FlexMove FS (65 mm) Conveyor System

Installation, Maintenance & Parts Manual

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Record Conveyor Serial Number Here

851-900 Rev. A

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Introduction

IMPORTANT

Some illustrations may show guards removed. DO NOT operate equipment without guards.

Upon receipt of shipment:

- Compare shipment with packing slip. Contact factory regarding discrepancies.
- Inspect packages for shipping damage. Contact carrier regarding damage.
- Accessories may be shipped loose. See accessory instructions for installation.

Dorner's Limited Warranty applies.

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

⚠ 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	Infeed Module
2	Curve Module
3	Incline Module
4	Decline Module
5	Intermediate Module
6	Drive Module
7	Gearmotor
8	Stands

Figure 1

Conveyor Supports:

Maximum Distances:

1 = 914 mm (36")

2 = 3000 mm (118")*

3 = 914 mm (36")

* For conveyors longer than 3000 mm (118"), install support at joint.

Note: Additional support required on 180° curve modules.

Figure 2

Installation

Introduction

The main purpose of this manual is to help self-building end users, with little or no prior experience, to assemble a FlexMove conveyor system. Each chapter includes detailed instructions and pictures showing how to assemble the different parts. Most pictures in the manual include parts from the FS conveyor system, but all instructions are applicable to the FH, FK, FS, FM, FC, FL, FU and FV.

Document Disposition

The document is divided into the following five main parts:

- Installation site preparations
- Tools and fasteners
- Assembly
- Start-up and testing

Initial Assembly Planning

Systematically working planning is required:

- Fully understand and studying the assembly drawing.
- Ensure the necessary tools are required.
- Ensure all the parts and materials are well prepared in advance, following the parts list.
- Enough space for conveyor installation is important.
- Ensure the floor is even and so the foot can be properly attached on the floor.

Safeguarding

All pinch and shear points, as well as other exposed moving parts that present a hazard to users, is recommended to be safe guarded. Cleat conveyor chain is more susceptible of creating pinch and shear points than plain chain.

When two or more pieces of equipment are interfaced, special attention must be given to the interfaced area to ensure proper safeguarding.

For overhead conveyors, guards must be provided if products fall off the conveyor for some reason. The same applies to all incline, decline and vertical conveyors.

Considerations

When correctly applied, the conveyor components are safe to use or maintain. It is, however, necessary for those responsible to design, installation, operation and maintenance to be aware of certain areas when special caution is required.

End Drive Unit

The chain slack of a normal direct drive unit must be maintained during the system lifetime.

Idler Unit

The opening between links (when they turn around idler) could be a potential risk. The idler end should not be accessible during conveyor operation.

Catenary Drive Unit

The bridge area where the chain goes down should not be accessible during conveyor operation.

Assembly Order

During the conveyor assembly, the following items can be used as a checklist:

- Cut all beams to desired length.
- Connect all feet and structural beams.
- Mount conveyor beam support brackets.
- Assembly conveyor beams and mount them onto the support structure.
- Mount drive and idler unit at the end of the conveyor.
- Mount slide rail onto the conveyor beam.
- Loosen the slip clutch at the drive unit.
- Check any obstruction of the conveyor with a short piece chain.
- Assemble and mount necessary chain onto the conveyor.
- Mount guide rail and other accessories required onto the conveyor.
- Tighten the slip clutch with suitable friction.
- Read the final preparations at the end of this manual.

Tools General

Tools

To assemble a FlexMove Conveyor, you may need most of the tools listed on the following page. Not all are essential, but they will make your work easier and efficient.

Hand Tools

- Wrench
- Slide rail cutter
- Set of metric hex keys
- Counter sink bit
- Drill fixtures for slide rail
- Riveting tool
- In addition, the tools listed below can be useful:
  - Files
  - Socket wrench
  - Screwdriver
  - Pliers
  - Knife (burr of slide rail)
  - Flush cutting pliers
  - Soft head hammer
  - Chain tools (for chain installation and dismantle)
  - Level

Power Tools

- Hand drill
- Drill bit (for fixing slide rail)

Fasteners

Standard Fasteners

Standard Fasteners **(Figure 3)**:

- M8 = Washer, Countersink Cap Screw, Nut, Lock Nut
- M6 = Washer, Countersink Cap Screw, Nut, Lock Nut

Figure 3

Square Nut

Square nuts **(Figure 4)** can be slid into T-slot of FlexMove conveyor and support beams. They do not stay in place in vertical positions and have to be inserted from the end of beam. Remember to put in a sufficient number before completing the assembly.

Figure 4

Spring Nuts

Spring nuts **(Figure 5)** can be inserted into the T-slot of FlexMove conveyors and support beams. They do not stay in place in vertical positions.

Figure 5

Connecting Strip

Connecting strips **(Figure 6)** are used for joining end to end of beams. Use hex key and set screws when attaching the connecting strip to the beam.

Figure 6

Installation

T-Bolt

T-bolts **(Figure 7)** can be entered from the beam side, and when turned 90 degrees they will stay in place after tightening with lock nuts. Use lock nuts to facilitate T-bolt turning in slot. The indication groove in the T-bolt should be at 90 degrees to the conveyor T-slot. T-bolts are used when attaching support brackets, guide rails and drip trays to the conveyor beam. T-bolts should not be used when fine adjustment for exact positioning is required (use square nuts or spring nuts for this type of application). Do not use T-bolts with support beams.

Figure 7

Pre installation Information

Cutting FlexMove Beam

Cutting is required for all 3m beams, including a precise cut to 3m lengths. Study your drawing to determine the beam lengths required before cutting.

Saw Requirements

The circular cross-cut saw used for aluminum profile cutting must be equipped with carbide tip saw circulating at high speed for a clean cut. The saw should have the ability of cutting the largest profile in one single cutting action.

⚠ WARNING

All safety precautions issued bythe cutting saw manufacturer should be followed at all the times.

Working Site

You should use a special area for cutting beams in order to keep the assembly area clean.

Quality of Cut

If burrs are evident, they must be removed prior to assembly. Make sure the cut is straight for proper assembly.

Assembly

The basic FlexMove conveyor structure consists of five component groups (See **(Figure 8)** and **(Figure 9)**):

Figure 8

Figure 9

- Support structure
- Conveyor beams, straight sections, and bends
- Drive and idler units
- Chains
- Guide rail assembly components
- Other accessories

The first step in the assembly process is to assemble the support structure, which consists of feet, support beams, and beam support brackets. Most conveyor support designs are based on vertical support beams, combined, if necessary, with horizontal support beams. There are also a number of different feet and beam support brackets, so check which ones are suitable to use in your application.

Foot Installation

1. Insert hex head screws and washers **(Figure 10, item 1)** into the holes on the side of the foot. Use the screws to fasten foot connecting strips to the inner side of the foot. Leave loose.

Figure 10

2. Slide the connecting strips **(Figure 11, item 1)** into the structural beam T-slots.

Figure 11

3. Raise the beam from the bottom of the foot approximately 40-50 mm **(Figure 12, item 1)**, to allow for height adjustment later in the assembly.

Figure 12

4. Tighten the screws using a wrench **(Figure 13, item 1)**.

Figure 13

Installation

Conveyor Installation

Conveyor beams are mounted on to the support structure by means of support brackets. There are three different types of conveyor beam support brackets. They all serve the same purpose but are connected to the structural beams in different ways.

Option 1

Horizontal beam support brackets (60mm or 80mm) **(Figure 14, item 1)** are used for horizontal support structure mounted to 64x64mm or 80x80mm support beams.

Figure 14

Option 2

Vertical beam support brackets **(Figure 15, item 1)** are used with vertical support beams and are made from aluminum.

Figure 15

Option 3

Dual side mounting brackets **(Figure 16, item 1)** are used to support 180° wheel corners.

Figure 16

Mounting Conveyor Beam Support Bracket

1. Attach screws, nuts and washers to the support bracket **(Figure 17, item 1)** before mounting. (Screws and square nuts are support beam fasteners; T-bolts and nuts are conveyor beam fasteners.) Slide the square nuts of one support bracket into the support beam T-slots. Tighten the screws. Make sure that the support bracket is aligned with the beam cross-section **(Figure 17, item 2)** as shown in the drawing.

Figure 17

2. Insert the square nuts of the second support bracket **(Figure 18, item 1)** into the support beam T-slots. Slide the bracket down so that it does not protrude above the cross-section of the beam.

Figure 18

3. Use a soft hammer or mallet to mount an end cap **(Figure 19, item 1)** on to the support beam.

Figure 19

4. Mount the first support bracket **(Figure 20, item 1)** to the conveyor beam **(Figure 20, item 1)**. Pull the second bracket up and insert the T-bolts into the conveyor beam T-slot. Tighten the nuts.

Figure 20

Conveyor Beam Installation

The next step is to connect conveyor beams – straight sections and bends – to each other. Connect all conveyor beams according to the instructions below.

1. Connect two conveyor beam ends by inserting connecting strips **(Figure 21, item 1)** into the beam inner T-slots. Use two connecting strips per beam joint.

Figure 21

2. Make sure that the set screws **(Figure 22, item 1)** do not prevent the connection strips from sliding into place.

Figure 22

3. Tighten the set screws using a hex key **(Figure 23, item 1)**.

Figure 23

NOTE
Assemble the entire conveyor beam structure in the same way. If the conveyor beam is too long to mount onto the support structure in one continuous length, assemble shorter lengths and connect them to each other once fastened to the support beams.

Drive Unit and Idler End Unit Installation

Drive End

1. Mount the end drive unit **(Figure 24, item 1)** on to the end of the conveyor: Release the four set screws that are inserted into the drive unit connecting strips. Insert the connecting strips into the T-slot of the beam you want attached to the end drive unit. Make sure that the set screws do not prevent the connecting strips from sliding into place.

Figure 24

2. Tighten the set screws using a hex key **(Figure 25, item 1)**.

Figure 25

Drive Tail Support Brackets

1. Attach the drive tail support brackets **(Figure 26, item 1)** to the slot **(Figure 26, item 2)** in the drive tail with the T-bolts and hex nuts. The brackets should be located closest to the frame **(Figure 26, item 3)**.

Figure 26

Idler End

1. Insert the idler unit **(Figure 27, item 1)** connecting strips into the T-slots of the beam end and tighten it.

Figure 27

2. Tighten the set screws using a hex key **(Figure 28, item 1)**.

Figure 28

⚠ CAUTION

The opening between the links when they turn around the idler could be a risk. Idler ends should not be accessible during conveyor operation.

Attaching Slide Rail in Straight Beam

1. Start the slide rail assembly at an idler end unit **(Figure 29, item 1)**. Separate the top and bottom flange of the slide rail at the end of rail and press into place.

Figure 29

2. Make sure the slide rail **(Figure 30, item 1)** is properly mounted and snaps onto the beam. The longer flange of the slide rail must always face inside of the beam (See **Figure 31)**.

Figure 30

Figure 31

3. The slide rail **(Figure 32, item 1)** must be mounted across the entire beam section. Remember to mount slide rails on both top and bottom side of the beam (unless top running chain only).

Figure 32

Slide Rail End Installation at Connector Beam

1. Cut both slide rail ends at a 35° angle. The beginning of a new slide rail (in the direction of travel) must cut back at a small angle **(Figure 33, item 1)**.

Figure 33

2. Allow a space of approximately 10 mm **(Figure 34, item 1)** between two slide rail ends. The travel direction is indicated by an arrow.

Figure 34

3. Do not place two slide rail joints **(Figure 35, item 1)** opposite each other. Make sure there is a distance of at least 100 mm **(Figure 35, item 2)** between them to make the chain run smoother. This does not apply to slide rail that begins by an idler unit or after a drive unit, where joints are always parallel.

Figure 35

Try to let the slide rail run in as continuous lengths as possible by reducing number of breaks, except in circumstances stated below:

- It is recommended to use short slide rails 2–3m (78-3/4”–118”) where chemicals may have an effect on the slide rail composition.
- It is important to cut the slide rail and allow for elongation in high load areas. Cutting is required in wheel and horizontal bends (see following page), at idler units and where the conveyor will be heavily loaded. This prevents the slide rail from stretching out and entering into the drive unit, which may block the chain movement.
- Never join slide rail in horizontal or vertical bends, since forces are higher on the slide rail in these sections. Instead, place the joint before the bend.
- Avoid joining slide rails on top of conveyor beam joints.

Slide Rail Installation at Wheel Bend

1. **Infeed Wheel Bend:** Cut the slide rail end **(Figure 36, item 1)** in flat. Make sure there is a 5 mm gap created at the plastic molding part. The step is applied onto outfeed as well.

Figure 36

2. **Outfeed Wheel Bend:** Follow step 1.

Figure 37

3. In the outer bend, make sure that the slide rail is properly connected to the conveyor beam profile.

Figure 38

Slide Rail Installation at Horizontal Plain Bends and Vertical Bend

In plain bends with a small radius, the slide rail for the inner bend should be cut so that it is only 10 mm wide in the bend. This is to prevent an uneven slide rail surface. Stretch the slide rail while mounting.

Drilling Slide Rail

1. Drill two holes near the beginning of each slide rail section. Use the drill fixture **(Figure 39, item 1)** to ensure clean-cut holes and the correct location of the holes. The holes must be at the leading edge of the joint piece, in the direction of travel, to hold the slide rail in place when the conveyor is in use. Use a well sharpened 4.3mm, #18, or 11/64" drill bit.

Figure 39

2. Use a bigger drill bit or countersink bit **(Figure 40, item 1)** to deburr and countersink the holes. Also make sure that there are no metal filings left underneath the slide rail.

Figure 40

Fixing Slide Rail

The beginning of each slide rail section must be fixed to the beam, since the chain will cause the slide rail to be pushed forward. A slide rail which moves into a wheel bend or a drive unit can block the chain completely. The riveting method is more secure if the conveyor will run with high operational speed or be heavily loaded.

Nylon Screw

1. Insert the nylon screws **(Figure 41, item 1)** into the holes using a hex driver until the screw is flush with the bottom of the slide rail.

Figure 41

2. Cut off the head of nylon screws by using flush cutting pliers **(Figure 42, item 1)** or soft hammer and knife **(Figure 43, item 1)**. Remember, the cut must be made away from the joint, in the direction of chain travel.

Figure 42

Figure 43

3. After the cut, make sure the slide rail surface is smooth and the nylon screws do not protrude over the slide rail surface. Use a file **(Figure 44, item 1)** to file off the protruding edge if uneven surface is found.

Figure 44

NOTE
Nylon screws can be used multiple times before being discarded. Ensure bottom of screw is cut square before re-using.

Aluminum Rivet

1. Insert the aluminum rivets **(Figure 45, item 1)** into the holes **(Figure 45, item 2)**.

Figure 45

2. Clamp the aluminum rivet by using crimping pliers **(Figure 46, item 1)**.

Figure 46

Checking Slide Rail and Rivet Condition After Fixed

1. Ensure slide rails do not protrude due to the over-pressing during rivet process.
2. Check that the rivets do not protrude over the surface of the slide rail. Check both top and underneath surface of slide rail for protruding metal. (See **Figure 47**.)

Figure 47

Joining Chain End

Assemble the chain by inserting the steel pin that comes with each chain link, into the opposite end of another link. Do this by using the FlexMove pin insertion tool.

1. Insert the plastic pivot **(Figure 48, item 1)** with the slot facing outward.

Figure 48

2. Insert the steel pin **(Figure 49, item 1)** halfway, using a pair of pliers. Always use new steel pins and plastic pivots when joining chain ends.

Figure 49

3. Line the FlexMove chain tool **(Figure 50, item 1)** up with the pin **(Figure 50, item 2)**. Slowly depress the trigger until the pin seats. A slight detent will be felt when pin is seated.

Figure 50

4. Check that the chain is flexible in the joint and that the pin does not stick out or go through the other side **(Figure 51, item 1)**.

Figure 51

Chain Installation at Drive Unit

1. Insert the chain **(Figure 52, item 1)** into the underside of the drive unit **(Figure 52, item 2)**. Make sure the chain will be moving in the correct direction, as indicated by the arrow **(Figure 53, item 1)** located at the side of all chain links.

Figure 52

Figure 53

2. Feed the chain along the conveyor **(Figure 54, item 1)** by pulling it through the idler unit and back to the drive unit.

Figure 54

3. Join 5 meter lengths of chain when necessary. (See **Figure 55**.)

Figure 55

4. Tension the chain and remove links if necessary, so that the chain will exhibit some slack at the drive unit. Put in the stainless steel pin **(Figure 56, item 1)** at the hole provided at drive unit and join the chain.

Figure 56

Chain Assembly at Chain Disconnecting Module FSCC

1. Loosen the screws **(Figure 57, item 1)** on the beam section flanges.

Figure 57

2. Remove the flange **(Figure 58, item 1)** so that the chain becomes accessible.

Figure 58

3. Clamp the chain **(Figure 59, item 1)** to the beam profile. Use the FlexMove chain tool **(Figure 59, item 2)** to remove a steel pin from the chain, so that two links are separated.

Figure 59

4. Remove excess links and use the chain tool **(Figure 60, item 1)** to put the chain back together again.

Figure 60

Weighted Take-Up

NOTE
Remove as much chain slack as possible that will still allow idler to be installed.

1. Install idler pulley assembly **(Figure 61, item 1)** onto belt **(Figure 61, item 2)**.

Figure 61

2. Make sure teeth on pulley and guard are facing mating teeth on take up box assembly.
3. Raise weighted take up box assembly, with plate **(Figure 62, item 1)** on idler pulley assembly on outside of outer plate **(Figure 62, item 2)** of weighted take up assembly.

Figure 62

4. Raise weighted take up assembly **(Figure 63, item 1)** with notch **(Figure 63, item 2)** in assembly mating with stud **(Figure 63, item 3)** on conveyor frame.

Figure 63

5. Install and tighten two screws **(Figure 64, item 1)** on each side to secure assembly to frame.

Figure 64

NOTE
• *For standard belt use these holes **(Figure 65, item 1)**.* • *For friction insert belt use these holes **(Figure 65, item 2)**.*

Figure 65

Top Running Drive

1. Install top running drive assembly **(Figure 66, item 1)** clamp plates into conveyor frame sections **(Figure 66, item 2)** by lining up clamp plates with slots in conveyor frame.

Figure 66

2. Secure with four set screws **(Figure 66, item 3)** on both sides of conveyor. Tighten all set screws 1/4 turn past contact with frame.
3. Install belt with the direction arrow pointing in the direction of belt travel.
4. Install belt around conveyor ends and bring the ends of the belt **(Figure 67, item 1)** together.

Figure 67

5. Insert the belt rod. Use a punch and hammer or belt removal tool #203480 **(Figure 67, item 2)** to press pin just below flush with side of belt. Stop when pin detent is felt.
6. Install drive motor mounting plate **(Figure 68, item 1)** using four hex head cap screws **(Figure 68, item 2)**.

Figure 68

7. Install belt hold down tabs **(Figure 69, item 1)** to drive assembly **(Figure 69, item 2)** using four socket head screws **(Figure 69, item 3)**.

Figure 69

8. Repeat on opposite side.
9. Install belt hold down wheel **(Figure 70, item 1)** and tighten set screw **(Figure 70, item 2)**.

Figure 70

10. Install spacer, washer, and key onto drive shaft.
11. Install drive package **(Figure 71, item 1)** to drive motor mounting bracket **(Figure 71, item 2)** using four socket head screws **(Figure 71, item 3)**.

Figure 71

12. Install and tighten flat head screw **(Figure 72, item 1)** onto the drive shaft.

Figure 72

Install Guiding

All guiding must be located and installed by the end user.

Length Adjustment of the Conveyor Chain

End Drive Units and Catenary Drive Units

1. The conveyor chain is carried out at the drive end of the conveyor.
2. The transmission guard cover must be removed from the drive unit and the slip clutch disengaged or transmission chain removed. The conveyor chain should now be free to travel within the conveyor beam profile.
3. Catenary protection plates should also be removed to allow easy access for the conveyor chain pin insertion tool.
4. The conveyor chain should be tensioned within the conveyor system by pulling down the conveyor chain at the chain catenary on the underside of the drive unit. Clamp across the conveyor chain to trap the chain on to the beam profile. The clamp should be placed over the edges of the drive unit to reduce the risk of damage to the aluminum profile.
5. Remove all slack links from the conveyor chain using the pin insertion tool.
6. Rejoin the conveyor chain using a new steel pin and plastic pivot.
7. Remove the chain clamp and replace the catenary protection plate and transmission chain. The slip clutch should also be reset.
8. Replace the transmission guard cover. The conveyor is now ready for operation.

Intermediate Drive Units and Horizontal Bend Drive Unit

1. Conveyors which have no conveyor chain slack should be assembled with a special section of conveyor beam (FSCC), which allows for the chain to be easily inserted and adjusted for tension. (See “Chain Assembly at Chain Disconnecting Module FSCC” on page 21.)
2. Remove the lower part of this conveyor beam section by releasing the four screws.
3. Lift the chain from this section of the beam and clamp the conveyor chain as described above. Adjust the chain tension as for end and catenary drive units.

In a wheel bend drive, the outer aluminum profile can be removed by loosening the set screws in the beam connecting strips. The slide rail must be fitted to allow the removal of this section.

1. After removal of the outer aluminum profile, the conveyor chain can be pulled out of the wheel bend disc. Lift the chain upwards.
2. Remove chain links using the pin insertion tool.
3. New steel pins and plastic pivots must be used when rejoining chain ends.
4. The tensioned chain can now be pulled back into position on the bend guide disc, and the outer profile put into place.

Guide Rail System Installation

Guide rails are used to guide products being conveyed, but also to prevent them from falling off the conveyor. Guide rails are supported by guide rail brackets attached to the sides of the conveyor beam. Follow the mounting instructions for the type of bracket used in your application.

Brackets should be placed approximately 500 to 1000 mm apart depending on type of product and if accumulation occurs or not. If brackets are spaced at greater distances than 1000 mm, there is a possibility that guide rails will become deformed due to excessive force.

High Side Guiding

1. Install stud **(Figure 73, item 1)** onto retaining clip **(Figure 73, item 2)** with nut **(Figure 73, item 3)**.

Figure 73

2. Install stud **(Figure 73, item 1)** into side rail channel **(Figure 73, item 4)**. The end clips should be no greater than 12" from end of the conveyor.
3. Fasten retaining clip **(Figure 74, item 1)** to conveyor with nut **(Figure 74, item 2)** on stud.

Figure 74

NOTE
*Be certain that slot **(Figure 74, item 3)** is close to vertical when finished tightening nut.*

4. Tighten nuts **(Figure 74, item 2)**.
5. Install guide **(Figure 75, item 1)** and retaining clip **(Figure 75, item 2)** to conveyor side rail with socket head screw **(Figure 75, item 3)**.

Figure 75

Heavy Duty Fully Adjustable Guiding

1. Install guide bracket assembly **(Figure 76, item 1)** into the conveyor T-slot **(Figure 76, item 2)**.

Figure 76

2. Tighten screws **(Figure 77, item 1)** making sure T-nut **(Figure 77, item 2)** rotates and engages inside of the T-slot.

Figure 77

3. Loosen screw **(Figure 78, item 1)** on end of shaft **(Figure 78, item 2)** to remove clip **(Figure 79, item 1)**.

Figure 78

Figure 79

4. Snap clip **(Figure 80, item 1)** onto guide rail **(Figure 80, item 2)**.

Figure 80

5. Reassemble clip **(Figure 81, item 1)** and attach to shaft **(Figure 81, item 2)**. Tighten screw **(Figure 78, item 1)** on end of shaft.

Figure 81

6. Adjust rail width with top screw **(Figure 82, item 1)**.

Figure 82

7. Adjust rail height with lower screw **(Figure 83, item 1)**.

Figure 83

Puck/Pallet Guiding

1. Install clip assembly **(Figure 84, item 1)** into side rail channel **(Figure 84, item 2)**. The end clips should be no greater than 12" from the end of the conveyor.

Figure 84

NOTE
*Make sure that the studs **(Figure 84, item 4)** rotate inside the channel and engage with the conveyor.*

2. Fasten clip **(Figure 84, item 1)** to conveyor with nut **(Figure 84, item 3)** on stud.
3. Tighten nuts **(Figure 85, item 1)**.

NOTE
*Be certain that slot **(Figure 85, item 2)** is close to vertical when finished tightening nut.*

Figure 85

4. Attach slide rail **(Figure 86, item 1)** to guiding **(Figure 86, item 2)**.

Figure 86

NOTE
If guide length is less than 250 mm (10”), pin plastic guide to rail using slide rail screw and cutting flush.

5. Attach guiding **(Figure 87, item 1)** to clip **(Figure 87, item 2)** and tighten screw **(Figure 87, item 3)**.

Figure 87

Adjustable Guide Rail Bracket

1. Fasten an adjustable guide rail bracket support **(Figure 88, item 1)** to the conveyor beam using T-bolt **(Figure 88, item 2)**.

Figure 88

2. Attach the guide rail **(Figure 89, item 1)** to the clamp **(Figure 89, item 2)**. Tighten the screw **(Figure 89, item 3)**. Remember, do not over tighten the screw.

Figure 89

3. Use a wrench **(Figure 89, item 4)** to tighten the guide rail to the frame. Remember, do not over tighten the screw. Install remaining brackets.

Assembly with Different Guide Rail Support

Option 1

Figure 90

Option 2

Figure 91

NOTE
Tighten the screws when the position is justified.

FGRF- 42x18V Guide Rail Bracket Assembly

1. Prepare the heavy-duty guide rail bracket **(Figure 92, item 1)** with T-bolt **(Figure 92, item 2)**.

Figure 92

2. Attach the bracket onto conveyor beam and tighten with a socket wrench **(Figure 93, item 1)**.

Figure 93

Assembly with Different Guide Rail Support

Option 1

Figure 94

Option 2

Figure 95

Option 3

Figure 96

FGRF- 42x18V Spacer Assembly

1. Attach the spacer **(Figure 97, item 1)** onto FGRF- 42x18V **(Figure 97, item 2)** and install correct length T-bolt **(Figure 97, item 3)**.

Figure 97

2. Attach the bracket onto conveyor beam and tighten with a socket wrench **(Figure 98, item 1)**.

Figure 98

FGRB- 40x18, FGRB- 40x20 and FGRB- 40x15x20 Guide Rail Bracket Assembly

Method 1

1. Open the upper and lower caps **(Figure 99, item 1)** on FGRB - 40 guide rail bracket **(Figure 99, item 2)**, and install T-bolt.

Figure 99

2. Attach the bracket onto conveyor beam and tighten with a socket wrench **(Figure 100, item 1)**. Install upper and lower caps.

Figure 100

Assembly with Different Guide Rail Support

Option 1

Figure 101

Option 2

Figure 102

NOTE
Tighten all the screws when the position is justified. Remember to assemble the upper and lower caps onto the bracket.

Method 2

1. Open the upper and lower caps **(Figure 103, item 1)** and prepare the FGRB - 40 guide rail bracket **(Figure 103, item 2)** with T-bolt.

Figure 103

2. Attach the bracket onto conveyor beam and tighten with a socket wrench. Install both caps of the bracket.

Figure 104

Fixed Guide Rail Bracket Installation

1. Fasten a fixed guide rail bracket support **(Figure 105, item 1)** to the conveyor beam using T-bolt.

Figure 105

2. Attach the guide rail **(Figure 106, item 1)** to the bracket **(Figure 106, item 2)**. Clamp the spring pin into the slot between bracket and guide rail to the fixed position.

Figure 106

Guide Rail Connecting Installation

Rail Connecting

1. Slide the guide rail sleeve **(Figure 107, item 1)** into either one of the guide rail profile that you are going to join.

Figure 107

2. Move the guide rail sleeve into second profile. Tighten set screws.

Figure 108

Connecting Plug

1. Connecting plugs **(Figure 109, item 1)** are pressed into two guide rail ends with soft hammer.

Figure 109

Guide Rail Cover Installation

1. To prevent products from being scratched, a plastic guide rail cover **(Figure 110, item 1)** can be snapped on to the inside of the guide rail.

Figure 110

2. Make sure that all cover joints **(Figure 111, item 1)** are smooth, so that products do not get caught or damaged. Covers are not required on guide rail joints.

Figure 111

Final Preparations

Plug Beam Ends

Ensure that end caps have been fitted to all aluminium profile ends. The beam profiles should be deburred before fixing end caps. It may be necessary to fix the cap into position using a soft-faced hammer.

Anchor Feet to the Floor

After the assembly of all components, it is recommended to anchor the conveyor support feet to the floor. Use a type of fastener that is right for the kind of floor where the conveyor is installed.

Instability of the conveyor during operation may result in a dangerous operating environment or damage the conveyor components.

Other Preparations

- Adjust the height of the structural beam if necessary.
- Make sure that the installation is stable and that all screws have been properly tightened.
- Make sure that all electrical equipment and power supply are properly connected.
- Make sure that the conveyor is running in the correct direction before starting the conveyor!
- Tighten the slip clutch to a suitable friction.
- Make sure that all chain and belt covers are attached correctly.
- In pallet installations, make sure that all pneumatic equipment is properly connected.

NOTE
Remember that conveyor chains should always be pulled, not pushed, by the drive unit.

Start-Up and Testing

Safety Considerations

To eliminate the risk of accidents, it is important to be aware of certain areas of the conveyor where special caution is required, during installation, operation, and maintenance. Some areas present a higher danger to personal safety, and various kinds of safety devices need to be installed.

- All pinch and shear points as well as other exposed moving parts that present a hazard to employees at their workstations or their passageways must be safeguarded.
- Cleated conveyor chains are more susceptible of creating pinch and shear points than plain chain.
- When two or more pieces of equipment are interfaced, special attention must be given to the interfaced area to ensure proper safeguarding.
- For overhead equipment, guards must be provided if products may fall off the equipment for some reason. The same applies to all incline, decline, and vertical conveyors.

Safeguarding can be achieved by:

- Location – locate the hazardous area out of reach of the personnel involved.
- Guards – mechanical barriers preventing entry into the hazardous area or protecting against falling goods.
- Control devices – machine controls preventing or interrupting hazardous conditions.
- Warnings – instructions, warning labels, or sound or light signals, alerting on hazardous conditions.
- Warnings shall be used when other means of safeguarding will impair the function of the installation.

⚠ WARNING

It must be difficult to bypass or inactivate safeguards during operation! Safety devices should be designed to minimize discomfort or difficulties for operators.

Torque Limiter Adjustment for Suspended Drive Units

Introduction

The slip clutch on the drive unit is a safety device which allows the chain to stop if the load becomes excessive. It has two purposes:

- Prevent damage to conveyor
- Prevent damage to the products on the conveyor (See **Figure 112**.)

Name of Parts

Figure 112

1	Hub
2	Friction Facing
3	Bushing
4	Pressure Plate
5	Disk Spring
6	Lock Washer
7	Pilot Plate
8	Adjustable Bolt

Torque Setting

NOTE

It may be easier to adjust torque limiter off of conveyor to adequately secure inner race with shaft locked in a vise while turning adjusting nut.

Tighten adjusting nut hand tight (approximately ¼ turn after first making contact). Mark nut flat closest to keyway. Continue to tighten to specified rotation to achieve desired torque:

Rotation Angle	Slip Torque	Chain Pull
30 Degrees	13 Nm	203 N
60 Degrees	21 Nm	328 N
90 Degrees	29 Nm	453 N
110 Degrees	33 Nm	500 N

Once adjusted nut is tightened to desired rotation, bend locking tabs down against nut flats in at least 2 locations.

Replace the Friction Facing

Change the friction facing when they reach roughly half the thickness of 1.6 mm (0.063 in.). Before replacing the friction facing, each part must be completely free of oil, rust and dirt.

Maintenance and Precautions after the Replacement Procedure

Replace the friction facing and bushing if they wear.

Keep the torque limiter free from water and oil. If torque limiter slips, re-adjust as necessary.

Safety

⚠ WARNING

- **Before carrying out maintenance, make sure there is no load or turning force applied to the machine.**
- **Inspect operation periodically for overloads.**

⚠ CAUTION

- **Mechanical parts may wear depending on the rotation speed and slipping time. Check the operation periodically.**

Start-Up and Maintenance Schedule

The chains are made of acetyl resin, which has an excellent combination of strength, wear, chemical resistance, impact strength and temperature range. Chain failures like breakage, pin bending, and high wear might occur if the actual pull is higher than the permissible chain limit. There is also high risk of slip-stick effect if the conveyor is running at high chain tension.

It is important for the chain to run in the correct direction. The chain is marked with direction of travel by an arrow on the side of the chain. Over tensioning the chain can cause chain failure. Signs of over tensioning and overloading are broken links or bent link pins. On catenary drive units it is important that there is visible chain slack on the bottom of the drive units when running.

Chain Lubrication

Lubrication of the chain where it meets the slide rails and inside by the pin and pivot location can reduce friction - allowing the chain to run more smoothly, quietly, and last longer. Spray silicon with Teflon™ is the recommended lubrication, and can be applied at the drive tail to the inside of the chain through the slot in the catenary drive tails or gravity take-up units.

Wear

The degree of wear on a conveyor depends on a number of factors, such as:

- Running time
- Load, contact pressure
- Speed
- Product accumulation
- Sharp or rough products
- Chemicals
- Foreign particles, e.g. chips, grinding particles, broken glass, sand, sugar
- Temperature
- Plain bends

Try to minimize the running time for the conveyor by stopping it when there is no transport. Multiple horizontal and vertical plain bends in a conveyor will often result in increased wear.

Chain Elongation

Acetyl resin is an elastic material. In addition to the elastic elongation, the chain will exhibit elongation because of material creeping. The magnitude of chain elongation will depend on the chain tension. Unless a weighted take-up is used, the chain elongation will show up at the bottom of the drive unit. Too much of the chain slack may cause high wear at the drive unit entry point. Chain slack of up to 150 mm (5.9 in.) is acceptable during normal running but any slack longer than that is not advisable. The chain slack might also hit on any part below it. For this case, the chain slack should be shortened much earlier. In a normal case, chain should be shortened after run-in time of 40 hours. The next inspection should be made after 200 hours of running and then every 1600 hours. More frequent inspections are recommended if the conveyor is long and has high load.

The chain should never be so tight that there is no slack during the operation. If there is too much slack, there will be excessive wear on the chain guides and the chain. This could be a risk for injury. If the slack on the conveyor chain is unacceptably high, it must be shortened by splitting the chain and removing the necessary number of links.

- The conveyor chain must show some slack during operation (See **Figure 113**).

Figure 113

- The conveyor chain does not need to show any slack when the conveyor chain is stationary or when a weighted take-up is used.

Inspection

Visually check the slide rail in horizontal and vertical bends after every 200 hours of operation. The chain can stay in place during the inspection. Replace any worn out slide rail. Remove the chain from the conveyor and inspect the slide rail carefully once every 1500 hours of operation. Check for any worn out slide rail and any other unusual conditions and make necessary replacement. Clean up any dirt accumulation in the conveyor beam, especially before any plain bends, wheel bends, drive unit, and idler end.

Drive Unit

The drive unit can be equipped with different gear motor brands. Please follow the maintenance recommendations from the manufacturer.

Maintenance Schedule

Maintenance is recommended to be carried out every 3rd, 6th and 12th month, and subsequently every 6th month, considering the running condition. Following are the recommended actions to be carried out:

First 3rd Month, 6th Month, and Every 6th Month Following

- Shorten the chain, if required.
- Visually inspect the condition of the slide rail, sprocket, wheel, and chain guides.
- Check any high wear part on the conveyor, and replace when necessary.
- Clean up any foreign accumulation that might block the smooth flow of the conveyor.
- Check the gearbox oil level and top off when necessary.
- Check all support structures, slide guides, and conveyor joints for looseness. Replace when necessary.

Checking Slide Rail with the Conveyor Chain in Place

The slide rail needs to be checked after every 200 hours of operation. Check on a stationary state with the chain in place. **Figure 114** shows the correct configuration of joints.

Figure 114

- Check the screwing points on the slide rail.
- Check the joints section on the slide rail.
- Check that the gap **(Figure 115, item 1)** between the slide rails and that the joints fit correctly.

Figure 115

- Check that the nylon screw is in place and does not protrude over the surface of the slide rail.
- Check that the joint sections are not deformed.

Checks When the Chain is Removed

The slide rail needs to be checked once a year or after 1500 hours of operation. The chain should be removed from the conveyor beam for checking the slide rail. Check carefully on the condition of wear and the screws.

Horizontal Bends

Horizontal bends need to be checked carefully after every 200 hours of operation.

Check the inner slide rail in horizontal bends carefully, since the friction here is particularly high. The conveyor chain develops more pressure on the inner slide rail compared to the outer slide rail.

- Check the slide rail for scratches and notches.
- Replace the slide rail and the screws, if necessary.
- Clean the conveyor chain and check the condition of the chains.
- Clean the conveyor beam.

Safety Devices

Safety devices should be checked at regular intervals.

- Check the motor cover for the suspended drive (See **Figure 116**).

Figure 116

- This motor cover must always be in place when the conveyor is operating.
- The drive unit should always have a chain cover to protect the safety of the users. The chain slack can be seen when the conveyor is running at the drive unit. Check that the chain cover plates are in place, and that the chain does not slacken enough to hang below the plates (**Figure 117**).

Figure 117

- Check that the chain cover is in place for the conveyor chain on the intermediate drive units and the catenary drive units.

Troubleshooting

Symptom	Cause	Corrective Action
Jerky running	• Damage or badly fitted slide rail. • Incorrectly adjusted slip clutch. • Worn transmission parts. • Conveyor chain is too tight or loose. • Dirty conveyor.	• Inspect and replace as necessary. • Adjust slip clutch. • Check/replace transmission chain, chain drive sprocket. • Lubricate chain with silicone spray with Teflon™. • Tension conveyor chain correctly. • Clean conveyor chain/slide rail. • Add weighted take-up.
Drive unit is running; conveyor chain is not running	• Incorrectly adjusted slip clutch. • Friction discs in slip clutch are worn or contaminated. • Damage/badly fitted slide rail. • Transmission products are not fitted.	• Check adjustment of slip clutch. • Check and replace if necessary. • Check the free running of the conveyor chain. • Check and fit.
Motor overheating on drive unit	• Overloaded conveyor. • Gearbox leaking oil. • Dirty conveyor.	• Remove products from conveyor and test run. • Check actual conveyor load against recommended loading. If possible, add breaks to add more drives. • Check output shaft seal and area around motor/gearbox interface. • Clean the conveyor chain with warm water.
Noise	• Worn or damaged bearings in drive unit. • Damage/badly fitted slide rail. • Excessive conveyor speed. • Incorrect conveyor chain tension.	• Check/replace drive unit. • Check the free running of the conveyor chain, especially in slide rail joints. • Check actual load against recommended loading. • Lubricate chain with silicone spray with Teflon™. • Lengthen or shorten conveyor chain.
Abnormal wear of plastic parts	• Overloaded conveyor. • Ambient temperature too high. • Foreign object dropped on the conveyor chain.	• Remove products from conveyor and test run. • Check the free running of the conveyor chain. • Check actual conveyor load against recommended loading. If possible, add breaks the conveyor and add more drives. • Check against recommended temperature for conveyor. • Replace the broken section of chain.
Clutch Ratcheting or slipping	• Excessive or accumulated load. • Improper ratchet clutch tensioning. • Damaged or missing chain assembly parts. • Accumulation of conveyed material or foreign objects inside of casing.	• Avoid load buildup by running conveyor continuously. • Do not manually surge load conveyor. • Refer to ratchet clutch adjustment in Maintenance. • Review belt and repair or replace as required. • Remove chain and clean out.

Required Tools

- 3/32" hex wrench
- 3 mm hex wrench
- 4 mm hex wrench
- 5 mm hex wrench
- 6 mm hex wrench
- 8 mm hex wrench
- 10 mm wrench
- 13 mm wrench
- 16 mm wrench
- Chain Removal Tool
- Slide Rail Cutter
- Drill Fixtures for Slide Rails
- Riveting Tool

Conveyor Chain Replacement

⚠ WARNING

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

Replacing a Section or Entire Chain

1. Use chain removal tool or a punch and hammer to push the chain rod **(Figure 118, item 1)** out.

Figure 118

⚠ WARNING

SEVERE HAZARD!
If conveyor chain is damaged or worn, replace chain section.

2. Replace old section of chain.

⚠ CAUTION

DO NOT reuse chain rods that are damaged, bent, or show signs of wear.

NOTE

Drive spindle shaft assembly replacement is recommended with belt replacement (see “Drive Spindle Shaft Replacement” on page 41).

Conveyor Chain Tensioning

⚠ WARNING

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

NOTE

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

1. Remove one or more chain links to take up tension. Refer to “Replacing a Section or Entire Chain” on page 39.

NOTE

*After shortening chain, ensure there is visible slack in chain (while running) at catenary drive tails. If chain is not visible in cover slot **(Figure 119, item 1)** inspect from end.*

Figure 119

Slide Rail Replacement

Replace the slide rails if they become worn.

NOTE

Top and bottom slide rails are shipped pinned/attached at various places on conveyor.

1. Remove belt. See “Conveyor Chain Replacement” on page 39.
2. Drill out or push out drilled pinned screws or rivets **(Figure 120, item 1)**.
3. Remove slide rail **(Figure 120, item 2)** from top of frame assembly.

Figure 120

4. Cut and remove worn slide rail section and replace with new slide rail. See "Installation" section, starting on page 15.
5. Remove lower slide rails, as needed, repeat procedure used for upper slide rails.
6. Install new slide rails. See "Installation" section, starting on page 15.

Idler Pulley Replacement

⚠ WARNING

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

1. Remove chain. See “Conveyor Chain Replacement” on page 39.

2. Remove three flat head screws **(Figure 121, item 1)**.

Figure 121

3. Remove the head plate **(Figure 122, item 1)** from the idler end.

Figure 122

4. Remove flat head screw **(Figure 123, item 1)** and remove idler pulley **(Figure 123, item 2)** from idler head plate assembly.

Figure 123

5. Install components reverse of removal.

Drive Spindle Shaft Replacement

⚠ WARNING

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

1. Remove chain. See “Conveyor Chain Replacement” on page 39.
2. Remove the gearmotor.
3. Loosen two screws **(Figure 124, item 1)** on each side of conveyor, and remove the drive tail assembly **(Figure 124, item 2)** from the conveyor frame **(Figure 124, item 3)**.

Figure 124

4. Remove four screws **(Figure 125, item 1)** on side of drive spindle.

Figure 125

5. Remove two screws **(Figure 126, item 1)** on side of drive spindle.

Figure 126

6. Use the bearing tool **(Figure 127, item 1)** to unseat bearings by inserting the four screws and turning the threaded rod **(Figure 127, item 2)** to push bearing out. NOTE: Insert the longer screws **(Figure 127, item 3)** on the drive shaft side and the shorter screws **(Figure 128, item 1)** on the non-shaft side.

Figure 127

Figure 128

7. Remove the head plates **(Figure 129, item 1)** from the drive tail.

Figure 129

8. Install components reverse of removal.

Retaining Guide Replacement

Cantenary Drive End

1. Remove three socket head screws **(Figure 130, item 1)** and remove drive plate guard **(Figure 130, item 2)** from drive plate **(Figure 130, item 3)**.

Figure 130

2. Remove two socket head screws **(Figure 131, item 1)**.

Figure 131

3. Remove lower retaining guide **(Figure 132, item 1)** from drive plate **(Figure 132, item 2)**.

Figure 132

4. Remove three socket head screws **(Figure 133, item 1)**.

Figure 133

5. Remove upper retaining guide **(Figure 134, item 1)** from drive plate **(Figure 134, item 2)**.

Figure 134

6. Install components reverse of removal.

Idler End and GP Drive Tail

1. Remove seven (7) socket head screws **(Figure 135, item 1)** from idler head plate assembly.

Figure 135

2. Remove retaining guide **(Figure 136, item 1)** from idler head plate assembly **(Figure 136, item 2)**. Replace components, as needed.

Figure 136

3. Install components reverse of removal.

Top Running Drive

1. Remove four socket head screws **(Figure 137, item 1)**. Remove drive package **(Figure 137, item 2)** from drive motor mounting bracket **(Figure 137, item 3)**.

Figure 137

2. Loosen set screw **(Figure 138, item 1)** and remove belt hold down wheel **(Figure 138, item 2)**.

Figure 138

3. Repeat on opposite side.
4. Remove four socket head screws **(Figure 139, item 1)** securing belt hold down tabs **(Figure 139, item 2)** to drive assembly **(Figure 139, item 3)**.

Figure 139

5. Repeat on opposite side.
6. Use belt removal tool #203480 **(Figure 140, item 1)** or a punch and hammer to push the belt rod out by striking the rod end.

Figure 140

⚠ WARNING

SEVERE HAZARD!

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

7. Remove four hex head cap screws **(Figure 141, item 1)** and remove drive motor mounting plate **(Figure 141, item 2)**.

Figure 141

8. Loosen set screws **(Figure 142, item 1)** on both sides of conveyor.

Figure 142

9. Separate conveyor halves **(Figure 142, item 2)** and remove drive assembly **(Figure 142, item 3)**.
10. Remove four socket head screws **(Figure 143, item 1)**.

Figure 143

11. Remove four low head cap screws **(Figure 143, item 2)** and remove side plate **(Figure 143, item 3)**.
12. Remove four low head cap screws securing spindle assembly to side plate on the opposite side.
13. Replace spindle assembly.

Wheel Bend Servicing

⚠ WARNING

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

1. Remove screw **(Figure 145, item 1)** on both sides of guard cover **(Figure 145, item 2)**. Remove guard cover.

Figure 144

2. Remove screws **(Figure 145, item 1)** from wheel guide **(Figure 145, item 2)**.

Figure 145

3. Replace wheel guide.
4. Install components reverse of removal.

Weighted Take-Up

1. Remove two socket head screws **(Figure 146, item 1)** on each side securing assembly to frame.

Figure 146

2. Lower weighted take up assembly **(Figure 147, item 1)** from conveyor **(Figure 147, item 2)** by disengaging locking teeth **(Figure 147, item 3)** on both sides.

Figure 147

3. Use two wrenches to remove nut **(Figure 148, item 1)** on bolt securing wheel **(Figure 148, item 2)** onto weighted take up assembly housing **(Figure 148, item 3)**.

Figure 148

4. Remove bolt **(Figure 149, item 1)**, washer **(Figure 149, item 2)**, two spacers **(Figure 149, item 3)**, and wheel **(Figure 149, item 4)** from take up assembly housing **(Figure 149, item 5)**.

Figure 149

5. Remove idler pulley assembly **(Figure 150, item 1)** from belt **(Figure 150, item 2)**.

Figure 150

6. Remove socket head screw **(Figure 151, item 1)** from end of idler pulley assembly.

Figure 151

7. Remove bolt **(Figure 152, item 1)**, washer **(Figure 152, item 2)**, spacer **(Figure 152, item 3)**, wave washer **(Figure 152, item 4)**, and plate **(Figure 152, item 5)** from end of idler assembly **(Figure 152, item 6)**.

Figure 152

8. Repeat on opposite side.
9. Remove two weights **(Figure 153, item 1)** from each side of pulley **(Figure 153, item 2)**.

Figure 153

10. Install components reverse of removal, using two hex wrenches **(Figure 154, item 1)** on each side of idler assembly to tighten components.

NOTE
*Be certain that notches **(Figure 154, item 2)** on both plates are on top side, and spacers are in same orientation, as shown, before tightening components.*

Figure 154

11. Install idler pulley assembly **(Figure 155, item 1)** onto conveyor in belt loop **(Figure 155, item 2)**.

Figure 155

12. Install remaining components reverse of removal. (For installation instructions, refer to "Weighted Take-Up" on page 22 in the Installation section.)

Power Transfer

Removal

1. Remove two socket head screws **(Figure 156, item 1)** and cover **(Figure 156, item 2)** from power transfer assembly.

Figure 156

2. Loosen two socket head screws **(Figure 157, item 1)** holding tensioning pulley **(Figure 157, item 2)** onto timing belt **(Figure 157, item 3)**.

Figure 157

3. Remove timing belt **(Figure 157, item 3)** from assembly.
4. Loosen idler socket head screw **(Figure 158, item 1)** on both sides of the conveyor.

Figure 158

5. Slide idler assembly within slot **(Figure 158, item 2)** to remove tension on belt.
6. Remove two socket head screws **(Figure 159, item 1)** and pinch guard **(Figure 159, item 2)**.

Figure 159

7. Lift slightly on belt **(Figure 160, item 1)** and push pin **(Figure 160, item 2)** out of belt.

Figure 160

Figure 161

NOTE
*Note that head of pin **(Figure 161, item 1)** should be removed in direction shown.*

8. Remove belt.

9. Remove four socket head screws **(Figure 162, item 1)** holding wear bar assembly **(Figure 162, item 2)** onto power transfer.

Figure 162

10. Remove wear bar assembly **(Figure 163, item 1)** from power transfer.

Figure 163

11. Disassemble side guide plates **(Figure 164, item 1)**, wear rods **(Figure 164, item 2)**, and wear bar **(Figure 164, item 3)**. Replace worn components.

Figure 164

12. Remove socket head screw **(Figure 165, item 1)** on both sides of the conveyor and remove idler assembly.

Figure 165

13. Replace idler assembly (if worn), and install socket head screws to secure.

14. Loosen two set screws **(Figure 166, item 1)** on two bearings **(Figure 166, item 2)**.

Figure 166

15. Loosen sprocket set screws **(Figure 166, item 3)**.
16. Remove drive shaft **(Figure 167, item 1)**, making certain not to loose key **(Figure 167, item 2)** when removing gear **(Figure 167, item 3)**.

Figure 167

17. Remove key **(Figure 168, item 1)** from sprocket **(Figure 168, item 2)**.

Figure 168

18. Replace worn drive sprockets and bearings.

Installation

1. Install drive shaft **(Figure 169, item 1)** on two bearings **(Figure 169, item 2)** and press outward as shown.

Figure 169

2. Secure drive shaft onto bearings with two set screws **(Figure 170, item 1)**.

Figure 170

3. Raise belt **(Figure 171, item 1)** into position, and move gear **(Figure 171, item 2)** so that cogs line up with belt, as shown.

Figure 171

4. Tighten sprocket with set screws **(Figure 171, item 3)** in proper alignment with belt **(Figure 171, item 1)**.

5. Install wear bar assembly **(Figure 172, item 1)** with four socket head screws **(Figure 172, item 2)**.

Figure 172

6. Guide belt **(Figure 173, item 1)** through idler assembly with belt routing under gear **(Figure 173, item 2)** and over wear tube **(Figure 173, item 3)**.

Figure 173

7. Bring ends of belt together and install pin **(Figure 174, item 1)**.

Figure 174

8. Install pinch guard **(Figure 175, item 1)** with two socket head screws **(Figure 175, item 2)**.

Figure 175

9. Slide idler assembly within slot **(Figure 176, item 1)** only enough to remove excess slack from belt **(Figure 176, item 2)**. Tighten socket head screws **(Figure 176, item 3)**.

⚠ CAUTION

DO NOT overtighten belt or excessive wear will occur.

Figure 176

10. Rotate drive shaft **(Figure 177, item 1)** to verify tightness of belt **(Figure 177, item 2)**. Belt should turn freely. Loosen idler socket head screw **(Figure 177, item 3)** and adjust, if necessary.

Figure 177

11. Install timing belt:

- On idler end, route and install belt **(Figure 178, item 1)** as shown. Press up on tensioner **(Figure 178, item 2)** and tighten two socket head screws **(Figure 178, item 3)**.

Figure 178

- On drive end, route and install belt **(Figure 179, item 1)** as shown. Press down on tensioner **(Figure 179, item 2)** and tighten two socket head screws **(Figure 179, item 3)**

Figure 179

12. Install cover **(Figure 180, item 1)** with two socket head screws **(Figure 180, item 2)**.

Figure 180

Service Parts

NOTE
For replacement parts other than those shown in this section, contact an authorized Dorner distributor or Dorner directly. Recommended Critical Service Parts and Kits are identified by the Key Service Parts symbol . Dorner recommends keeping these parts on hand.

Drive Tail

Item	Part Number	Description
1	FSD63101-A	Retaining Guide Set (Pair)
2	FSD63102-A	Belt Capture Guide Set (Pair)
3	205700-EN-065	Standard Load E-Drive 3/4” Spindle Shaft Assembly
	205700-EA-065	Standard Load E-Drive 3/4” Spindle Shaft Assembly with Auxiliary Shaft
	205700-FN-065	Standard Load 20 mm Spindle Shaft Assembly
	205700-FA-065	Standard Load 20 mm Spindle Shaft Assembly with Auxiliary Shaft
	205700-AN-065	Auxiliary Spindle Shaft Assembly
	205700-AA-065	Dual Auxiliary Spindle Shaft Assembly

Item	Part Number	Description
4	FSDD-A65-EL	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'A' Position
	FSDD-A65-ER	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'D' Position
	FSDD-A65-ELA	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'A' Position and Auxiliary Shaft
	FSDD-A65-ERA	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'D' Position and Auxiliary Shaft
	FSDD-A65PT-EL	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'A' Position and Power Transfer
	FSDD-A65PT-ER	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'D' Position and Power Transfer
	FSDD-A65-0L	Standard Load 20 mm Drive Tail Kit with Shaft in the 'A' Position
	FSDD-A65-0R	Standard Load 20 mm Drive Tail Kit with Shaft in the 'D' Position
	FSDD-A65-0LA	Standard Load 20 mm Drive Tail Kit with shaft in the 'A' Position and Auxiliary Shaft
	FSDD-A65-0RA	Standard Load 20 mm Drive Tail Kit with shaft in the 'D' Position and Auxiliary Shaft
	FSDD-A65PT-0L	Standard Load 20 mm Drive Tail Kit with Shaft in the 'A' Position and Power Transfer
	FSDD-A65PT-0R	Standard Load 20 mm Drive Tail Kit with Shaft in the 'D' Position and Power Transfer
	FSDD-A65-AA	Auxiliary Tail Kit with two Auxiliary Shafts
	FSDD-A65-AL	Auxiliary Tail Kit with Shaft in the 'A' Position
	FSDD-A65-AR	Auxiliary Tail Kit with Shaft in the 'D' Position
5	FAEC-DS	Plug
6	FLG-120-SF	Drive Flange
	207242	Drive Flange for Power Transfer
7	CP1005-1-SF	Guard Plate (Pair - with screws)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Guided Profile (GP) Drive Tail

Item	Part Number	Description
1	FSE63001-A	Retaining Guide Set (Pair)
2	FAEC-IE-SF	Idler Tail Cover (x10)
3	205700-EN-065	Standard Load E-Drive 3/4” Spindle Shaft Assembly
	205700-EA-065	Standard Load E-Drive 3/4” Spindle Shaft Assembly with Auxiliary Shaft
	205700-FN-065	Standard Load 20 mm Spindle Shaft Assembly
	205700-FA-065	Standard Load 20 mm Spindle Shaft Assembly with Auxiliary Shaft
	205700-AN-065	Auxiliary Spindle Shaft Assembly
	205700-AA-065	Dual Auxiliary Spindle Shaft Assembly

Item	Part Number	Description
4	FSDD-A65GP-EL	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'A' Position
	FSDD-A65GP-ER	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'D' Position
	FSDD-A65GP-ELA	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'A' Position and Auxiliary Shaft
	FSDD-A65GP-ERA	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'D' Position and Auxiliary Shaft
	FSDD-A65GPPT-EL	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'A' Position and Power Transfer
	FSDD-A65GPPT-ER	Standard Load E-Drive 3/4” Drive Tail Kit with Shaft in the 'D' Position and Power Transfer
	FSDD-A65GP-0L	Standard Load 20 mm Drive Tail Kit with Shaft in the 'A' Position
	FSDD-A65GP-0R	Standard Load 20 mm Drive Tail Kit with Shaft in the 'D' Position
	FSDD-A65GP-0LA	Standard Load 20 mm Drive Tail Kit with Shaft in the 'A' Position and Auxiliary Shaft
	FSDD-A65GP-0RA	Standard Load 20 mm Drive Tail Kit with Shaft in the 'D' Position and Auxiliary Shaft
	FSDD-A65GPPT-0L	Standard Load 20 mm Drive Tail Kit with Shaft in the 'A' Position and Power Transfer
	FSDD-A65GPPT-0R	Standard Load 20 mm Drive Tail Kit with Shaft in the 'D' Position and Power Transfer
	FSDD-A65GP-AA	Auxiliary Tail Kit with two Auxiliary Shafts
	FSDD-A65GP-AL	Auxiliary Tail Kit with Shaft in the 'A' Position
	FSDD-A65GP-AR	Auxiliary Tail Kit with Shaft in the 'D' Position
5	FLG-120-SF	Drive Flange
	207242	Drive Flange for Power Transfer

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Service Parts

FSSD-A65 Suspended Drive

Item	Part Number	Description
1	FSD63101-A	Retaining Guide Set (Pair)
2	FSD63102-A	Belt Capture Guide Set (Pair)
3	205700-AN-065	Auxiliary Spindle Shaft Assembly
4	RS08BX19T-20	Sprocket, Solid (19T)
5	FATL-250	Torque Limiter Sprocket (Max Pull 844N)
6	FRS008B-64LK	Roller Chain
7	FSSD-A65-0L	Suspended Drive Tail Kit with Shaft in the ‘A’ Position
	FSSD-A65-0R	Suspended Drive Tail Kit with Shaft in the ‘D’ Position
	FSSD-A65GP-0L	Suspended Guided Profile Drive Tail Kit with Shaft in the ‘A’ Position
	FSSD-A65GP-0R	Suspended Guided Profile Drive Tail Kit with Shaft in the ‘D’ Position
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

FSID-DD-0L1/0R1 Intermediate Direct Drive

Item	Part Number	Description
1	FSD63503	FSID Drive Sprocket
2	FSD63504-1	FSD Steering Guide Right/Left
3	FSD63102	FSD Return Steering Guide R/L
4	CP1012-M	Return Chain Protector
5	6205LLU	NTN Bearing
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

FSID-SD-0L1/0R1 Intermediate Suspended Drive

Item	Part Number	Description
1	FSD63503	FSID Drive Sprocket
2	FSD63504-1	FSD Steering Guide Right/Left
3	FSD63102	FSD Return Steering Guide R/L
4	6205LLU	NTN Bearing
5	FATL-250	Sprocket
6	RS08BX19T-20	Transmission Sprocket
7	FRS008B-64LK	Roller Chain
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Weighted Take-Up

Item	Part Number	Description
1	FSD63102-A	Belt Capture Guide Set (Pair)
2	207198-065	Conveyor Section
3	920516M	Socket Head Screw, M5-.80 x 16 mm
4	990501M	Hex Nut, M5-0.80
5	807-1760	Washer
6	807-2290	Hex Bolt, 1/2-13 x 4.5"
7	807-2297	Nylon Spacer, 0.75" x 0.32" x 0.375"
8	FASN-M8	Square Nut, M8 (x50)
9	910-320	Lock Nut
10	807-2314	Spring Washer
11	FSIM-A15	Idler Pulley Assembly
12	203330	Weighted Take-Up Plate
13	203331	Wheel
14	911-516	Washer
15	203344-065	End Guard
16	203349	Latching Cover
17	203351	Ratchet Plate
18	207199-065	Bottom Guard
19	920608M	Socket Head Cap Screw, M6-1.00 x 8 mm
20	920612M	Socket Head Cap Screw, M6-1.00 x 12 mm
21	920820M	Socket Head Cap Screw, M8-1.25 x 20 mm
22	920830M	Socket Head Cap Screw, M8-1.25 x 30 mm
23	950810M	Low Head Cap Screw, M8-1.25 x 10 mm
24	207746	Weighted Take-Up Disk, 1/4"
25	207747	Weighted Take-Up Disk, 5/16"
26	207238	Guide Spacer
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Idler Tail

Item	Part Number	Description
1	FSE63001-A	Retaining Guide Set (Pair)
2	FAEC-IE	Idler Tail Cover (x10)
3	FSIM-A15	Idler Pulley Assembly
	205700-AN-065	Idler Pulley Assembly with Auxiliary Shaft
4	FSIE-A65	Idler Tail Kit
	FSIE-A65-AL	Idler Tail Kit with Auxiliary Shaft in the 'A' Position
	FSIE-A65-AR	Idler Tail Kit with Auxiliary Shaft in the 'D' Position (Shown)
	FSIE-A65PT-L	Idler Tail Kit with Shaft in the 'A' Position and Power Transfer
	FSIE-A65PT-R	Idler Tail Kit with Shaft in the 'D' Position and Power Transfer
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Top Running Drive

Item	Part Number	Description
1	807-2555	Set Screw, M8-1.25 x 10 mm
2	FSDD-A65DL-19	Spindle Assembly
3	205140	Connecting Bar
4	205147	Hex Post
5	205125	Extrusion Guard
6	204379	Hold Down Assembly
7	204790	Pinch Guard
8	205115	Side Plate
9	205134	Wheel Block
10	205139-LH	Slide Rail Support Left Hand
11	205139-RH	Slide Rail Support Right Hand
12	708180P	Tri-lobe Screw, M6-1.00 x 25 mm
13	950610M	Low Head Cap Screw, M6-1.00 x 10 mm
14	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
15	950630M	Low Head Cap Screw, M6-1.00 x 30 mm
16	970808M	Set Screw, M8-1.25 x 10 mm
17	960612MSS	Hex Head Cap Screw, M6-1.00 x 12 mm
18	807-2016	Cover
19	807-2277	Disc Spring
20	203065	Drive Spacer
21	205132	Motor Mount
22	350115	Adapter Ring
23	920620M	Socket Head Screw, M6-1.00 x 20 mm
24	931025M	Flat Head Screw, M10-.50 x 25 mm
25	950650M	Low Head Cap Screw, M6-1.00 x 50 mm
26	B6205-C70-T15	Bearing Retainer
27	913-051	Pin
28	205141	Spacing Bar
29	202270-00134	Extrusion
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Frame Assembly

Item	Part Number	Description
1	See Slide Rail Section	Slide Rails
2	FSCB-3-LLLLL	Frame
3	FACS-25x140A	Connecting Bracket, w/Set Screws (x10)
LLLLL = Part length in inches with two decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Curve Frame Assembly

Item	Part Number	Description
1	See Slide Rail Section	Slide Rails
2	FSWB-AR150A	Wheel Curve Kit
	FSHB-AR500	90° 500 Radius Plain Bend Curve Kit
	FSHB-AR700	90° 700 Radius Plain Bend Curve Kit
3	205165-065	Guard Assembly for Top Running Drive Only (Not Shown)
4	FSWH63001	Wheel Guide (Pair)
A = Curve Angle: 30, 45, 60, 90, 180		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Knuckle Frame Assembly

Item	Part Number	Description
1	See Slide Rail Section	Slide Rails
2	FSVB-5R300	5° Knuckle Kit
	FSVB-7R300	7° Knuckle Kit
	FSVB-10R300	10° Knuckle Kit
	FSVB-15R300	15° Knuckle Kit
	FSVB-20R300	20° Knuckle Kit
	FSVB-30R300	30° Knuckle Kit
	FSVB-45R300	45° Knuckle Kit
	FSVB-60R300	60° Knuckle Kit
	FSVB-90R300	90° Knuckle Kit
3	FACS-25x140A	Connecting Bracket, w/Set Screws (x10)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

#4 & #5 High Sides for Straight Modules

Item	Part Number	Description
1	FATB-20	Stud, M8 x 20 mm (x50)
2	204172-LLLLL	1.5" High Side
	204127-LLLLL	3" High Side
3	204566	Mounting Clip
4	210829	Guide Clip Adapter
	210831	Guide Clip Adapter for Tail Mount Only
	210836	Guide Clip Adapter for Roller Transfer Tail Mount Only
5	920614M	Socket Head Screw, M6-1.00 x 14 mm
6	990812M	Hex Nut, M8-1.25
LLLLL = Part length in inches with two decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

#4 & #5 High Sides for Curve Modules

Item	Part Number	Description
1	FATB-20	Stud, M8 x 20 mm (x50)
2	204135-065-AAA	1.50" High Side for Wheel Bend Curves - Outside Edge
	204334-065-AAA	1.50" High Side for 500R Plain Bend Curves - Outside Edge
	204338-065-AAA	1.50" High Side for 700R Plain Bend Curves - Outside Edge
	204134-065-AAA	3" High Side for Wheel Bend Curves - Outside Edge
	204336-065-AAA	3" High Side for 500R Plain Bend Curves - Outside Edge
	204340-065-AAA	3" High Side for 700R Plain Bend Curves - Outside Edge

Item	Part Number	Description
3	204137-065-AAA	1.50" High Side for Wheel Bend Curves - Inside Edge
	204333-065-AAA	1.50" High Side for 500R Plain Bend Curves - Inside Edge
	204337-065-AAA	1.50" High Side for 700R Plain Bend Curves - Inside Edge
	204136-065-AAA	3" High Side for Wheel Bend Curves - Inside Edge
	204335-065-AAA	3" High Side for 500R Plain Bend Curves - Inside Edge
	204339-065-AAA	3" High Side for 700R Plain Bend Curves - Inside Edge
4	204566	Mounting Clip
5	210829	Clip Guide Adapter
6	920614M	Socket Head Screw, M6-1.00 x 14 mm
7	990812M	Hex Nut, M8-1.25
AAA = Angle of curve: 030, 045, 060, 090, 180		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

#4 & #5 High Sides for Incline/Decline Modules

Item	Part Number	Description
1	204342-AA-065	1.5” Guide Plate for Lower knuckle
	204343-AA-065	1.5” Guide Plate for Upper knuckle
	204144-AA-065	3” Guide Plate for Lower knuckle
	204174-AA-065	3” Guide Plate for Upper Knuckle
2	FATB-20	Stud, M8 x 20 mm (x50)
3	990812M	Hex Nut, M8-1.25
4	204145	Spacer
AA = Angle of bend: 05, 07, 10, 15, 20, 30, 45, 60, 90		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

#13 & #14 Heavy Duty Fully Adjustable Guiding

Item	Part Number	Description
1	206380	Base
2	206381	Base Clamp
3	206382	Insert Clamp
4	206383	Guide Ring
5	206385	Tube
6	206397	Clip
7	206685	T-Nut
8	206692	Guide Tube
9	807-2859	Nylon Cap Screw, M6 x 16 mm
10	807-920	Square Nut, M6-1.0
11	911-710	Washer
12	920616M	Socket Head Screw, M6-1.00 x 16 mm
	206698	Knob, 12 mm (Tool-Less)
13	9206150M	Socket Head Screw, M6-1.00 x 150 mm
	206697	Knob, 150 mm (Tool-Less)
14	990601M	Hex Nut

Item	Part Number	Description
15	FGRR-15x20-LLLLL	Guide Rail
	GTB13A04	Guide Rail 4' long
	GTB13A08	Guide Rail 8' long
16	FGRT-3x33	1.3" UHMW Guiding (per foot)
	GTB13B04	1.3" UHMW Guiding 4' long
	GTB13B08	1.3" UHMW Guiding 8' long
	206683	2" UHMW Guiding (per foot)
	GTB13C04	2" UHMW Guiding 4' long
	GTB13C08	2" UHMW Guiding 8' long
17	206686	Adjustable Bracket Assembly (Includes Items 1 through 14)
	206687	Tool-Less Adjustable Bracket Assembly (Includes Items 1 through 14)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

#17 & #18 - Puck / Pallet Guiding

Item	Part Number	Description
1	FATB-20	Stud, M8 x 20 mm (x50)
2	FASN-M8	Square Nut, M8
3	205129	Clip
4	960882M	Hex Head Flange Screw, M8 x 12 mm
5	990812M	Hex Nut, M8-1.25
6	460055	Guide Rail (per foot)
7	203825	Clip On Slide Rail (per foot)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Type A - Fixed Guiding (16x54)

Item	Part Number	Description
1	FGRB-16x54	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut

Item	Part Number	Description
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type B - Fixed Guiding (16x42)

Item	Part Number	Description
1	FGRB-16x42	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut
5	FGRR-15x20	Guide Rail (3 m long)

Item	Part Number	Description
6	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type C - Fixed Guiding (28x42)

Item	Part Number	Description
1	FGRB-28x42	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut

Item	Part Number	Description
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Type D - Fixed Guiding (40x42)

Item	Part Number	Description
1	FGRB-40x42	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut
5	FGRR-15x20	Guide Rail (3 m long)

Item	Part Number	Description
6	FGRT-3x23	Guiding (3 m long)

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Service Parts

Type E - Fixed Guiding (49x42)

Item	Part Number	Description
1	FGRB-49x42	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut

Item	Part Number	Description
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type F - Fixed Guiding (53x42)

Item	Part Number	Description
1	FGRB-53x42	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut

Item	Part Number	Description
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type G - Fixed Guiding (90x42)

Item	Part Number	Description
1	FGRB-90x42	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut

Item	Part Number	Description
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type H - Adjustable Width Guiding (8x39x45)

Item	Part Number	Description
1	FGRA-8x39x45	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut

Item	Part Number	Description
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Type J - Adjustable Width Guiding (26x39x45)

Item	Part Number	Description
1	FGRA-26x39x45	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut

Item	Part Number	Description
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type K - Adjustable Width Guiding (40x18)

Item	Part Number	Description
1	FGRA-40x18	Fixed Guide Rail Bracket (x10)
2	FGRD-6	Spacer (x10)
3	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm (x50)
4	990802M	Hex Nut
5	FGRR-15x20	Guide Rail (3 m long)
6	FGRT-3x23	Guiding (3 m long)

Item	Part Number	Description
7	FGRK-18x80A	Guide Rail Support (x10)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type L - Adjustable Height Guiding (18x110)

Item	Part Number	Description
1	FGRF-42x18V	Guide Rail Bracket (x10)
2	FGRD-18A	Spacer (x10)
3	FGRL-18x110C	Guide Rail Support (x10)
4	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm, use with 1 spacer (x50)
	FATB-53	T-Bolt, 53 mm, use with 2 spacers (x50)
5	990802M	Hex Nut

Item	Part Number	Description
6	FGRR-15x20	Guide Rail (3 m long)
7	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type M - Adjustable Height Guiding (18x150)

Item	Part Number	Description
1	FGRF-42x18V	Guide Rail Bracket (x10)
2	FGRD-18A	Spacer (x10)
3	FGDT-150	Tube (x10)
4	FGRS-18	Guide Rail Support (x10)
5	FGEC-18	Cap (x10)
6	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm, use with 1 spacer (x50)
	FATB-53	T-Bolt, 53 mm, use with 2 spacers (x50)

Item	Part Number	Description
7	990802M	Hex Nut
8	FGRR-15x20	Guide Rail (3 m long)
9	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Type N - Fully Adjustable Guiding

Item	Part Number	Description
1	FGRB-18x20	Guide Rail Bracket (x10)
2	FGDT-70	Tube, 70 mm (x10)
	FGDT-100	Tube, 100 mm (x10)
	FGDT-150	Tube, 150 mm (x10)
3	FGRS-18	Guide Rail Support (x10)
4	FGSP-DT	Tube Spacer (x10)
5	FGGR-18x100	Guide Rail Tube, 100 mm (x10)
	FGGR-18x150	Guide Rail Tube, 150 mm (x10)
	FGGR-18x200	Guide Rail Tube, 200 mm (x10)

Item	Part Number	Description
6	FGEC-18	Cap (x10)
7	FGEC-20	Cap (x10)
8	FATB-20	T-Bolt, 20 mm (x50)
9	FGRR-15x20	Guide Rail (3 m long)
10	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type P - Fully Adjustable Guiding

Item	Part Number	Description
1	FGRD-18A	Spacer (x10)
2	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm, use with 1 spacer (x50)
	FATB-53	T-Bolt, 53 mm, use with 2 spacers (x50)
	FATB-71	T-Bolt, 71 mm, use with 3 spacers (x50)
3	FGRF-42x18V	Guide Rail Bracket (x10)
4	FGRL-18x160CA	Vertical Support (x10)

Item	Part Number	Description
5	FGRK-18x80A	Guide Rail Support (x10)
6	990802M	Hex Nut
7	FGRR-15x20	Guide Rail (3 m long)
8	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type Q - Dual Rail Guiding

Item	Part Number	Description
1	FGRD-18A	Spacer (x10)
2	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm, use with 1 spacer (x50)
	FATB-53	T-Bolt, 53 mm, use with 2 spacers (x50)
3	FGRF-A110	Guide Rail Bracket (x10)
4	FGRF-DP	Plug (x10)

Item	Part Number	Description
5	FGRK-18x80A	Guide Rail Support (x10)
6	990802M	Hex Nut
7	FGRR-15x20	Guide Rail (3 m long)
8	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Type R - Dual Rail Guiding

Item	Part Number	Description
1	FGRD-18A	Spacer (x10)
2	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm, use with 1 spacer (x50)
	FATB-53	T-Bolt, 53 mm, use with 2 spacers (x50)
3	FGRF-A35	Guide Rail Bracket (x10)
4	FGRF-DP	Plug (x10)
5	FGRK-18x80A	Guide Rail Support (x10)
6	990802M	Hex Nut

Item	Part Number	Description
7	FGRR-15x20	Guide Rail (3 m long)
8	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Type S - Adjustable Height Guiding

Item	Part Number	Description
1	FGRF-42x18V	Guide Rail Bracket (x10)
2	FGRD-18A	Spacer (x10)
3	FGRS-18	Guide Rail Support (x10)
4	FATB-20	T-Bolt, 20 mm, use without spacer (x50)
	FATB-35	T-Bolt, 35 mm, use with 1 spacer (x50)
	FATB-53	T-Bolt, 53 mm, use with 2 spacers (x50)
5	FGDT-200	Tube (x10)
6	FGEC-18	Cap (x10)
7	990802M	Hex Nut
8	FGRR-15x20	Guide Rail (3 m long)
9	FGRT-3x23	Guiding (3 m long)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Power Transfer

Item	Part Number	Description
1	802-046	Cam Bearing
2	802-110	Bearing
3	950620M	Low Head Cap Screw, M6-1.00 x 20 mm
4	203765	Locking Sprocket
5	807-2285	Cover
6	807-2286	Retaining Ring
7	807-2287	Hex Post
8	206886	Pulley
9	907-115	Socket Head Set Screw, #10-32 x 0.19
10	203229	Side Guide Plate
11	205711-065	Wear Bar
12	203231	Timing Belt Tensioner
13	205710-02	Side Plate
14	205726-065	Wear Rod
15	206343-065	Power Transfer Belt
16	205725-065	Tensioner Assembly

Item	Part Number	Description
17	203264-065	Shaft Assembly
18	203267-065	Square Key, 3/16" x 105 mm
19	205727-065	Pinch Guard
20	350505	Power Transfer Cover
21	605280P	Washer
22	910506M	Button Head Screw, M5-0.80 x 6 mm
23	950510M	Low Head Cap Screw, M5-0.80 x 10 mm
24	950612M	Low Head Cap Screw, M6-1.00 x 12 mm
25	950830M	Low Head Cap Screw, M8-1.25 x 30 mm
26	970510M	Socket Head Set Screw, M5-0.80 x 10 mm
27	605279P	Washer
28	814-105	Timing Belt 15 mm x 460 mm
29	990621M	Insert
30	807-2277	Washer
31	203765P	Sliding Sprocket
32	970606M	Cup Set Screw, M6-0.80 x 5 mm

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Horizontal Mounting Brackets

Item	Part Number	Description
1	FATB-20	Stud, M8 x 20 mm
2	FAHBS-80SPL	Mounting Bracket
3	605279P	Washer
4	920622M	Socket Head Screw, M6-1.00 x 22 mm
5	990602M	Hex Nut, M6-1.00
6	990812M	Flanged Hex Nut, M8-1.25
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Support Post - Conveyor Frame Mount

Item	Part Number	Description
1	FASL-M8	Spring Nut (x50)
2	FAVBS-60SV	Mounting Bracket for 64 mm Stand
	210830-065	Mounting Bracket for 80 mm Stand
3	FATB-20	T-Bolt, 20 mm (x50)
4	FBFT-64	Stand Foot for 64 mm Stand w/Hardware
	FBFT-80B	Stand Foot for 80 mm Stand w/Hardware
5	FBSB-64X64-LLLLL	Leg for 64 mm Stand
	FBSB-80X80-LLLLL	Leg for 80 mm Stand

Item	Part Number	Description
6	FBEC-64	Cover for 64 mm Stand (x10)
	FBEC-80	Cover for 80 mm Stand (x10)
7	960883M	Flange Head Cap Screw, M8-1.25 x 16 mm
8	990812M	Hex Nut, M8-1.25
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Support Post - Motor Mount

Item	Part Number	Description
1	207195-065	Stand Mounting Channel
2	207194-LH	Drive Tail Bracket, Left Hand
3	207194-RH	Drive Tail Bracket, Right Hand
4	990812M	Hex Nut, M8-1.25
5	FBCS-20X96	Connecting Strip, 20 x 96 mm (x10)
6	960882M	Flange Head Cap Screw, M8-1.25 x 12 mm
7	FATB-20	T-Bolt, 20 mm
8	FBFT-64	Stand Foot for 64 mm Stand w/Hardware
	FBFT-80B	Stand Foot for 80 mm Stand w/Hardware

Item	Part Number	Description
9	FBSB-64X64-LLLLL	Leg for 64 mm Stand
	FBSB-80X80-LLLLL	Leg for 80 mm Stand
10	FBEC-64	Cover for 64 mm Stand (x10)
	FBEC-80	Cover for 80 mm Stand (x10)
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Suspended Drive Stand

Item	Part Number	Description
1	FBCS-20X76	Connecting Strip, 20 x 76 mm (x10)
2	206887	Bracket
3	207275	Nut Bar
4	FBFT-64	Stand Foot for 64 mm Stand w/Hardware
	FBFT-80B	Stand Foot for 80 mm Stand w/Hardware
5	FBSB-64X64-LLLLL	Leg for 64 mm Stand
	FBSB-80X80-LLLLL	Leg for 80 mm Stand

Item	Part Number	Description
6	FBEC-64	Cover for 64 mm Stand (x10)
	FBEC-80	Cover for 80 mm Stand (x10)
7	960883M	Flange Head Cap Screw, M8-1.25 x 16 mm
8	960825M	Hex Head Cap Screw, M8-1.25 x 25 mm
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

Dual Side Support Post

Item	Part Number	Description
1	FBCS-20X55	Connecting Strip, 20 x 55 mm for 64 mm Stand (x10)
	FBCS-20X96	Connecting Strip, 20 x 96 mm for 80 mm Stand (x10)
2	FBFT-64	Stand Foot for 64 mm Stand w/Hardware
	FBFT-80B	Stand Foot for 80 mm Stand w/Hardware
3	FATB-20	T-Bolt, 20 mm (x50)
4	FBSB-64X64-LLLLL	Leg for 64 mm Stand
	FBSB-80X80-LLLLL	Leg for 80 mm Stand
5	FBEC-64	Cover for 64 mm Stand (x10)
	FBEC-80	Cover for 80 mm Stand (x10)

Item	Part Number	Description
6	FAAL-64	Mounting Bracket for 64 mm Stand
	FAAL-80	Mounting Bracket for 80 mm Stand
7	990812M	Hex Nut, M8-1.25
8	960825M	Hex Head Cap Screw, M8-1.25 x 25 mm for 64 mm Stand
	960883M	Hex Head Cap Screw, M8-1.25 x 16 mm for 80 mm Stand
9	FBSB-64X64-00039	Spacer
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

E-Drive Gearmotor Mounting Package

Item	Part Number	Description
1	202270-00075	Extrusion
2	202971	Drive Plate
3	203065	Drive Spacer
4	350115	Adapter Ring
5	920620M	Socket Head Screw, M6-1.00 x 20 mm
6	930625M	Flat Head Screw, M6-1.00 x 25 mm
7	990601M	Hex Nut, M6-1.00
8	931025M	Flat Head Screw, M10-1.50 x 25 mm
9	911-108	Washer
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Standard Load 90° Industrial Gearmotors

Item	Part No.	Description
1	62MES411FN	Motor, 0.25hp (0.19Kw), 115/230 Volts, 60 Hz, 1-Phase
	62MES423FN	Motor, 0.25hp (0.19Kw), 208–230/460 Volts, 60 Hz, 3-Phase
	22MSD3DEN	Motor, 0.25hp (0.19Kw), 130 VDC
	62MEH411FN	Motor, 0.5hp (0.37Kw), 115/230 Volts, 60Hz, 1–Phase
	32MES423FN	Motor, 0.5hp (0.37Kw) 208–230/460 Volts, 60Hz, 3 Phase
	62MHD9DEN	Motor, 0.5hp (0.37Kw), 90 VDC
	32MES423EN	Motor, 0.5hp (0.37Kw), 230 Volts, 3 Phase Inverter Duty
	32MHD9DEN	Motor, 0.75 hp, (0.56Kw), 90 VDC
2	32M005EL	Gear Reducer, 5:1, NEMA 42CZ
	32M010EL	Gear Reducer, 10:1, NEMA 42CZ
	32M020EL	Gear Reducer, 20:1, NEMA 42CZ
	32M040EL	Gear Reducer, 40:1, NEMA 42CZ
	32M060EL	Gear Reducer, 60:1, NEMA 42CZ
	32M005ES	Gear Reducer, 5:1, NEMA 56C
	32M010ES	Gear Reducer, 10:1, NEMA 56C
	32M020ES	Gear Reducer, 20:1, NEMA 56C
	32M040ES	Gear Reducer, 40:1, NEMA 56C
	32M060ES	Gear Reducer, 60:1, NEMA 56C
	32M010EH	Gear Reducer, 10:1, NEMA 140 TC
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Flange Mounted Motor (Direct Drive Tail)

Product Line		FK,FS,FM,FU,FV	FC,FL	FS	FM
Radius (M)		0.064	0.0675	0.044	0.049
Drive Type		Direct	Direct	Intermediate	Intermediate
Part Number					
Right Hand	Left Hand	Speed	Speed	Speed	Speed
FMM129RDS423EN	FMM129LDS423EN	5.2 m/min	5.5 m/min	3.6 m/min	4 m/min
FMM067RDS423EN	FMM067LDS423EN	10 m/min	10.6 m/min	6.9 m/min	7.7 m/min
FMM032RDS423EN	FMM032LDS423EN	21.3 m/min	22.5 m/min	14.6 m/min	16.3 m/min
FMM015RDS423EN	FMM015LDS423EN	45.8 m/min	48.3 m/min	31.5 m/min	35.1 m/min
FMM013RDS423EN	FMM013LDS423EN	52.2 m/min	55.1 m/min	35.9 m/min	40 m/min
FMM010RDS423EN	FMM010LDS423EN	68.7 m/min	72.5 m/min	47.3 m/min	52.6 m/min

Part Number	Volts	Phase	Hz	Power	Power	Speed	Torque	Torque	Ratio	Force
FMM129(X)DS423EN	230/460	3	60	0.18 kW	0.25 Hp	13 rpm	95 Nm	837 in-lb.	129 i	1484 N
FMM067(X)DS423EN	230/460	3	60	0.37 kW	0.50 Hp	25 rpm	79 Nm	699 in-lb.	67.5 i	1234 N
FMM032(X)DS423EN	230/460	3	60	0.55 kW	0.75 Hp	53 rpm	74 Nm	653 in-lb.	32.3 i	1156 N
FMM015(X)DS423EN	230/460	3	60	0.55 kW	0.75 Hp	114 rpm	39 Nm	341 in-lb.	15 i	609 N
FMM013(X)DS423EN	230/460	3	60	0.75 kW	1.00 Hp	130 rpm	48 Nm	425 in-lb.	13.3 i	750 N
FMM010(X)DS423EN	230/460	3	60	1.1 kW	1.50 Hp	171 rpm	56 Nm	490 in-lb.	10.2 i	875 N

(X) = L or R for Right Hand or Left Hand Gearmotor matching RH or LH Drive
Note: speed range for 60 Hz gearmotors is 10 to 60 Hz or 6:1.

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Service Parts

Foot Mounted Motor (Suspended Drive Tail)

Product Line		FK,FS,FM,FU,FV	FC,FL
Radius (M)		0.064	0.0675
Drive Type		Suspended	Suspended
Part Number			
Right Hand	Left Hand	Speed	Speed
FMM129RSS423EN	FMM129LSS423EN	5.2 m/min	5.5 m/min
FMM067RSS423EN	FMM067LSS423EN	10 m/min	10.6 m/min
FMM032RSS423EN	FMM032LSS423EN	21.3 m/min	22.5 m/min
FMM015RSS423EN	FMM015LSS423EN	45.8 m/min	48.3 m/min
FMM013RSS423EN	FMM013LSS423EN	52.2 m/min	55.1 m/min
FMM010RSS423EN	FMM010LSS423EN	68.7 m/min	72.5 m/min

Part Number	Volts	Phase	Hz	Power	Power	Speed	Torque	Torque	Ratio	Force
FMM129(X)SS423EN	230/460	3	60	0.18 kW	0.25 Hp	13 rpm	95 Nm	837 in-lb.	129 i	1484 N
FMM067(X)SS423EN	230/460	3	60	0.37 kW	0.50 Hp	25 rpm	79 Nm	699 in-lb.	67.5 i	1234 N
FMM032(X)SS423EN	230/460	3	60	0.55 kW	0.75 Hp	53 rpm	74 Nm	653 in-lb.	32.3 i	1156 N
FMM015(X)SS423EN	230/460	3	60	0.55 kW	0.75 Hp	114 rpm	39 Nm	341 in-lb.	15 i	609 N
FMM013(X)SS423EN	230/460	3	60	0.75 kW	1.00 Hp	130 rpm	48 Nm	425 in-lb.	13.3 i	750 N
FMM010(X)SS423EN	230/460	3	60	1.1 kW	1.50 Hp	171 rpm	56 Nm	490 in-lb.	10.2 i	875 N

(X) = L or R for Right Hand or Left Hand Gearmotor matching RH or LH Drive

Note: speed range for 60Hz gearmotors is 10 to 60 Hz or 6:1.

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Slide Rail Replacement Tool

Item	Part Number	Description
1	203475	Slide Rail Replacement Tool Kit
2	807-2694	Nylon Socket Screw, M5 x 6 mm (x50)
3	896-1008	Drill Bit, #18, 0.1695"
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Slide Rail

Item	Part No.	Description
1	FASR-25	Standard HDPE (25 M Roll)
	FASR-25U	Standard Low Friction UHMW (25 M Roll)
	FASR-25A	Special Conductive (25 M Roll)
	FASR-25X	Special HI Speed (25 M Roll)
	FASR-25P	Special Abrasive Resistant (25 M Roll)
	FASR-25T	Special Abrasive Resistant, High Load (25 M Roll)
	FASR-25MDS	Special High Load Nylon (25 M Roll)
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Replacement Chain

Replacement chain sold per box containing 5 meters of chain.

For specific chain details see FlexMove Engineering Manual.

Part Number	Description
FSPC-5	Standard Plastic Chain
FSPC-5CD	Conductive Chain
FSFT-5	Friction Top Chain
FSFT-5C	Friction Top Chain
FSWT-5A	Wedge Top Chain
FSWT-5C	Wedge Top Chain
FSWT-5D	Wedge Top Chain
FSMT-5	Magnet Top Chain
FSMT-5-L#	Magnet Top Chain
FSFK-5	Flocked Chain
FSST-5	Hardened Steel Top Chain
FSST-5S	Stainless Steel Top Chain
FSUC-5	Universal Chain
FSRT-5	Roller Top Chain
FSRC-5A-L#	Roller Cleat Chain
FSCT-5A17-L#	Cleat Top Chain - A
FSCT-5A30-L#	Cleat Top Chain - A
FSCT-5B	Cleat Top Chain - B
FSCT-5C	Cleat Top Chain - C
FSPC-5M	Twist Chain
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com	

Service Parts

Belt Removal Tool

Item	Part Number	Description
1	203480	Belt Removal Tool
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Side Cutter

Item	Part Number	Description
1	897-1098	Side Cutter
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Utility Cutter

Item	Part Number	Description
1	897-1099	Utility Cutter
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Bearing Tool

Item	Part Number	Description
1	206891	Bearing Tool
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Notes

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. Include part serial number if available.

A representative will discuss action to be taken on the returned items and provide a Returned Materials 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="9">Product Type</th></tr>
<tr><th></th><th colspan="8">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 & Spec. Fabric</th><th>Spare Belts - Plastic Chain</th><th>All equipment and parts</th></tr>
<tr><td>1100 Series</td><td colspan="6" rowspan="7">30% return fee for all products except:
50% return fee for conveyors with modular belt, cleated belt or speciality belts

All Electrical items are assigned original manufacturers return policy.</td><td colspan="2" rowspan="12">non-returnable</td><td rowspan="12">case-by-case</td></tr>
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<tr><td>3200 Series</td></tr>
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<tr><td>7100 Series</td><td colspan="6" rowspan="4">50% return fee for all products</td></tr>
<tr><td>7200/7300 Series</td></tr>
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<tr><td>GES Series</td></tr>
<tr><td>AquaGard 7350/7360 Series</td><td colspan="9" rowspan="2">non-returnable</td></tr>
<tr><td>AquaPruf Series</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 Dorner, an authorized sales channel or visit our website: www.dorner.com.

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

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