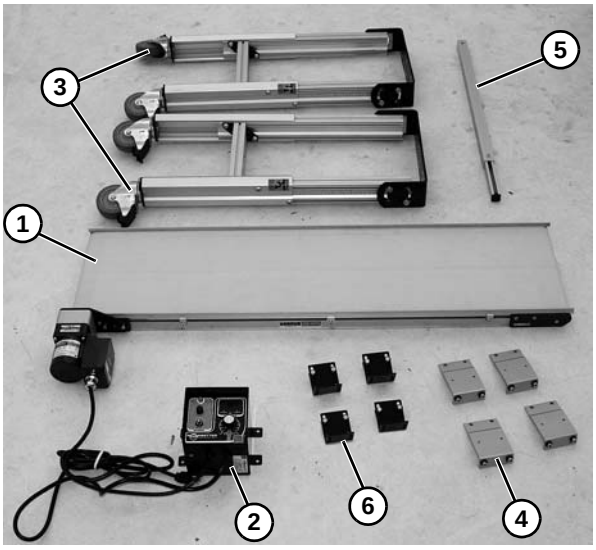


Figure 4

Required Tools

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

Recommended Installation Sequence

- Attach mounting brackets to conveyor (see "Support Stand Mounting Brackets" on page 8 for stand mounting brackets and see "Surface Mount Brackets" on page 9 for surface mounting brackets).
- Attach conveyor to stands (see "Stand Attachment" on page 10).
- Install stand cross brace
- Install variable speed controller

Support Stand Mounting Brackets

1. Locate brackets. Exploded view shown in Figure 5.

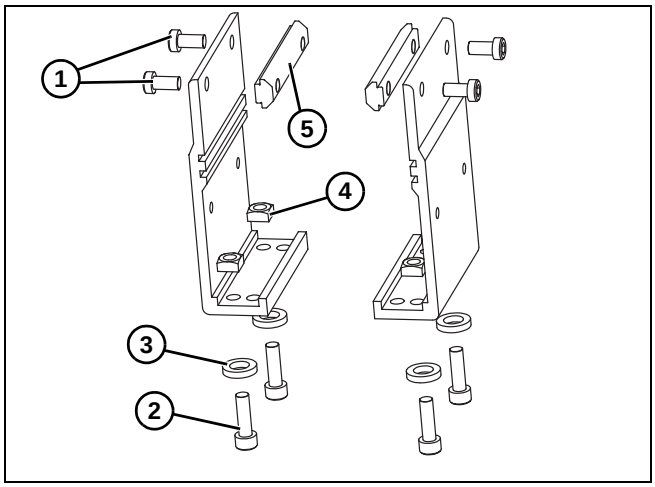


Figure 5

2. Remove screws **(Figure 5, item 1 & 2)**, washers **(Figure 5, item 3)**, nuts **(Figure 5, item 4**) and T-bars **(Figure 5, item 5)** from brackets.
3. Insert T-bars **(Figure 5, item 5)** into conveyor side slots **(Figure 6, item 1)**. Fasten brackets **(Figure 6, item 2)** to conveyor with mounting screws **(Figure 6, item 3)**.

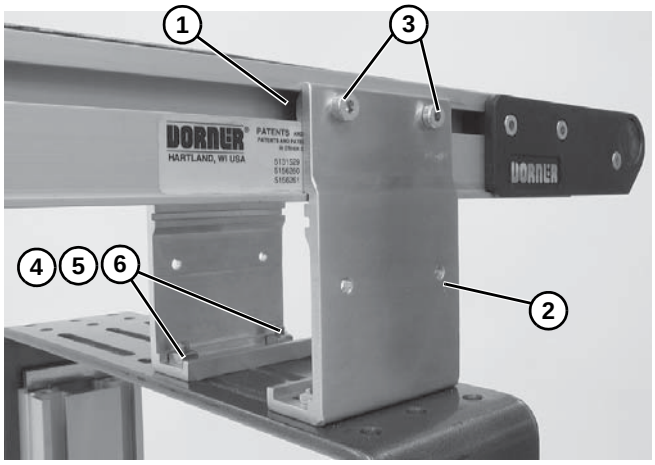


Figure 6

NOTE
Mounting brackets for flat belt conveyors shown.

4. Fasten brackets to support stand with mounting screws **(Figure 6, item 4)**, washers **(Figure 6, item 5)** and nuts **(Figure 6, item 6)**.
5. Tighten screws **(Figure 6, item 3 & 4)** to 60 in-lb (7 Nm).
6. See "Stand Height Adjustment" on page 19 for stand height adjustment.

Surface Mount Brackets

1. Locate brackets. Exploded view shown in Figure 8.

Illustration References

1	Slotted Bracket (2x)
2	M6 T-Bar (2x)
3	Spacer Plate (2x)
4	M6 Screw (4x)
5	M6 Washer (4x)

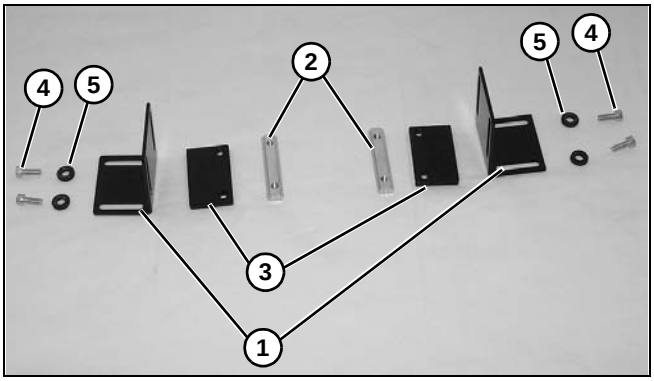


Figure 7

2. Install M6 T-bar **(Figure 8, item 1)** in T-slot **(Figure 8, item 2)**.

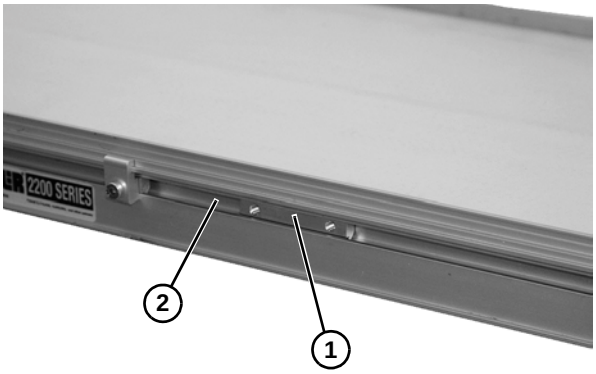


Figure 8

3. Set spacer **(Figure 9, item 1)** on conveyor lip **(Figure 9, item 2)**.

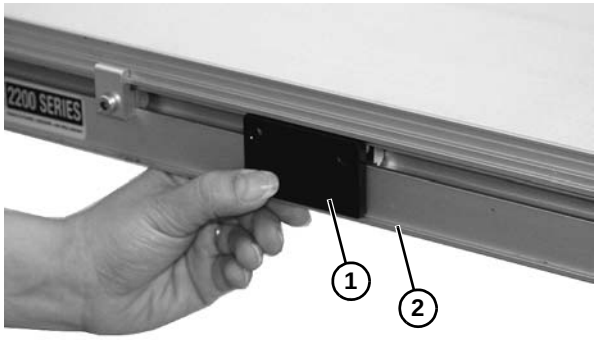


Figure 9

4. Mount slotted bracket **(Figure 10, item 1)** to conveyor frame with M6 screws **(Figure 10, item 2)**.

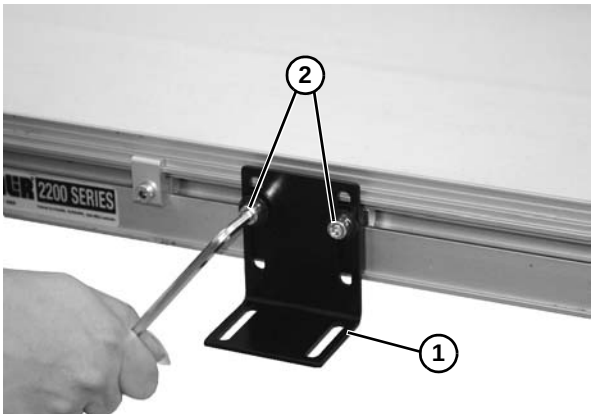


Figure 10

5. Adjust height as required. Tighten M6 screws to 80 in-lb (9 Nm).
6. Repeat for opposite side of conveyor.

Installation

Adjustable Cross Brace

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

Required Tools

- 5 mm hex key wrench
- Torque wrench

Illustration References:

1	M6 T-Bar (2x)
2	Adjustable Bar
3	M6 x 40 mm Socket Head Screw (2x)

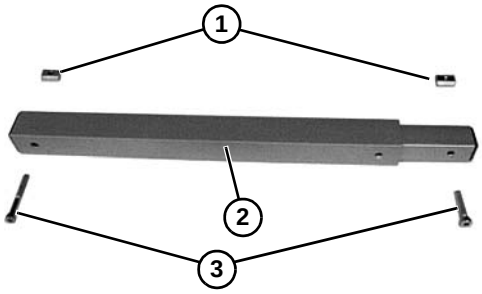


Figure 11

Stand Attachment

1. Loosen screw **(Figure 12, item 1)** of adjustable bar **(Figure 12, item 2)**.

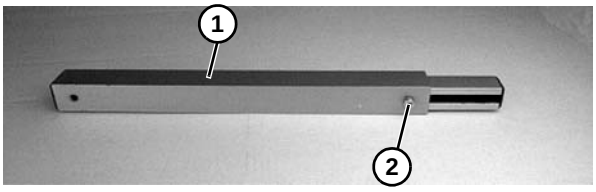


Figure 12

2. Install T-bar **(Figure 13, item 1)** in inner T-slot of stand leg **(Figure 13, item 2)**.

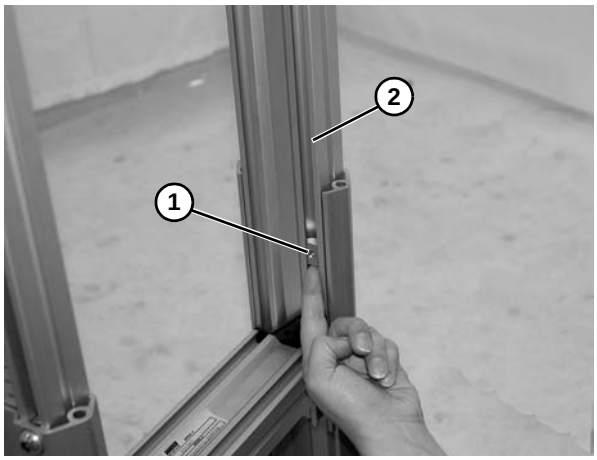


Figure 13

3. Loosely attach adjustable bar **(Figure 14, item 1)** or **(Figure 15, item 1)** to aluminum stand T-slot as required.

- Attach outer tube end with screw **(Figure 14, item 2)**.

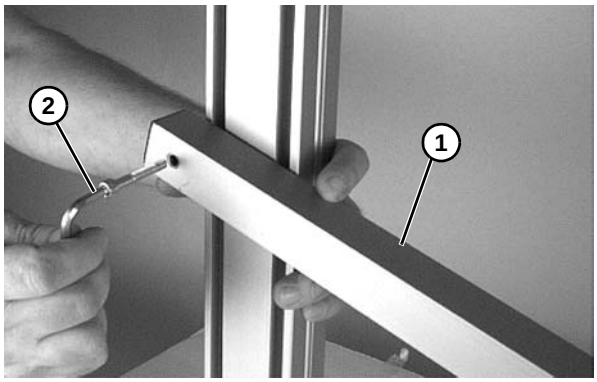


Figure 14

- Attach inner channel end with screw **(Figure 15, item 2)**.

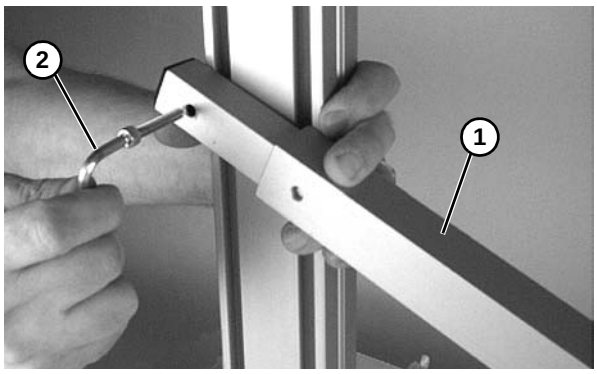


Figure 15

⚠ WARNING

Failure to secure three screws (Figure 16, item 1), may cause conveyor sections to drop down, causing severe injury.

TIGHTEN SCREWS AFTER ADJUSTMENT.

4. Tighten three screws **(Figure 16, item 1)**, to 80 in-lb (9 Nm).

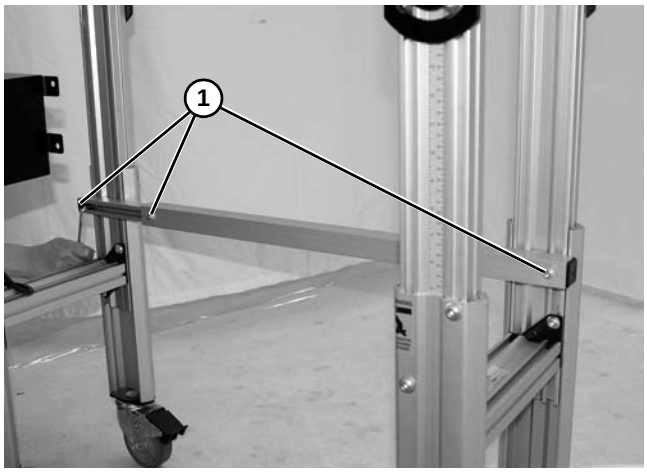


Figure 16

Variable Speed Controller

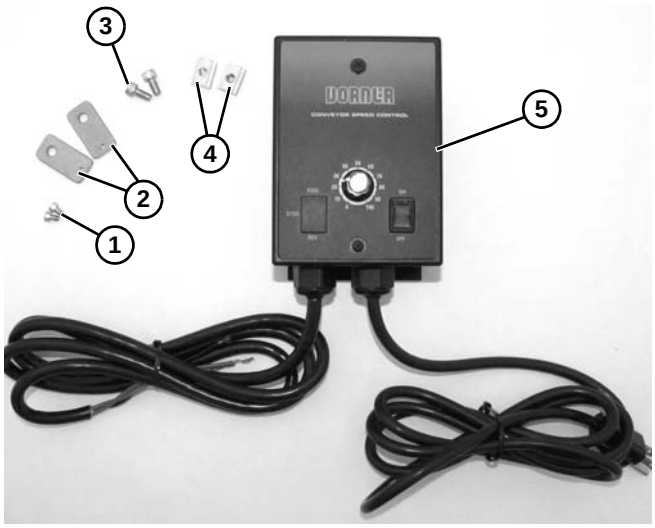
Variable Speed Controller Mounting to Conveyor

Typical Variable Speed Mounting on Conveyor

Figure 17

Illustration References:

Item	Part Number	Description
1	920406M	Socket Head Screw, M4-0.70 x 6 mm
2	202658	Mounting Clip (x2)
3	920612M	Socket Head Screw, M6-1.00 x 12 mm (x2)
4	639971M	T-Bar, Single Drop-In (x2)
5	827-103	Controller
	827-102	Reversing Controller



Shipping Package

Figure 18

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Assemble mounting clips **(Figure 19, item 1)** with screws **(Figure 19, item 2)** to the top of the controller.

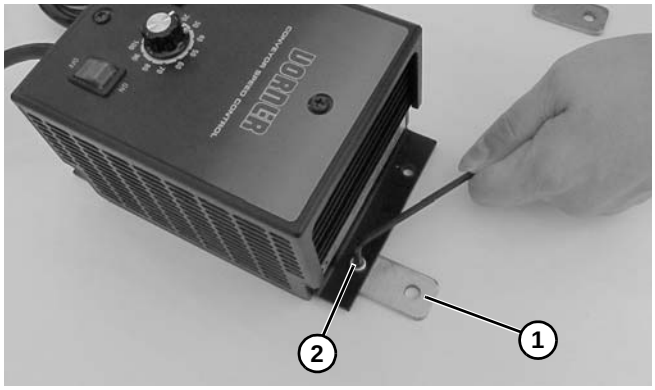


Figure 19

2. Install T-bars **(Figure 20, item 1)** into T-slots of conveyor.

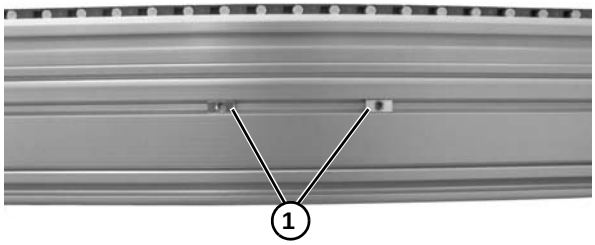


Figure 20

3. Attach controller to conveyor with two screws **(Figure 21, item 1)**.

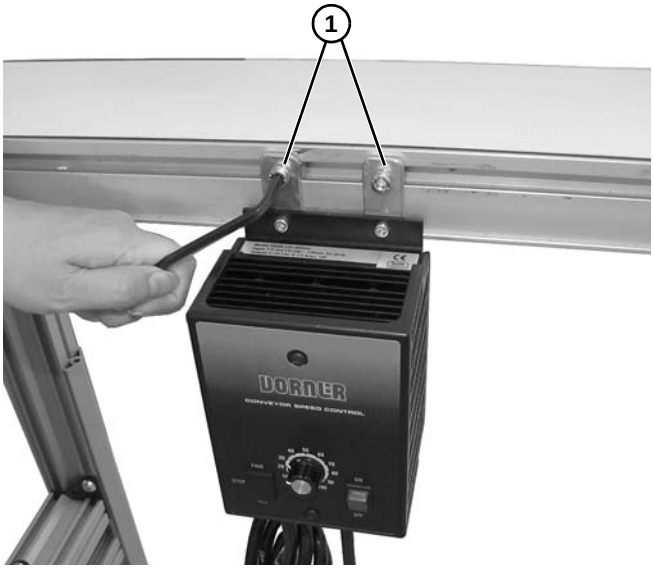


Figure 21

4. Slide controller to its desired mounting location along conveyor and tighten both screws.

Variable Speed Controller Mounting to Stand Leg

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Assemble mounting clips **(Figure 22, item 1)** with screws **(Figure 22, item 2)** to the side of the controller.

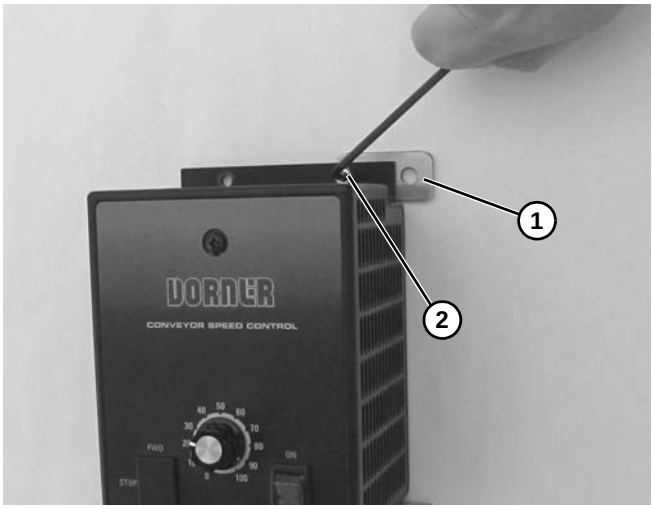


Figure 22

2. Install T-bars **(Figure 23, item 1)** into T-slots of stand leg.

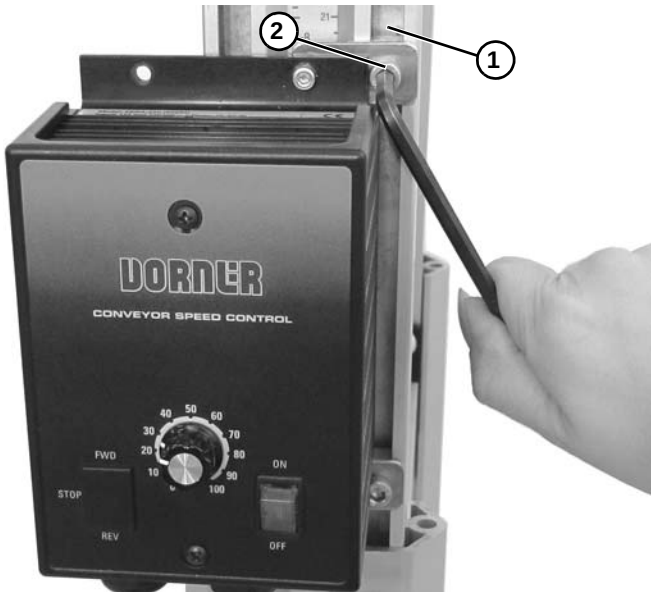


Figure 23

3. Attach controller to stands with two screws **(Figure 23, item 2)**.
4. Slide controller to its desired mounting location along conveyor and tighten both screws.

Required Tools

Standard Tools

- Hex-key wrenches:
  2.5 mm, 4 mm, 5 mm, 6 mm
- Arbor press

Special Tools

- 807–1716 Bearing Puller Tool (or equivalent)
- 450292 Bearing Installation Tool (Pusher Sleeve)
- 450293 Bearing Installation Tool (Bearing Pusher)
- 456063 Bearing Removal Tool

Checklist

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

Lubrication

No lubrication is required. Replace bearings if worn.

Maintaining Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

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

Surface cuts and wear indicate:

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

Stalling or slipping indicates:

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

Damage to V-guide indicates:

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

Cleaning

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

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

Conveyor Belt Replacement

⚠ WARNING

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

Conveyor Belt Replacement Sequence

- Release tension
- Remove old conveyor belt:
  - Conveyor with Stands and Gearmotor Mounting Package
- Install new conveyor belt
- Tension conveyor belt

Belt Removal for Conveyor With Stands and Gearmotor Mounting Package

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Place temporary support stands **(Figure 24, item 1)** at both ends of the conveyor. Place an additional support stand **(Figure 24, item 2)** under the drive motor **(Figure 24, item 3)**, if equipped. See WARNING.

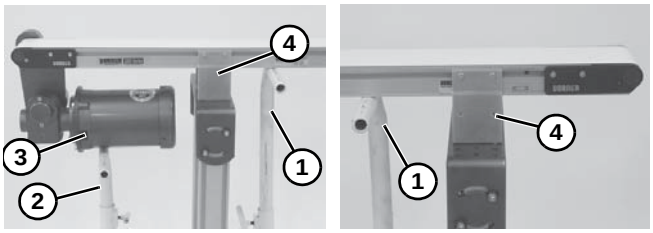


Figure 24

2. Remove mounting brackets **(Figure 24, item 4)** from one side of conveyor. (Reverse steps in "Support Stand Mounting Brackets" on page 8 or "Surface Mount Brackets" on page 9.) If equipped with heavy load drive package, remove brackets from side opposite drive **(Figure 25, item 1)**.

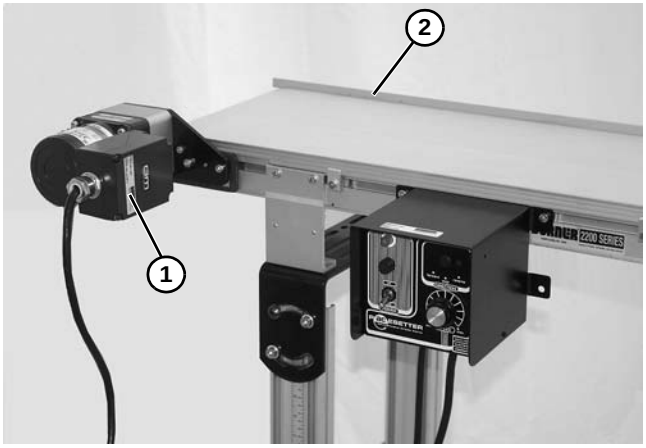
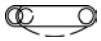


Figure 25

3. If equipped, remove return rollers, guiding **(Figure 25, item 2)** and accessories from side opposite drive **(Figure 25, item 1)**.

4. On tension end of the conveyor, identified with  a label **(Figure 26, item 1)**, push in head plate assembly **(Figure 26, item 2)**:

   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 26, item 3)** (if equipped) away from head plates.

   b. Loosen fastening screws **(Figure 26, item 4)** and push head plate assembly inward.

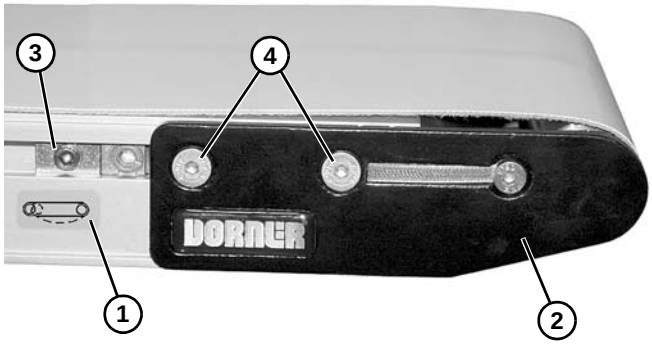


Figure 26

5. Remove belt **(Figure 27, item 1)** from conveyor.

Figure 27

Belt Installation for Conveyor with Stands and Gearmotor Mounting Package

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Ensure temporary support stands **(Figure 24, item 1)** are placed at both ends of the conveyor. Place an additional support stand under the drive motor **(Figure 24, item 3)**, if equipped. See WARNING.
2. Orient belt so splice leading fingers **(Figure 28, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 28, item 2)**.

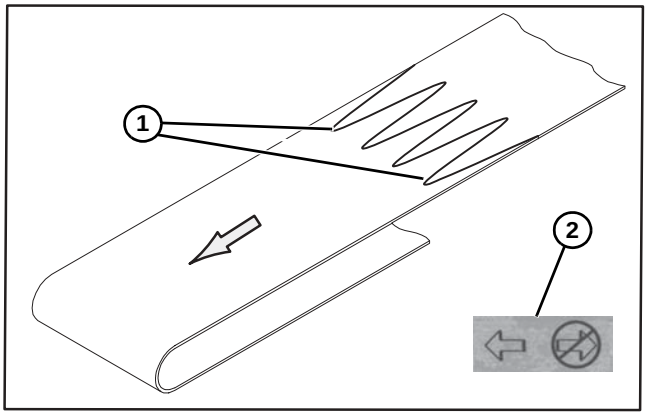


Figure 28

3. Install belt **(Figure 29, item 1)** on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.

Figure 29

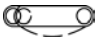
4. Re-install conveyor mounting brackets. Refer to “Support Stand Mounting Brackets” on page 8 or “Surface Mount Brackets” on page 9.
5. Tension belt. Refer to “Conveyor Belt Tensioning” on page 15.
6. If equipped, re-install return rollers and guiding.

Conveyor Belt Tensioning

⚠ WARNING

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

Conveyors with 1.25" (32 mm) Diameter Pulleys

1. On tension end of the conveyor, identified with  a label **(Figure 30, item 1)**, push in head plate assembly **(Figure 30, item 2)**:
   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 30, item 3)** (if equipped) away from head plates.
   b. Loosen fastening screws **(Figure 30, item 4)** and push head plate assembly inward.

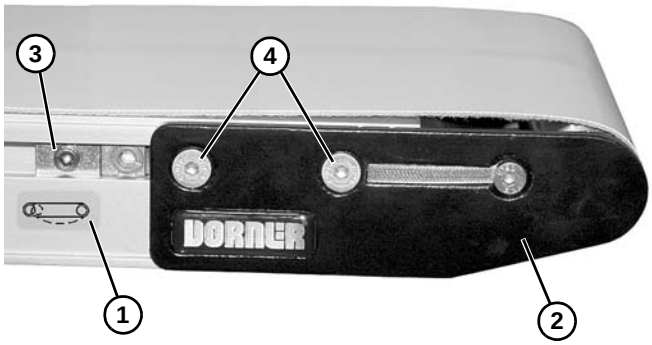


Figure 30

2. Adjust head plate assembly so end of conveyor frame aligns with or between the head plate tensioning marks **(Figure 31, item 1 & 2)**. Replace belt if proper tensioning can not be obtained while aligning the end of the conveyor frame with or between the tensioning marks. See NOTE.

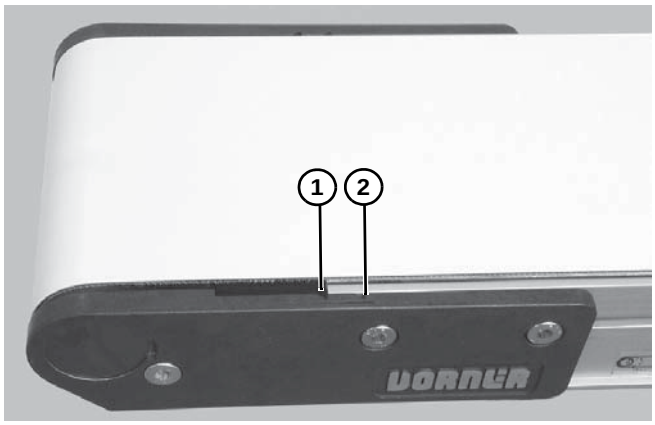


Figure 31

NOTE

On pinion gear, do not exceed a torque of 25 in-lb (2.8 Nm) for 2 – 12" (44 – 305 mm) wide conveyors and 50 in-lb (4.5 Nm) for an 18 – 24" (457 – 610 mm) wide conveyor. Over tensioning the conveyor belt could cause excessive pulley bearing load and early failure.

3. After adjusting proper tensioning, tighten fastening screws **(Figure 32, item 1)** on both sides of conveyor to 60 in-lb (7 Nm).

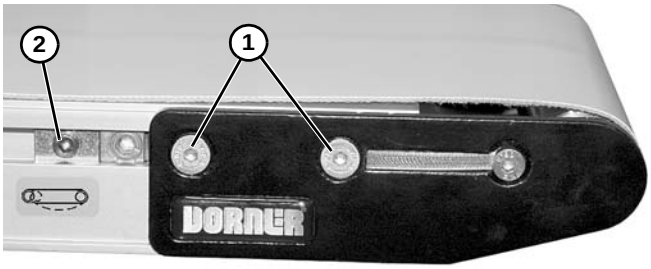


Figure 32

4. If equipped with cam tracking assemblies **(Figure 32, item 2)**, position against head plates and adjust belt tracking. Refer to “Conveyor Belt Tracking” on page 16.

Conveyor Belt Tracking

V-Guided Belts

V-guided belts do not require tracking adjustment.

Pulley Removal

⚠ WARNING

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

Leaving the conveyor belt in place, remove the desired pulley following the corresponding instructions below:

- A – Idler Pulley Removal
- B – Drive Pulley Removal

A – Idler Pulley Removal

1. On one side of the conveyor, remove screw **(Figure 33, item 1)** and remove dust cover **(Figure 33, item 1)**, if installed.

NOTE

To prevent damage to the head plates, be sure to remove them slowly because they are not attached to pulley.

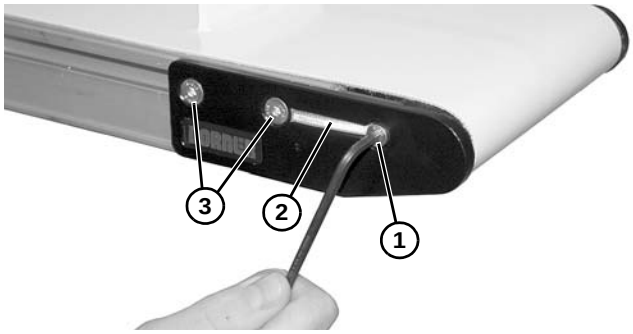


Figure 33

2. Remove two fastening screws **(Figure 33, item 3)**.
3. Remove the head plate **(Figure 34, item 1)** from the conveyor frame, holding spindle in place.

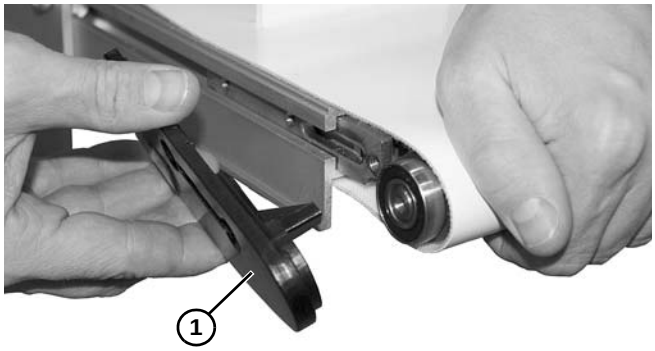


Figure 34

4. Slide spindle out of the belt loop.
5. To replace the idler tail pulley, reverse the removal procedure.
6. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 15.
7. If installed, re-position the cam assemblies against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 16.

B – Drive Pulley Removal

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

1. Remove belt tension.
2. On one side of the conveyor, remove screw **(Figure 35, item 1)** and remove dust cover **(Figure 35, item 2)**, if installed.

NOTE

To prevent damage to the head plates, be sure to remove them slowly because they are not attached to pulley.

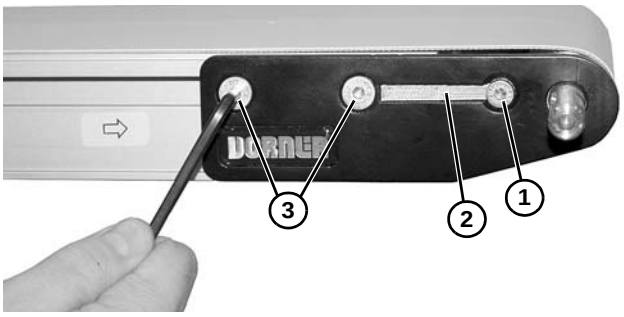


Figure 35

3. Remove two fastening screws **(Figure 35, item 3)**.

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

4. Remove the head plate **(Figure 36, item 1)** from the conveyor frame, holding spindle in place.

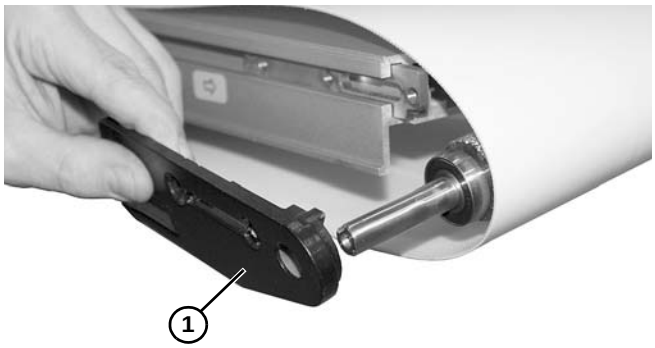


Figure 36

5. Slide the drive pulley out of the belt loop.
6. To replace the drive tail pulley, reverse the removal procedure.
7. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 15.
8. If installed, re-position the cam assemblies against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 16.

Bearing Removal & Replacement

Removal

IMPORTANT

Do not use any removed bearings. Replace them.

1. Place bearing removal tool part #456063 **(Figure 37, item 1)** below bearing **(Figure 37, item 2)** with lip **(Figure 37, item 3)** located in gap **(Figure 37, item 4)** between bearing and spindle hub **(Figure 37, item 5)** as shown.

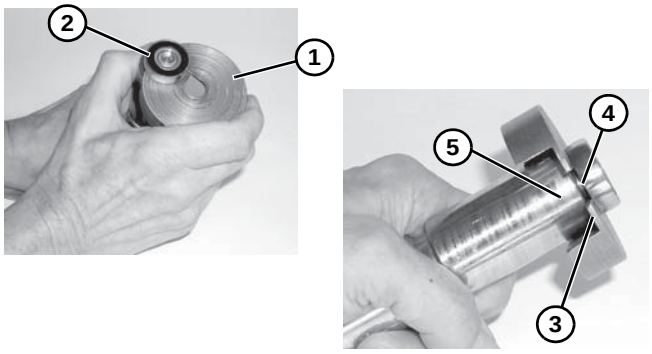


Figure 37

2. Using puller part #807−1716 **(Figure 38, item 1)**, remove and discard bearing.

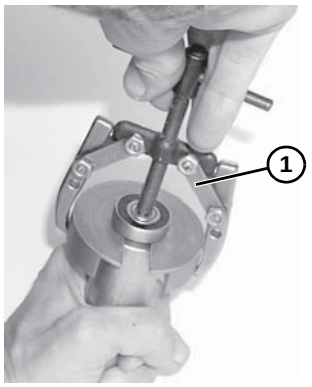


Figure 38

Replacement

1. Inspect the head plates bearing seating surface **(Figure 39, item 1)**. If they are worn or damaged, replace. See "Service Parts" on page 24.

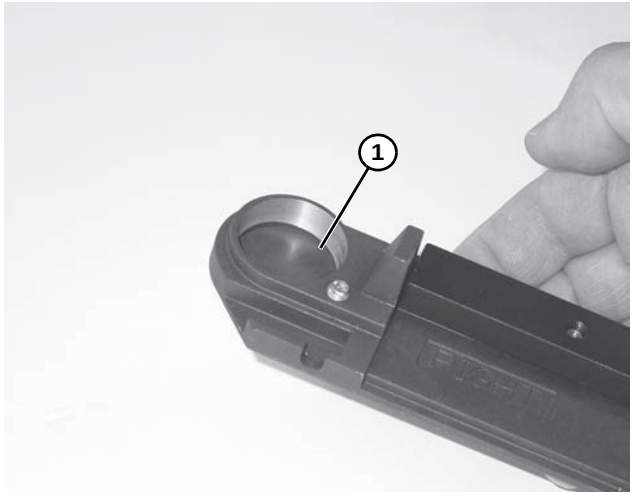


Figure 39

2. Inspect spindle **(Figure 40, item 1)**. Replace if worn.
3. Slide bearing **(Figure 40, item 2)** onto spindle.

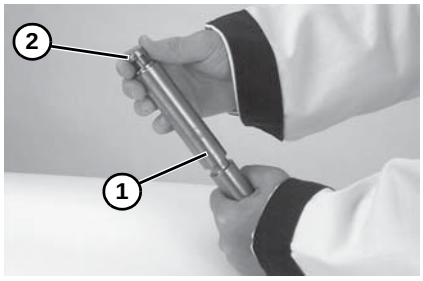


Figure 40

4. Slide sleeve **(Figure 41, item 1)** of tool over bearing.

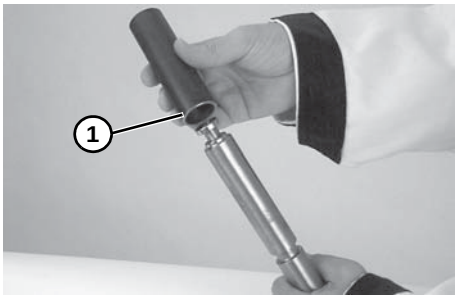


Figure 41

5. Place open end of pusher **(Figure 42, item 1)** into sleeve.

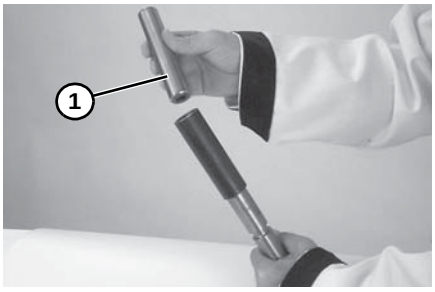


Figure 42

6. Using an arbor press or similar device, press bearing onto pulley shaft **(Figure 43)**.

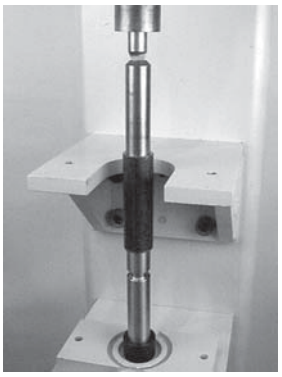


Figure 43

7. Repeat steps 1 through 5 for each bearing.

Drive Pulley and Idler Pulley Installation

Drive Pulley Installation

1. With opposite head plate installed, position the drive pulley through the loop of the belt, into the opposite head plate.
2. Place the head plate **(Figure 44, item 1)** and attach the head plate to the conveyor frame with the two (2) screws removed. Tighten screws 60 in-lb (7 Nm).

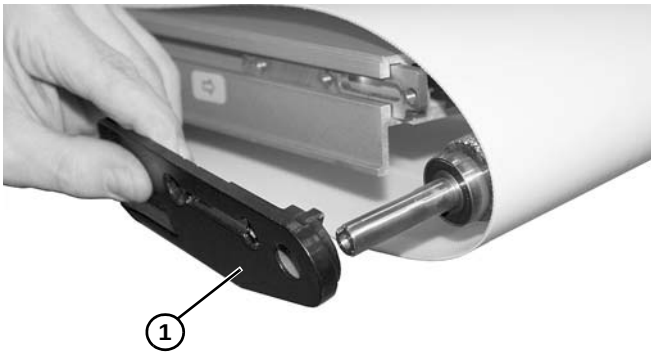


Figure 44

Idler Pulley Installation

1. With opposite head plate installed, position the idler pulley through the loop of the belt, into the opposite head plate.
2. Place the head plate **(Figure 45, item 1)** and attach the head plate to the conveyor frame with the two (2) screws removed and hand tighten.

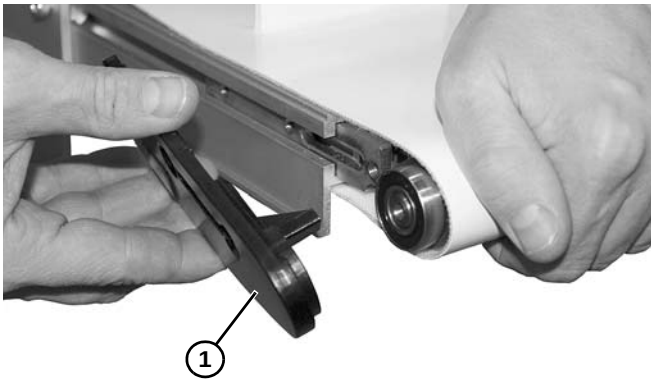


Figure 45

Stand Height Adjustment

Height Adjustment for Fixed and Adjustable Height Stands

Required Tools

- 6 mm Hex Key Wrench

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

⚠ WARNING

Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing severe injury.

SUPPORT CONVEYOR SECTIONS PRIOR TO LOOSENING STAND HEIGHT OR ANGLE ADJUSTMENT SCREWS.

1. Using a support **(Figure 46, item 1)**, raise conveyor and stand off the floor.

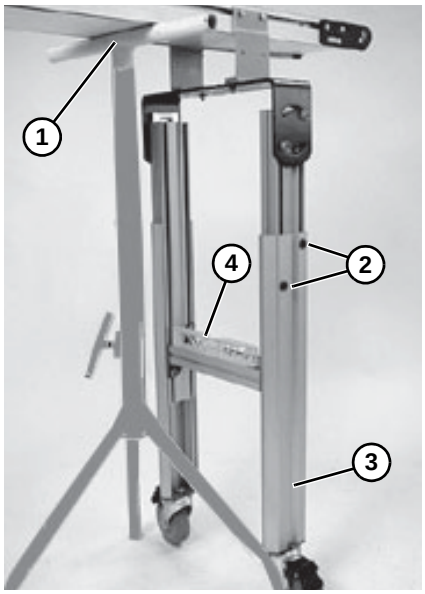


Figure 46

2. Loosen button screws **(Figure 46, item 2)**.
3. Raise or lower stand leg **(Figure 46, item 3)** to the required height. Level stand from side to side using a level **(Figure 46, item 4)**.

⚠ WARNING

Failure to secure screws (Figure 46, item 2) may cause conveyor sections to drop down causing severe injury.

TIGHTEN SCREWS (Figure 46, item 2) AFTER ADJUSTMENT.

4. Tighten button screws **(Figure 46, item 2)** to 150 in–lb (17 N–m).
5. Repeat steps 2 through 4 on opposite stand leg.

Gearmotor Mounting Package Removal

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Loosen two (2) screws **(Figure 47, item 1)**.

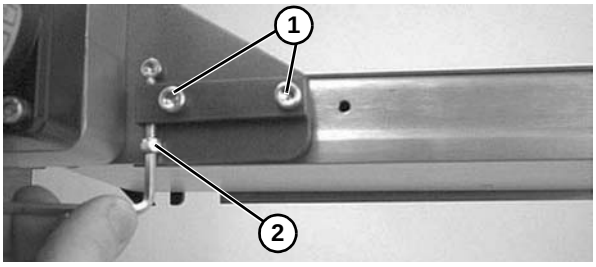


Figure 47

2. Loosen timing belt tensioner screw **(Figure 47, item 2)**.
3. Remove four (4) screws **(Figure 48, item 1)**. Remove gearmotor **(Figure 48, item 2)** and cover **(Figure 48, item 3)**.

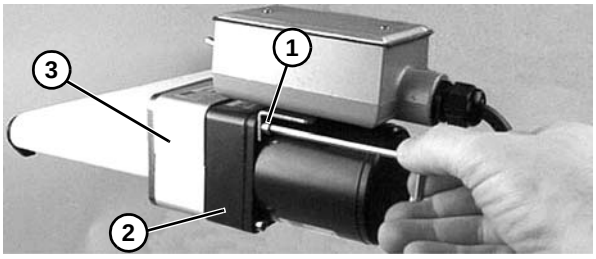


Figure 48

4. Remove timing belt **(Figure 49, item 1)**.

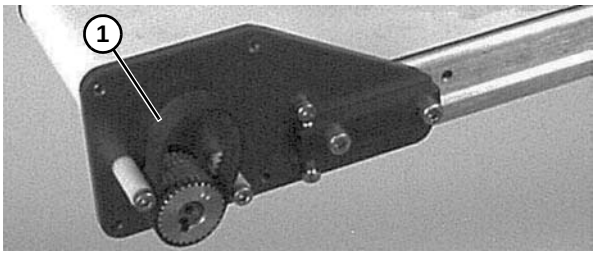


Figure 49

5. Loosen set screws **(Figure 50, item 1)** and remove driven pulley **(Figure 50, item 2)**.

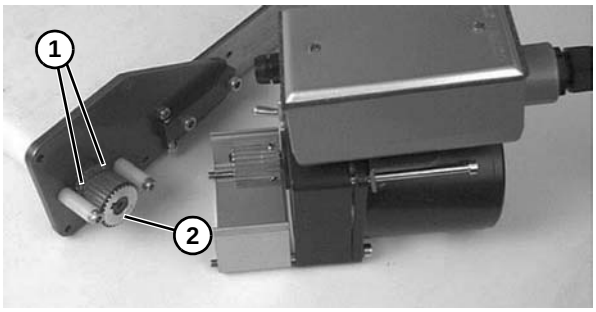


Figure 50

6. Replace drive or driven pulley. See “Drive or Driven Timing Pulley Replacement” on page 21. Tighten screws to 80 in-lb (9 Nm).
7. Complete steps 5-9 of “Timing Belt Replacement” on page 21. See “Drive or Driven Timing Pulley Replacement” on page 21.

Timing Belt Tensioning

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Loosen two (2) screws **(Figure 51, item 1)**. Tighten timing belt tensioner screw **(Figure 51, item 2)** to 15 in-lb (1.7 Nm).

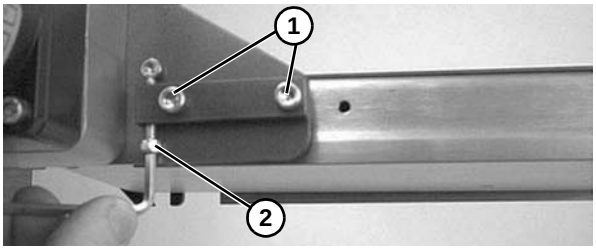


Figure 51

2. Tighten screws **(Figure 51, item 1)** to 80 in-lb (9 Nm).

Timing Belt Replacement

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Loosen two (2) screws **(Figure 51, item 1)**.
2. Loosen timing belt tensioner screw **(Figure 51, item 2)**.
3. Remove four (4) screws **(Figure 52, item 1)**. Remove gearmotor **(Figure 52, item 2)** and top cover **(Figure 52, item 3)**.

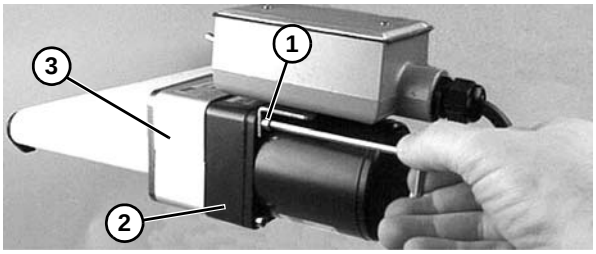


Figure 52

4. Remove old timing belt **(Figure 53, item 1)**.

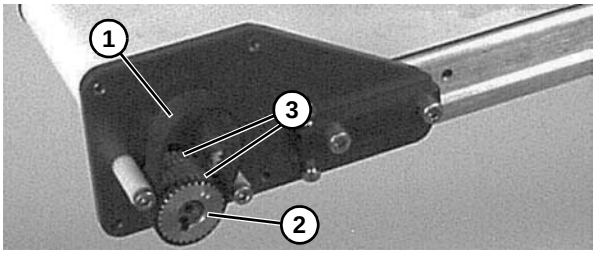


Figure 53

5. Place new timing belt **(Figure 53, item 1)** over driven pulley **(Figure 53, item 2)** and between belt flanges **(Figure 53, item 3)**.
6. Insert gearmotor drive pulley into timing belt. Mount assembly with two (2) bottom screws **(Figure 54, item 1)**. Tighten to 45 in-lb (5 Nm).

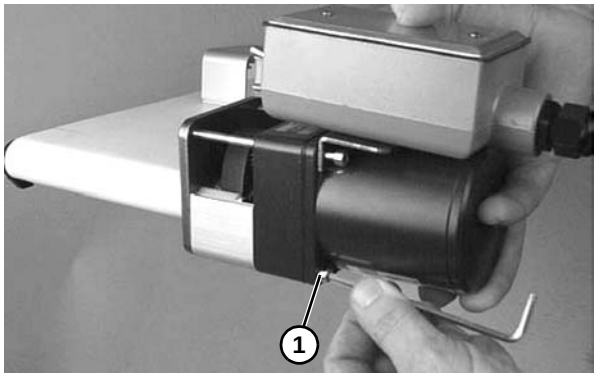


Figure 54

7. Insert top cover **(Figure 52, item 3)** into bottom cover. Mount assembly with two (2) top screws **(Figure 52, item 1)**. Tighten to 45 in-lb (5 Nm).
8. Tighten timing belt tensioner screw **(Figure 51, item 2)** to 15 in-lb (1.7 Nm)
9. Tighten screws **(Figure 51, item 1)** to 80 in-lb (9 Nm).

Drive or Driven Timing Pulley Replacement

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Complete steps 1 through 4 of "Timing Belt Replacement" on page 21.

2. Loosen set screws **(Figure 55, item 1)** and remove driven pulley **(Figure 55, item 2)** or drive pulley **(Figure 55, item 3)**.

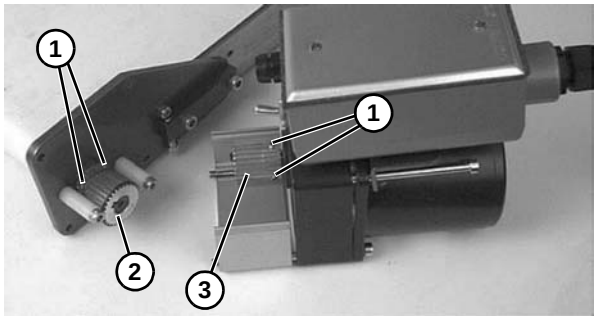


Figure 55

3. Replace drive or driven pulley. Tighten set screws to 33 in-lb (3.7 Nm).
4. Complete steps 5 through 9 of "Timing Belt Replacement" on page 21.

Gearmotor Replacement

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

⚠ DANGER

Hazardous voltage will cause severe injury or death.

LOCKOUT POWER BEFORE before wiring.

1. For single phase motor, unplug power cord from outlet.
2. For variable speed motor, unplug cord at disconnect **(Figure 56, item 1)**.

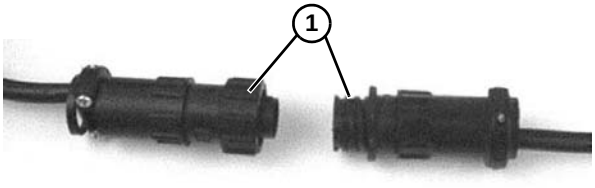


Figure 56

3. Remove four (4) screws **(Figure 57, item 1)**. Remove gearmotor **(Figure 57, item 2)** and top cover **(Figure 57, item 3)**.

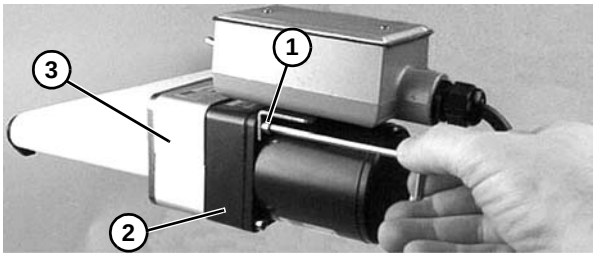


Figure 57

4. Loosen set screws **(Figure 58, item 1)** and remove drive pulley **(Figure 58, item 2)**.

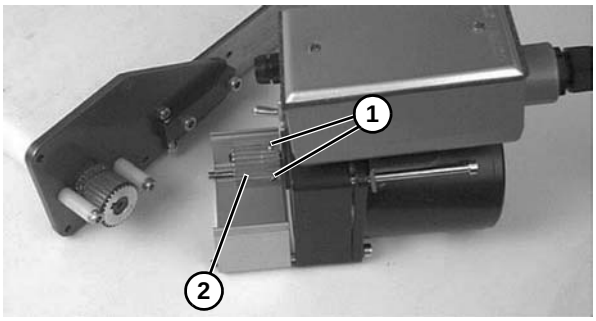


Figure 58

5. Replace drive pulley **(Figure 58, item 2)** on new gearmotor and tighten set screws **(Figure 58, item 1)** to 33 in-lb (3.7 Nm).
6. Complete steps 5 through 9 of "Timing Belt Replacement" on page 21.
7. Replace wiring:

- For a single phase motor, reverse step 1.
- For variable speed motor, reverse step 2.

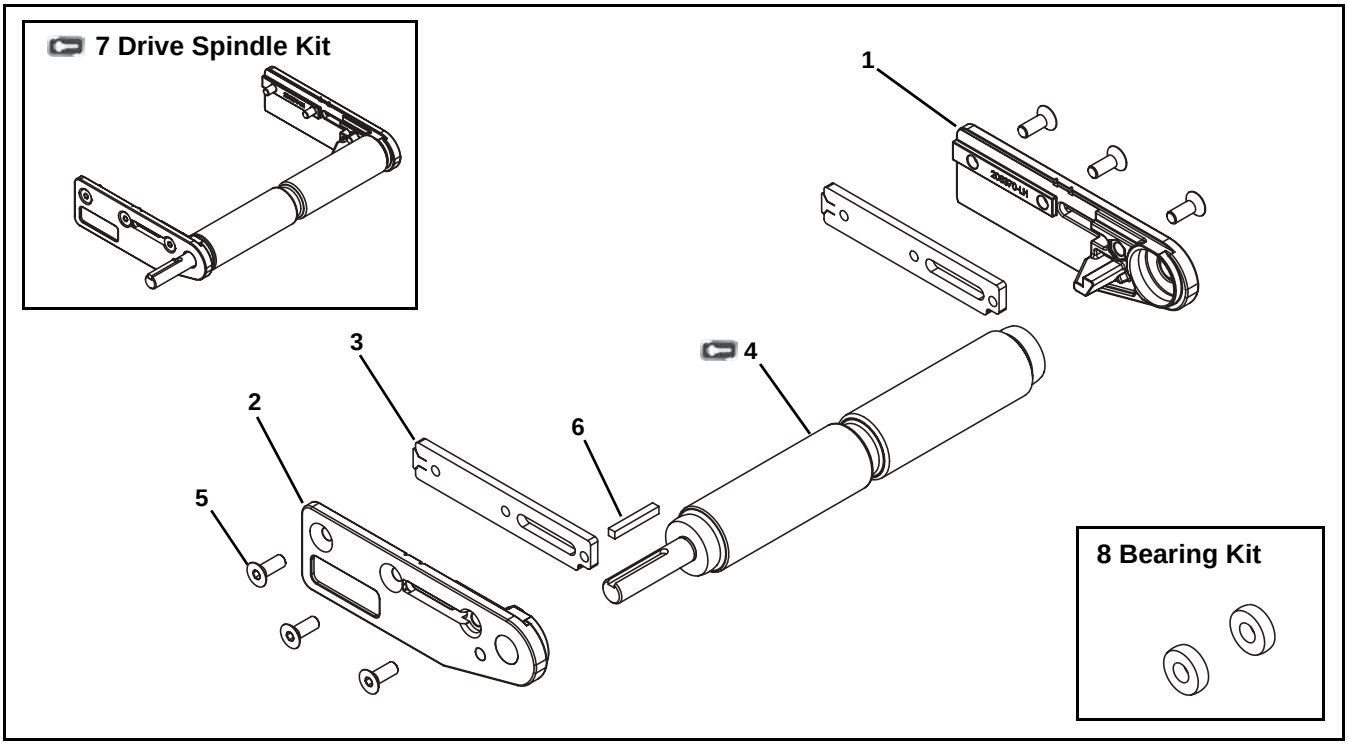
Notes

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.

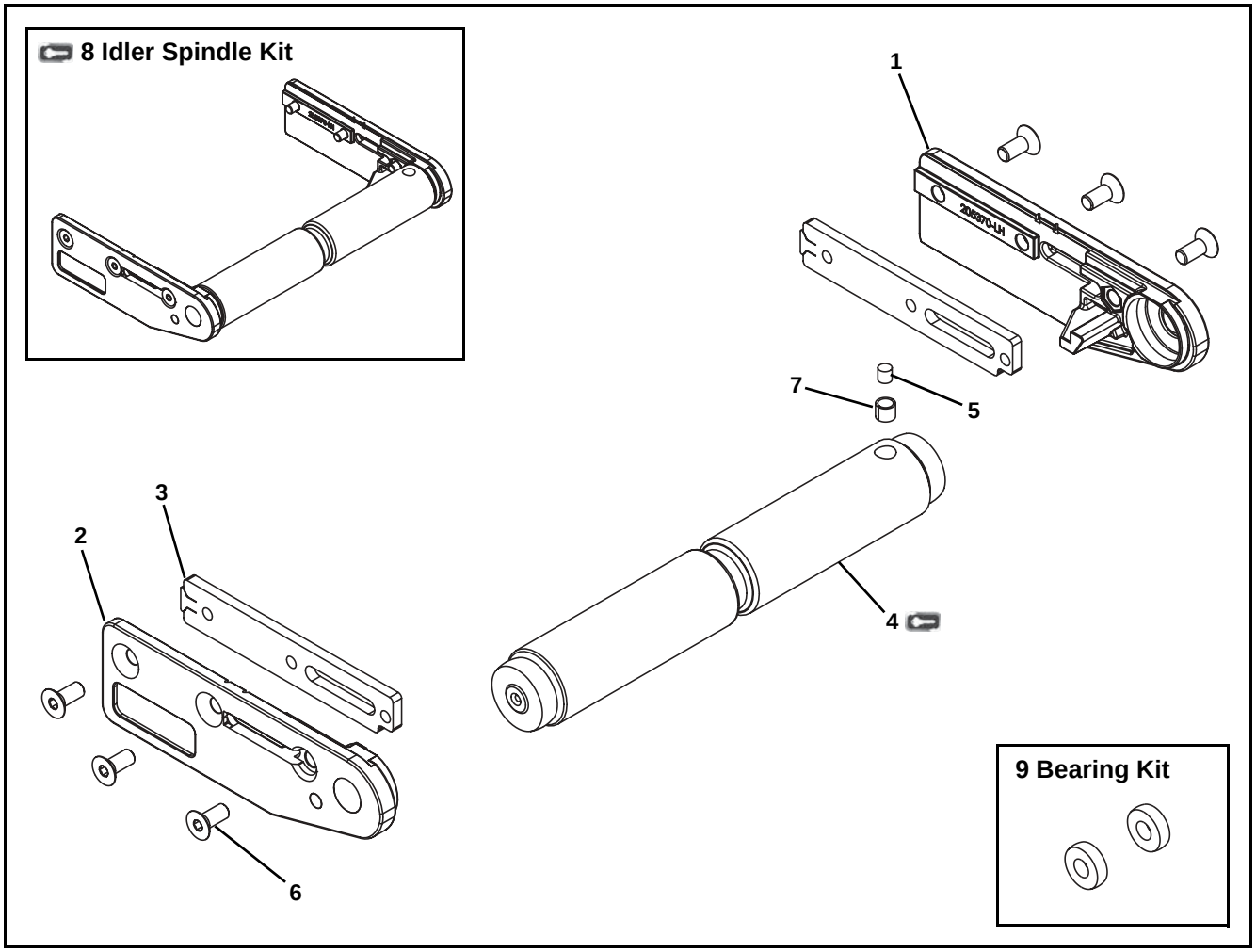
End Drive Tail



Item	Part Number	Description
1	205370-LH	Head Plate, Left Hand
2	205370-RH	Head Plate, Right Hand
3	206006	Tail Nut Bar
4	203713-WW	Drive Spindle Assembly
	203714-WW	Dual Shaft Drive Spindle Assembly
	203717-WW	Common Drive - Drive Conveyor Spindle Assembly (Drive Shaft & One Stub Shaft)
	203716-WW	Common Drive -Mid Conveyor Spindle Assembly (Two Stub Shafts)
	203715-WW	Common Drive -End Conveyor Spindle Assembly (One Stub Shaft)
	203723-WW	Lagged Drive Spindle
	203724-WW	Lagged Dual Shaft Drive Spindle
	203727-WW	Lagged Common Drive - Drive Conveyor Spindle (Drive Shaft & One Stub Shaft)
	203726-WW	Lagged Common Drive - Mid Conveyor Spindle (Two Stub Shafts)
	203725-WW	Lagged Common Drive - End Conveyor Spindle (One Stub Shaft)
5	930614M	Flat Head Screw, M6-1.00 x 10.7 mm
6	980428M	Square Key, 4 mm x 28 mm

Item	Part Number	Description
7	22V2FO-WW	Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FK-WW	Dual Shaft Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FS-WW	Common Drive - Drive Conveyor Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FLO-WW	Lagged Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FLK-WW	Lagged Dual Shaft Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FLS-WW	Lagged Common Drive - Drive Conveyor Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
8	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
WW = Conveyor width reference: 02, 03, 04, 06, 08, 12		

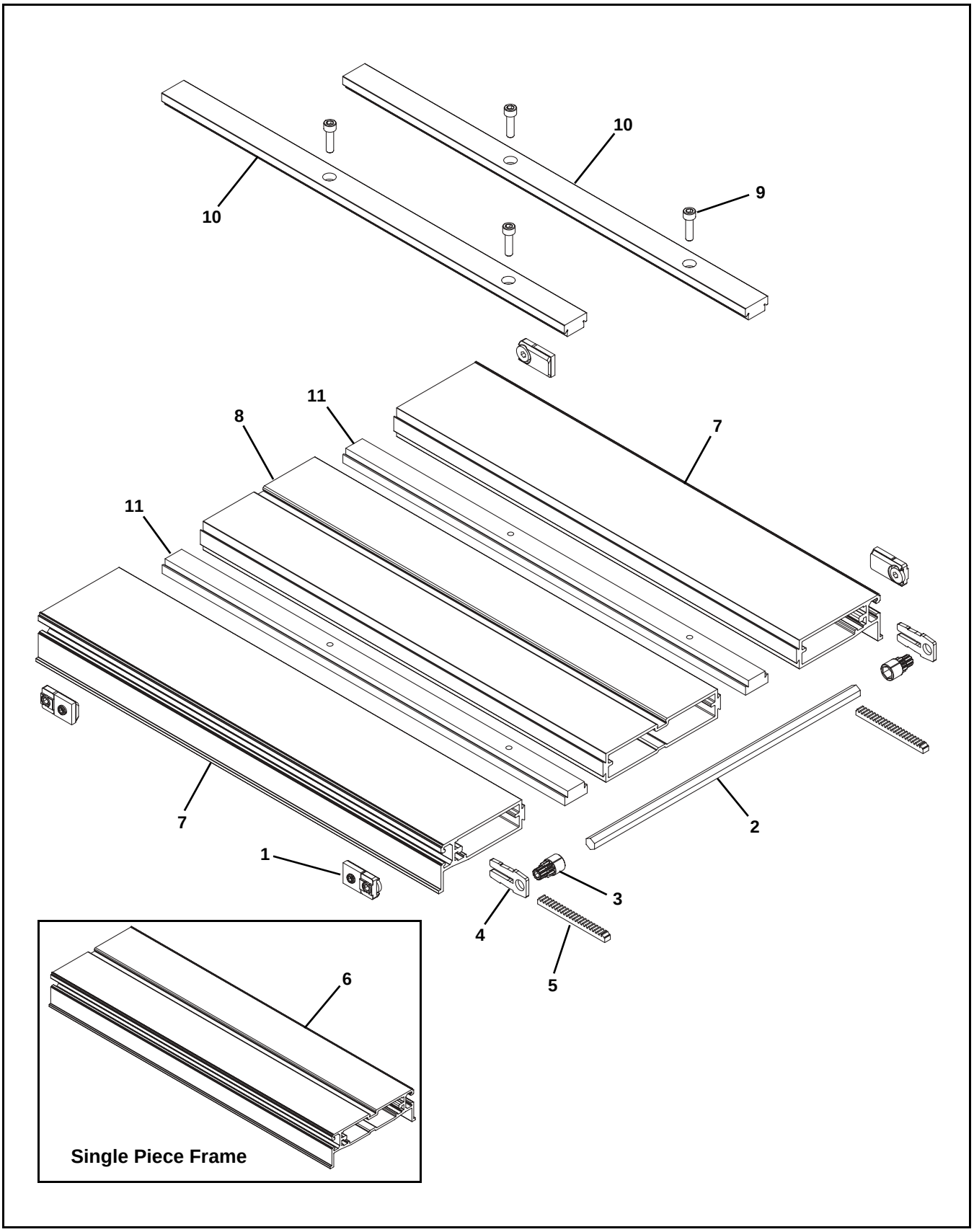
Idler Tail



Item	Part Number	Description
1	205370-LH	Head Plate, Left Hand
2	205370-RH	Head Plate, Right Hand
3	206006	Tail Nut Bar
4	201273-WW	Standard Spindle Assembly
	203715-WW	Spindle with One Stub Shaft Assembly
	203716-WW	Spindle with Two Stub Shafts Assembly
5	808-020	Magnet (Optional)
6	930614M	Flat Head Screw, M6-1.00 x 10.7 mm
7	450226SSP	Magnet Sleeve (Optional)
8	22V2TO-WW	Standard Idler Spindle Kit (Includes Items 1, 2, 4, and 6)
	22V2TM-WW	Idler Spindle Kit with Magnet (Includes Items 1, 2, 4, 5, 6, and 7)
	22V2TS-WW	Idler Spindle Kit with One Stub Shaft (Includes Items 1, 2, 4, and 6)
9	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
WW = Conveyor width reference: 02, 03, 04, 06, 08, 12		

Service Parts

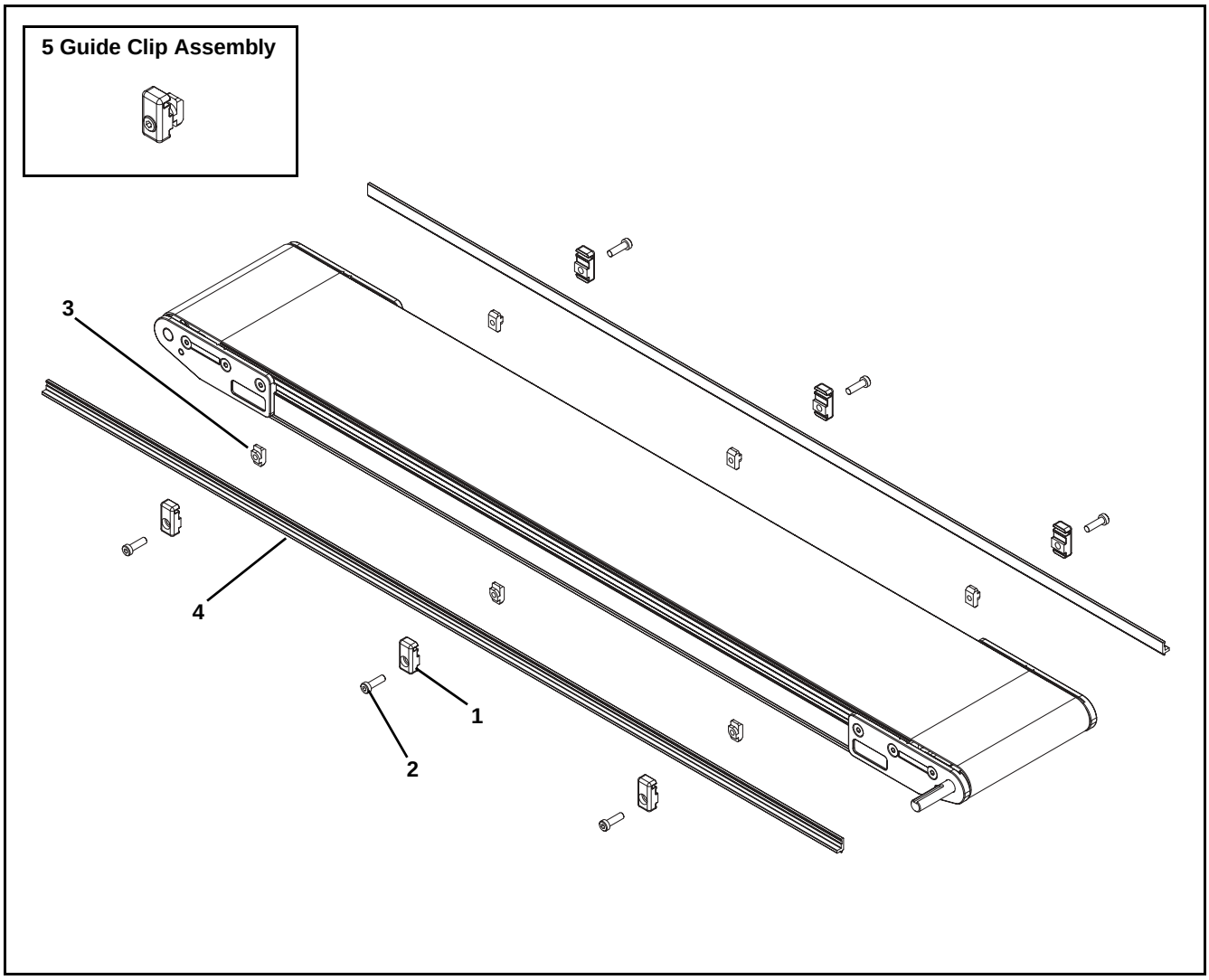
Frame Assembly



Item	Part Number	Description
1	203597	Tracking Block Assembly
2	205469-WW	Hex Pinion, for 3"- 24" wide Conveyors
3	207145	Pinion End Gear, for 2" wide Conveyors
	205383	Pinion End Gear, for 3"- 24" wide Conveyors
4	205450	Retaining Plate
5	203596	Gear Rack
6	203629-WW-LLLLL	Single Piece Frame, for 2"- 12" wide Conveyors
7	205393-LLLLL	Outside Frame, for Multi Piece 14" & 20" wide Conveyors (Qty. 2)
	205394-LLLLL	Outside Frame, for Multi Piece 16" & 22" wide Conveyors (Qty. 2)
	205395-LLLLL	Outside Frame, for Multi Piece 18" & 24" wide Conveyors (Qty. 2)
8	205396-LLLLL	Mid Frame, for Multi Piece 14"- 18" wide Conveyors
	205398-LLLLL	Mid Frame, for Multi Piece 20"- 24" wide Conveyors
9	920622M	Socket Head Screw, M6-1.00 x 22 mm
10	206505-LLLLL	Upper Connecting Strip
11	206506-LLLLL	Lower Connecting Strip
WW = Conveyor width reference: 02, 03, 04, 06, 08, 12		
LLLLL = part length in inches with 2 decimal places		
Example: Part length = 35.25" LLLLL = 03525		

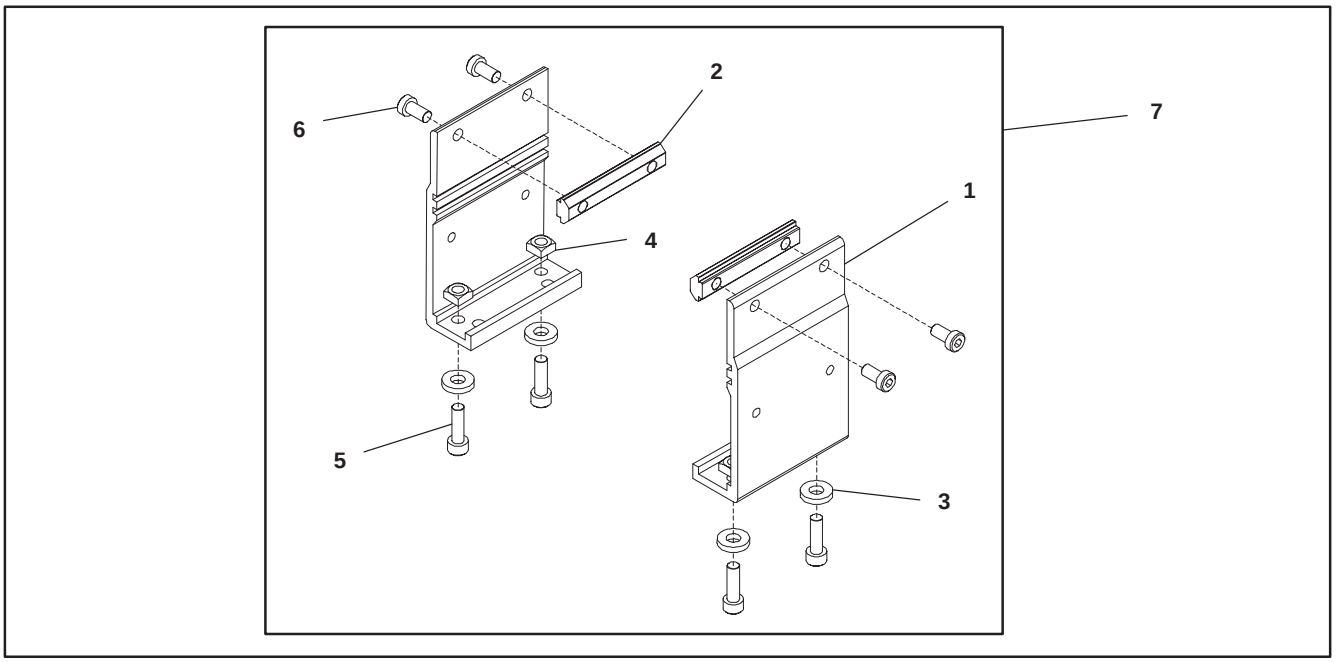
Service Parts

#09 Profile - Low to High Side



Item	Part Number	Description
1	206503	Guide Clip
2	807-2878	Low Head Cap Screw, M6-1.00 x 16 mm
3	206685	T-Nut
4	206512-LLLLL	.50" Guides
	GTB09A04	.50" Guides 4' long
	GTB09A08	.50" Guides 8' long
5	203661	Guide Clip Assembly (Includes items 1, 2, and 3)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

Flat Belt Stand Mount Assembly

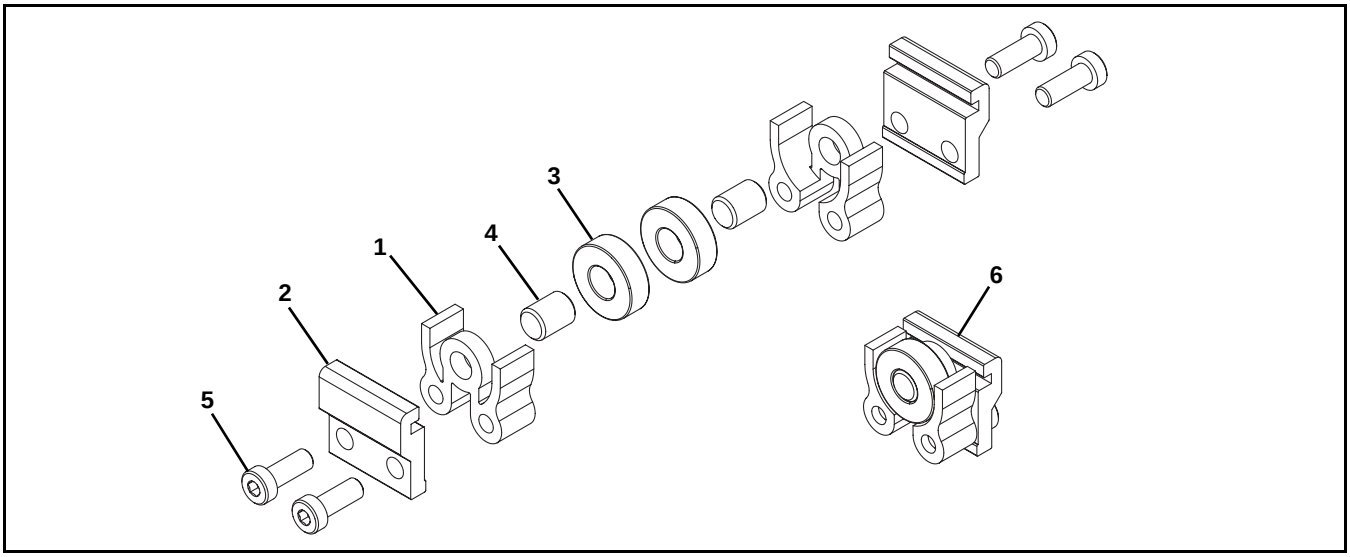


Item	Part Number	Description
1	240831	Stand Mount
2	300150MK14	Drop–In Tee Bar (x4)
3	605279P	Washer
4	807–920	Square Nut M6

Item	Part Number	Description
5	920620M	Socket Head Screw M6 x 20mm
6	950616M	Socket Low Head Screw M6 x 16 mm
7	240839	Flat Belt Stand Mount Assembly

Service Parts

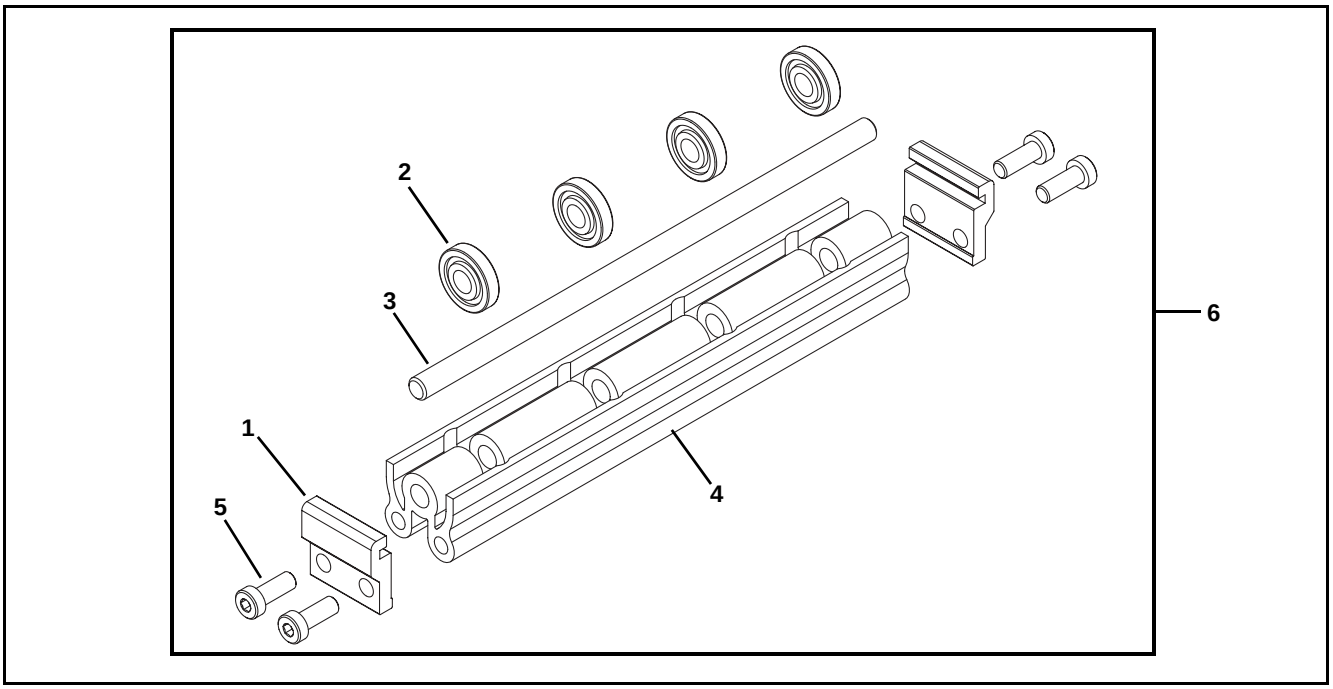
2" (51 mm) to 6" (152 mm) Flat Belt Return Roller



Item	Part Number	Description
1	240825	Return Roller Guard – Short
2	205978	Flat Return Roller Clip
3	802–027	Bearing
4	913–100	Dowel Pin

Item	Part Number	Description
5	950616M	Low Head Cap Screw M6-1.00 x 16 mm
6	206522	Return Roller Assembly

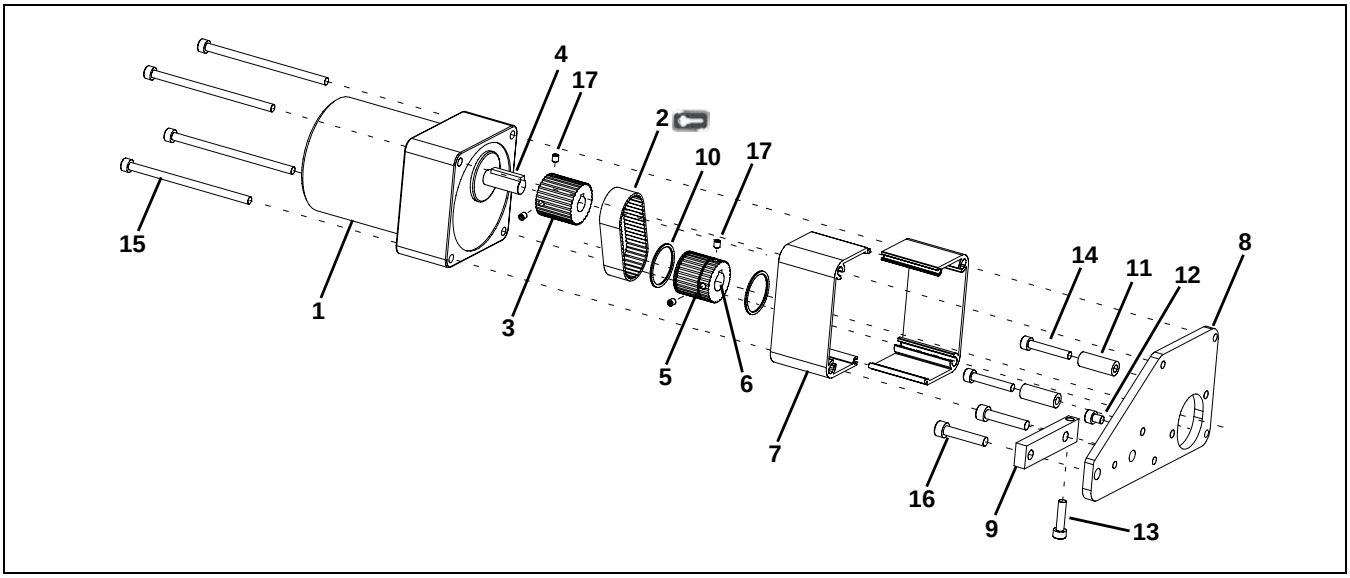
8" (203 mm) and 12" (305 mm) Flat Belt Return Roller



Item	Part Number	Description
1	205978	Flat Return Roller Clip
2	240826	Return Roller
3	2410WW	Return Roller Rod
4	2436WW	Return Roller Guard

Item	Part Number	Description
5	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
6	206523-WW	Return Roller Assembly
WW.= Conveyor width reference: 08, 12		

Gearmotor Mounting Package

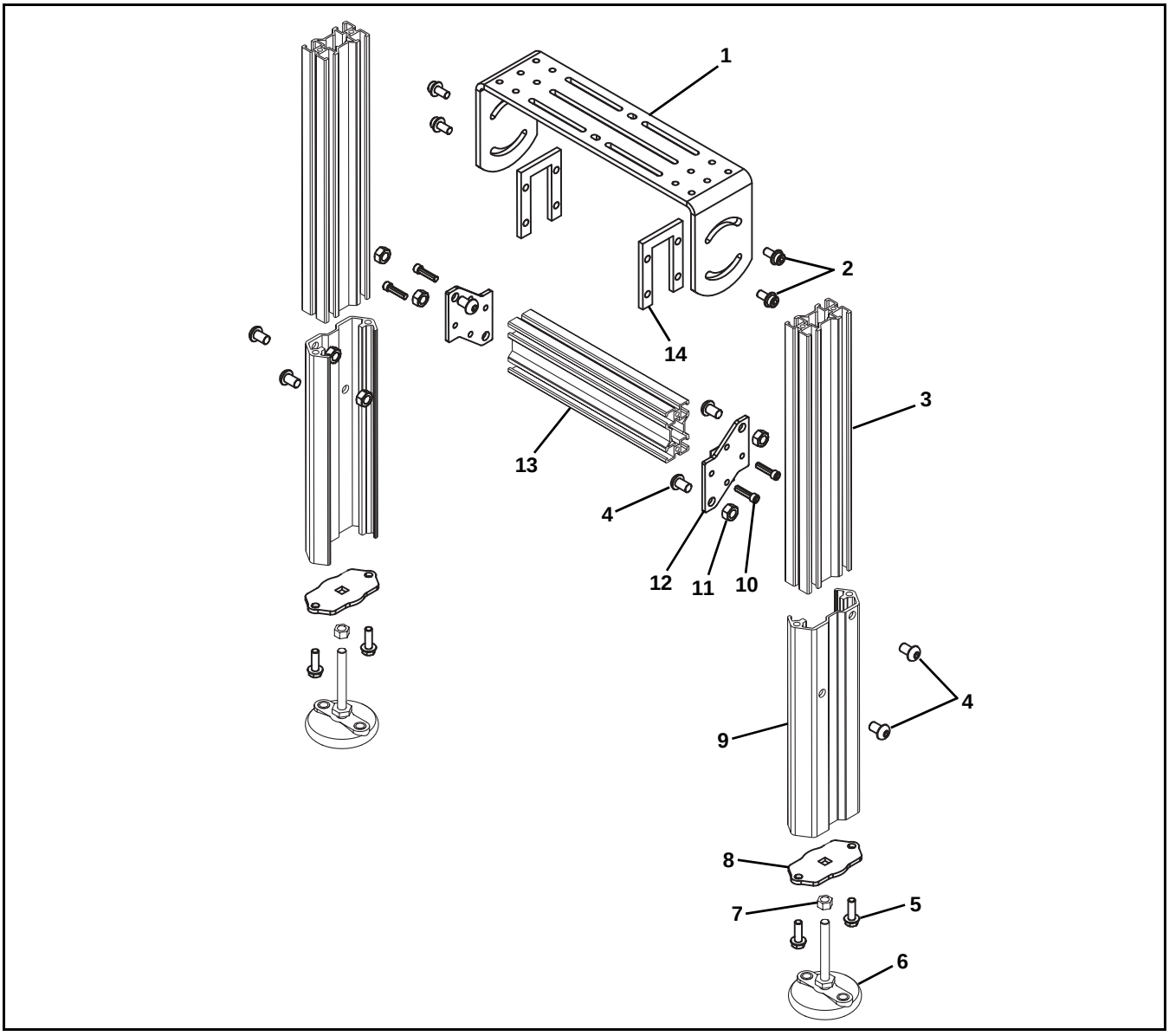


Item	Part No.	Part Description
1	62M060PL411FR	Gearmotor, 0.03 hp, 115 Volts, 25 RPM, 60 Hz, 1-Phase, 60:1
	62M036PL411FR	Gearmotor, 0.03 hp, 115 Volts, 42 RPM, 60 Hz, 1-Phase, 36:1
	62M025PL411FR	Gearmotor, 0.03 hp, 115 Volts, 60 RPM, 1-Phase, 25:1
	62M015PL411FR	Gearmotor, 0.03 hp, 115 Volts, 100 RPM, 139 RPM, 1-Phase, 15:1
	62M036PL423EN	Gearmotor, 0.03 hp, 230 Volts, 42 RPM, 10 - 60 Hz, 3-Phase, 36:1
	62M015PL423EN	Gearmotor, 0.03 hp, 230 Volts, 100 RPM, 10 - 60 Hz, 3-Phase, 15:1
	62M009PL423EN	Gearmotor, 0.03 hp, 230 Volts, 167 RPM, 10 - 60 Hz, 3-Phase, 9:1
2	814-088	Timing Belt, 3mm x 15mm (159mm long)
	814-089	Timing Belt, 3mm x 15mm (179mm long)
3	450078M	Drive Pulley, 1/2” Bore
	450076M	Drive Pulley, 10mm Bore
4	912–052	Key, 1/8” x 5/8”, 1/2” Bore
	980422M	Key, 4mm x 22mm, 10mm Bore
5	450077M	Driven Pulley, 12 mm Bore
6	980422M	Driven Pulley Key, 4 mm x 22 mm

Item	Part No.	Part Description
7	450087	Guard, Half, Light Duty Side Drive
8	450046M	Plate, Side Drive LD
9	450088M	Tensioning Bar, Side Drive
10	807–954	Spiral Retaining Ring
11	807–973	Nylon Spacer
12	920506M	Socket Head Screw M5x6mm
13	920525M	Socket Head Screw M5x25mm
14	920530M	Socket Head Screw M5x30mm
15	920500M	Socket Head Screw M5x100mm
	920590M	Socket Head Screw M5x90mm
	920460M	Socket Head Screw M4x60mm
16	920635M	Socket Head Screw M6x25mm
17	970405M	Cup Set Screw M4x5mm

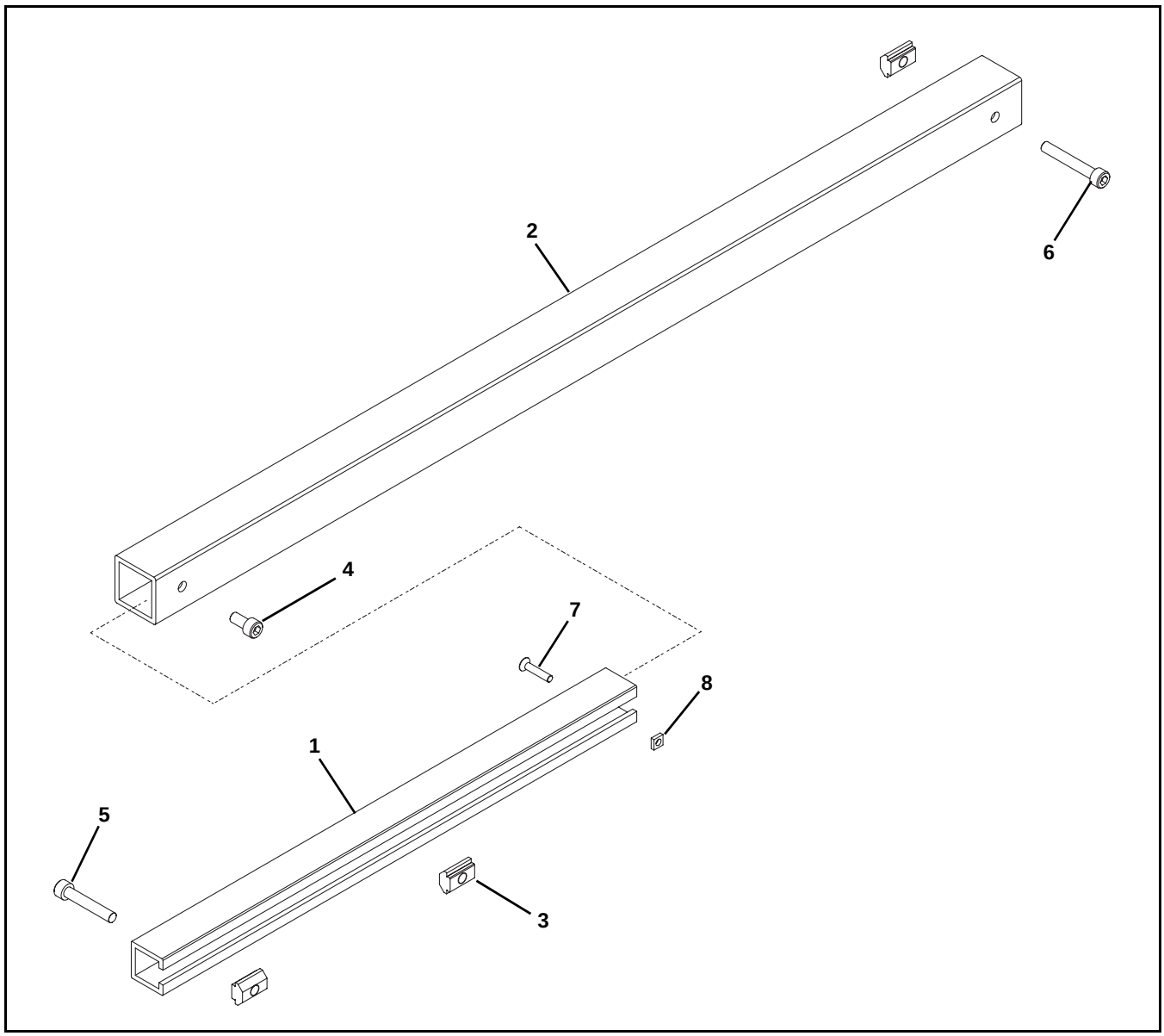
Service Parts

Adjustable Height Stand



Item	Part Number	Description
1	202148	Stand Bracket
2	960883M	Socket Flange Screw, M8–1.50 x 16 mm
3	710211-LLLLL	Leg, Stand
4	911016M	Button Head Screw, M10–1.50 x 16 mm
5	960897M	Hex Head Screw, M8–1.25 x 30 mm
6	807-1955	Swivel Foot
7	910-011	Hex Nut
8	710005	Plate, Stand
9	710031-LLLLL	Boot, Stand Leg
10	708180P	Trilobe Head Screw, M6–1.00 x 25 mm
11	991011M	Hex Nut, M10-1.50
12	710006	End Plate, Crossmember Stand
13	710210-LLLLL	Crossmember
14	200801M	Nut, Quad, M8–1.25
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

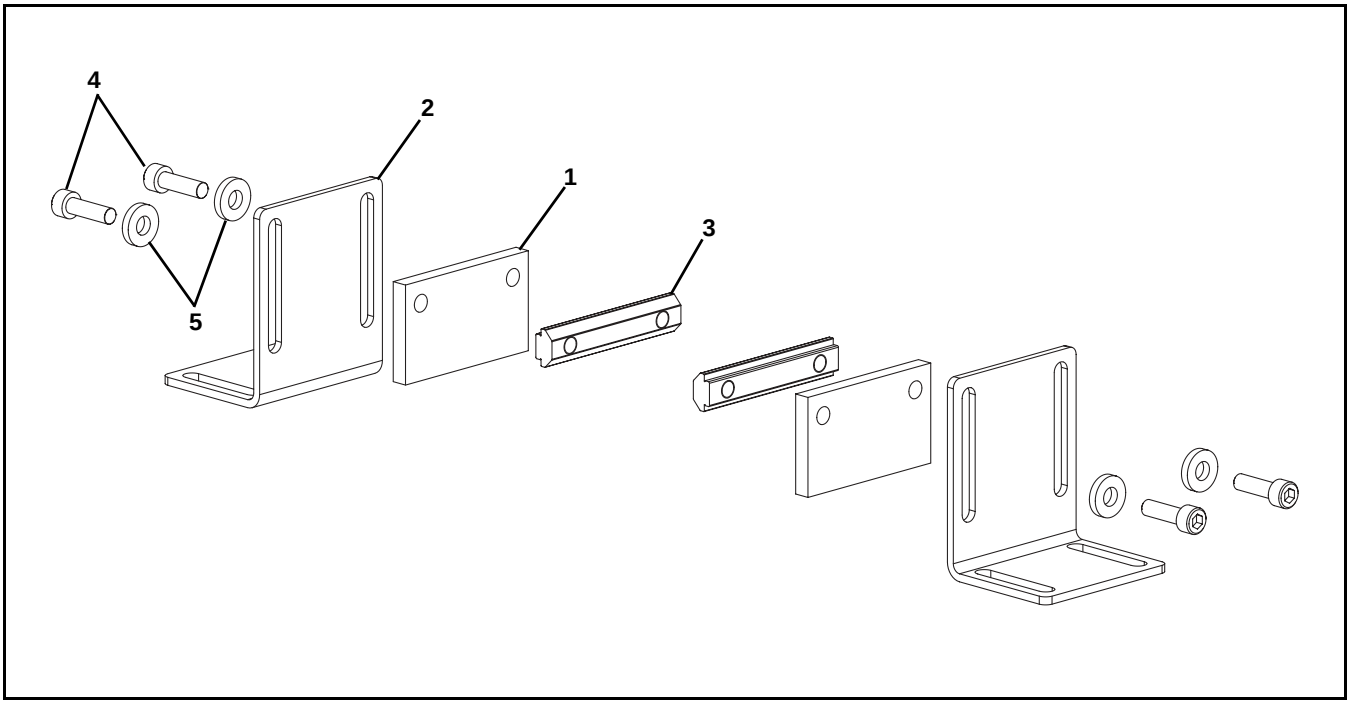
Support Stand Cross Brace



Item	Part Number	Description
1	233107	Inner Tube
2	233202	Outer Tube 2' long (for 75009329)
	233204	Outer Tube 4' long (for 75009330)
	233207	Outer Tube 7' long (for 75009331)
3	639971M	Drop-In Tee Bar
4	920612M	Socket Head Screw, M6-1.00 x 12 mm
5	920635M	Socket Head Screw, M6-1.00 x 35 mm
6	920640M	Socket Head Screw, M6-1.00 x 40 mm
7	930420M	Flat Head Screw, M4-.70 x 20 mm
8	990403M	Nut

Service Parts

Surface Mounting Bracket



Item	Part Number	Description
1	201342	Spacer
2	201347	Short Bracket (for 75009325)
	201348	Long Bracket (for 75009326)
3	300150M	Drop-In Tee Bar
4	920620M	Socket Head Screw, M6-1.00 x 20 mm
5	605279P	Washer

Conveyor Belt Part Number Configuration

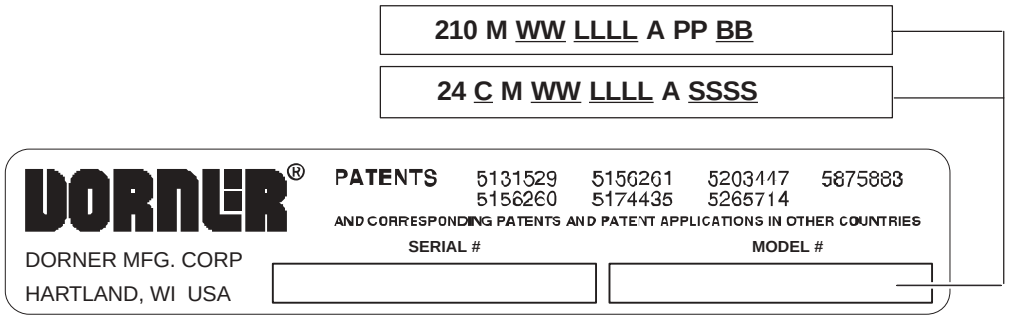


Figure 59

Flat Belt Part Number Configuration

Refer to Dorner patent plate **(Figure 59)**. From the model number, determine conveyor width (“WW”), length (“LLLL”) and belt type (“BB”). Use data to configure belt part number as indicated below. *Add “V” for V-guided belts.

22 - WW LLLL / BB V *

22 – __ __ __ __ __ __ / __ __ V*

(Fill In)

Cleated Belt Part Number Configuration

Refer to Dorner patent plate **(Figure 59)**. From the model number, determine conveyor type (”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 belts.

2T - WW LLLL C SSSS V *

2 __ – __ __ __ __ __ __ / __ __ __ __ V*

(Fill In)

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.

<table>
<tr><th></th><th colspan="8">Product Type</th></tr>
<tr><th></th><th colspan="7">Standard Products</th><th>Engineered to order parts</th></tr>
<tr><th>Product Line</th><th>Conveyors</th><th>Gearmotors & Mounting Packages</th><th>Support Stands</th><th>Accessories</th><th>Spare Parts (non-belt)</th><th>Spare Belts - Standard Flat Fabric</th><th>Spare Belts - Cleated & Specialty Fabric</th><th>Spare Belts - Plastic Chain</th><th>All equipment and parts</th></tr>
<tr><td>1100</td><td colspan="6" rowspan="14">30% return fee for all products except:
50% return fee for conveyors with modular belt, cleated belt or specialty belts</td><td colspan="2" rowspan="15">non-returnable</td><td rowspan="15">case-by-case</td></tr>
<tr><td>2200</td></tr>
<tr><td>2200 Modular Belt</td></tr>
<tr><td>2200 Precision Move</td></tr>
<tr><td>2300</td></tr>
<tr><td>2300 Modular Belt</td></tr>
<tr><td>3200</td></tr>
<tr><td>3200 LPZ</td></tr>
<tr><td>3200 Precision Move</td></tr>
<tr><td>4100</td></tr>
<tr><td>5200</td></tr>
<tr><td>5300</td></tr>
<tr><td>6200</td></tr>
<tr><td>Controls</td></tr>
<tr><td>7200 / 7300</td><td colspan="6">50% return fee for all products</td></tr>
<tr><td>7350</td><td colspan="9" rowspan="4">non-returnable</td></tr>
<tr><td>7360</td></tr>
<tr><td>7400</td></tr>
<tr><td>7600</td></tr>
</table>

Returns will not be accepted after 60 days from original invoice date. The return charge covers inspection, cleaning, disassembly, disposal and reissuing of components to inventory. If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

Dorner has representatives throughout the world. Contact Dorner for the name of your local representative. Our Customer Service Team will gladly help with your questions on Dorner products.

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

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

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