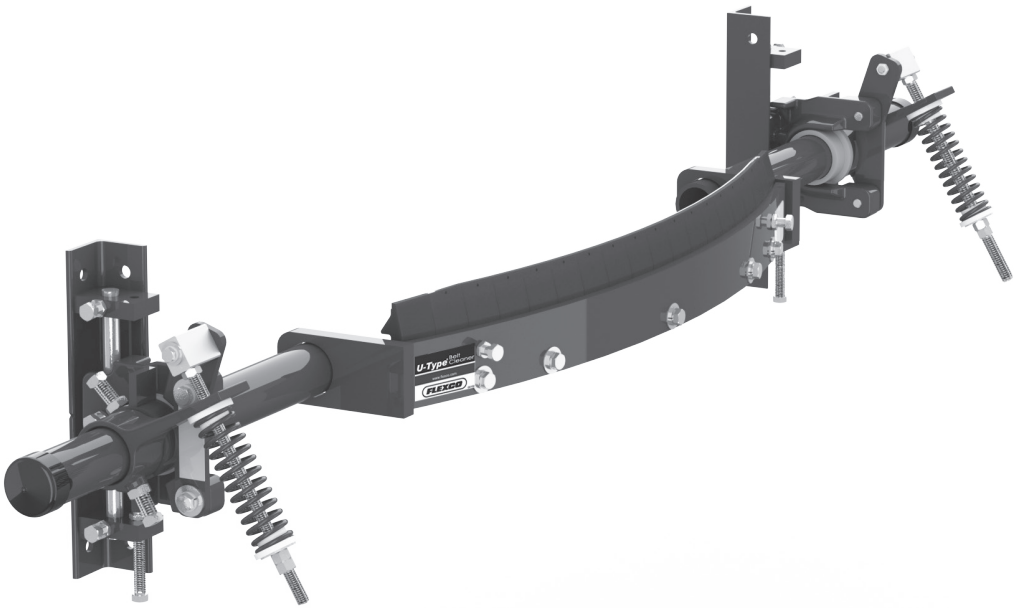
U-Type® Secondary Belt Cleaner

Installation, Operation and Maintenance Manual



FLEXCO

Serial Number: _____

Purchase Date:_____

Purchased From: _____

Installation Date:_____

Serial number information can be found on the Serial Number Label included in the Information Packet found in the cleaner carton.

This information will be helpful for any future inquiries or questions about belt cleaner replacement parts, specifications or troubleshooting.

Table of Contents

Section 1 - Important Information

1.1 General Introduction

We at Flexco are very pleased that you have selected a U-Type® Secondary Belt Cleaner for your conveyor system.

This manual will help you to understand the operation of this product and assist you in making it work up to its maximum efficiency over its lifetime of service.

It is essential for safe and efficient operation that the information and guidelines presented be properly understood and implemented. This manual will provide safety precautions, installation instructions, maintenance procedures and troubleshooting tips.

If, however, you have any questions or problems that are not covered, please contact your field representative or our Customer Service Department.

Visit www.flexco.com for other Flexco locations and products.

Please read this manual thoroughly and pass it on to any others who will be directly responsible for installation, operation and maintenance of this cleaner. While we have tried to make the installation and service tasks as easy and simple as possible, **it does however require correct installation and regular inspections and adjustments to maintain top working condition.**

1.2 User Benefits

Correct installation and regular maintenance will provide the following benefits for your operation:

- Reduced conveyor downtime
- Reduced man-hour labor
- Lower maintenance budget costs
- Increased service life for the belt cleaner and other conveyor components

1.3 Service Option

The U-Type® Secondary Belt Cleaner is designed to be easily installed and serviced by your on-site personnel. However, if you would prefer complete turn-key factory service, please contact your local Flexco

Section 2 - Safety Considerations and Precautions

Before installing and operating the U-Type® Secondary Belt Cleaner, it is important to review and understand the following safety information.

There are set-up, maintenance and operational activities involving both **stationary** and **operating** conveyors. Each case has a safety protocol.

2.1 Stationary Conveyors

The following activities are performed on stationary conveyors:

- Installation
- Tension adjustments
- Blade replacement
- Cleaning
- Repairs

⚠ DANGER

It is imperative that OSHA/MSHA Lockout/Tagout (LOTO) regulations, 29 CFR 1910.147, be followed before undertaking the preceding activities. Failure to use LOTO exposes workers to uncontrolled behavior of the belt cleaner caused by movement of the conveyor belt. Severe injury or death can result.

Before working:

- Lockout/Tagout the conveyor power source.
- Disengage any takeups.
- Clear the conveyor belt or clamp securely in place.

⚠ WARNING

Use Personal Protective Equipment (PPE):

- Safety eyewear
- Hardhats
- Safety footwear

Close quarters, springs and heavy components create a worksite that compromises a worker's eyes, feet and skull. PPE must be worn to control the foreseeable hazards associated with conveyor belt cleaners. Serious injuries can be avoided.

2.2 Operating Conveyors

There are two routine tasks that must be performed while the conveyor is running:

- Inspection of the cleaning performance.
- Dynamic troubleshooting.

⚠ DANGER

Every belt cleaner is an in-running nip hazard. Never touch or prod an operating cleaner. Cleaner hazards cause instantaneous amputation and entrapment.

⚠ WARNING

Belt cleaners can become projectile hazards. Stay as far from the cleaner as practical and use safety eyewear and headgear. Missiles can inflict serious injury.

⚠ WARNING

Never adjust anything on an operating cleaner. Unforseeable belt projections and tears can catch on cleaners and cause violent movements of the cleaner structure. Flailing hardware can cause serious injury or death.

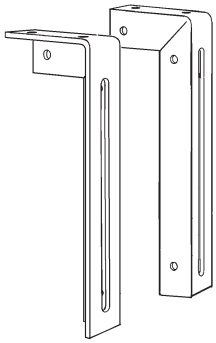
Section 3 - Pre-Installation Checks and Options

3.1 Checklist

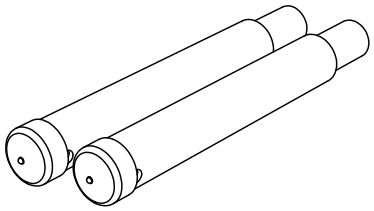
- Check that the cleaner size is correct for the beltline width.
- Check the belt cleaner carton and make sure all the parts are included.
- Review the “Tools Needed” list on the top of the installation instructions.
- Check the conveyor site:
  - Will the cleaner be installed on a chute?
  - Is the install on an open head pulley requiring mounting structure? (see 3.2 - Optional Installation Accessories)

3.2 Optional Installation Accessories

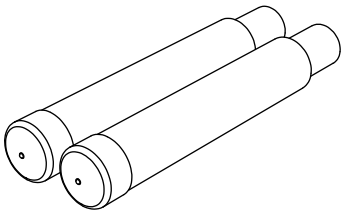
Versatile, adjustable brackets that can be mounted on the conveyor structure so the cleaner can be quickly and easily bolted into place. Pole extenders are also available for wide, non-standard conveyor structures.



Mounting Bracket Kit
(incl. 1 ea. left and right bracket)
(Item Code: 75666)



2-3/8" (60 mm) Pole Extender Kit
(incl. 2 pole extenders)
(Item Code: 77423)
- For cleaner sizes up to 54" (1350 mm)
- Provides 30" (750 mm) of extended pole length



2-7/8" (73 mm) Pole Extender Kit
(incl. 2 pole extenders)
(Item Code: 76024)
- For cleaner sizes 60" (1500 mm) and larger
- Provides 30" (750 mm) of extended pole length

Optional Installation Accessories (incl. 2 brackets/bars)

DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
Mounting Bracket Kit	EZS2MBK	75666	13.0
2-3/8" Pole Extender Kit	RAPEK	77423	18.0
2-7/8" Pole Extender Kit	MAPEK	76024	21.9

*Hardware Included
Lead time: 1 working day

Section 3 - Pre-Installation Checks and Options

3.3 Correct Blade Installation and Tensioning

For optimal cleaning efficiency and long wear life, the U-Type® blade must be located and tensioned correctly on the belt. If the cleaner pole is in the wrong location the performance of the new blade may be adversely affected. See "Possible Problems" below. For tensioning, please follow these instructions.

Correct Pole Location:

When the blade contacts the belt (before tensioning) there should be blade-to-belt contact across the entire blade (Fig. 1). If contact is more in the center with a gap on the outer edges, the pole will need to be raised until full contact is achieved (Fig. 2). If contact is more on the outer edges with a gap in the center, the pole will need to be lowered until full contact is achieved (Fig. 3).

Fig. 1

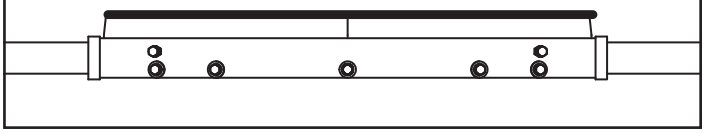


Fig. 2

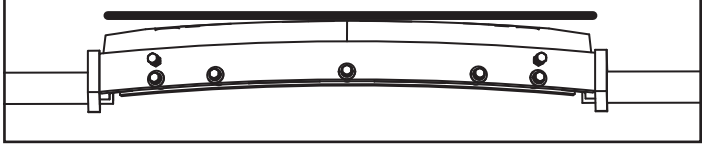
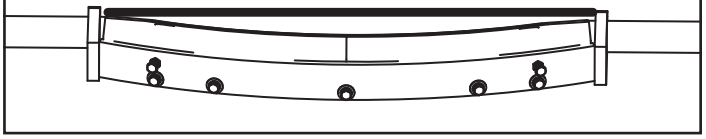


Fig. 3



Possible Problems:

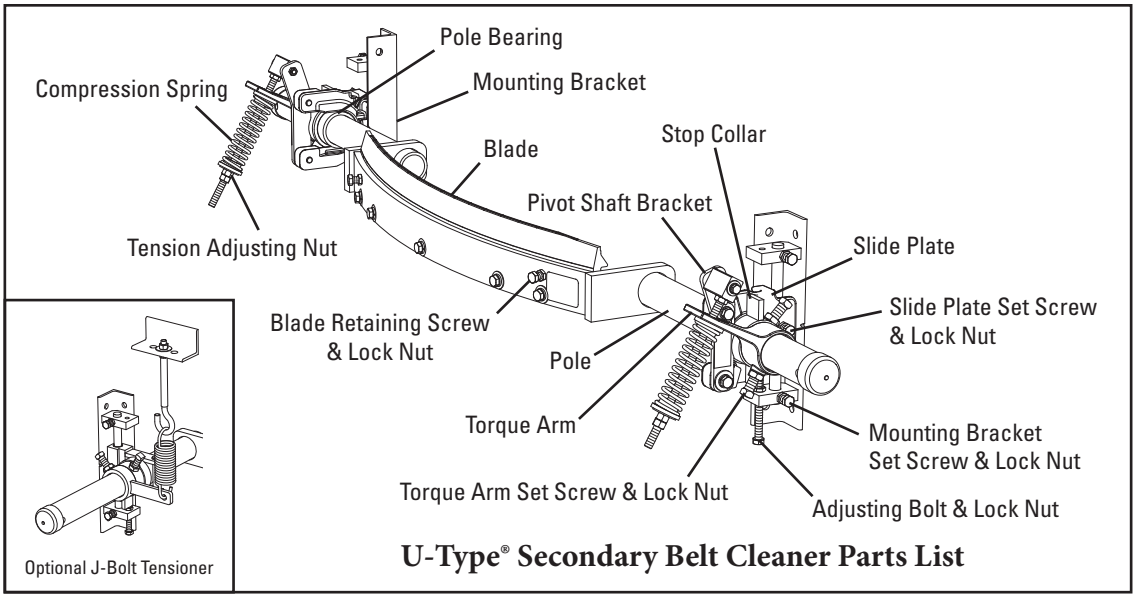
- Pole location too low - The initial cleaning will be concentrated in the center of the belt, failing to clean the outer edges efficiently.
- Pole location too high - The intial cleaning will be concentrated to the outer edges of the belt, failing to efficiently clean the center of the belt.
- Tension too low - Without the optimal tension, the cleaning efficiency is reduced and chatter or bouncing of the blade can occur.
- Tension too high - Although the cleaning may appear efficient, accelerated blade wear may occur; and in some cases less efficiency on the outer edges of the belt, which could result in increased belt wear.

Correct Tensioning:

Correct tension is determined and set by blade width. Check the information provided with the tensioner being used or consult the installation instructions.

Section 4 - Installation Instructions

4.1 U-Type® Secondary Cleaner

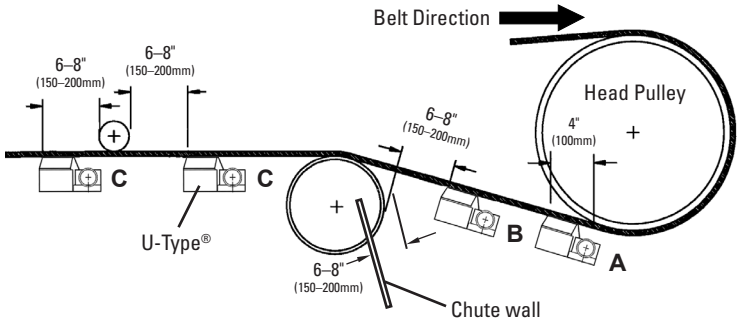


U-Type® Secondary Belt Cleaner Parts List

PHYSICALLY LOCK OUT AND TAG THE CONVEYOR AT THE POWER SOURCE BEFORE YOU BEGIN CLEANER INSTALLATION.

Tools Needed:

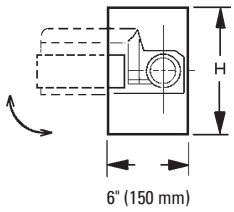
- 3/4" (19 mm) Wrench
  OR Large Adjustable/Crescent Wrench
- Ratchet with 3/4" (19 mm) Socket
- 6" (150 mm) C-Clamps (x2)
- Torch (as needed)
- Welder (as needed)
- Screwdriver
- Tape Measure
- Level
- Square
- Marking Pen or Soapstone



Cleaner Location Options

Before You Begin:

- Double-check the blade type needed for your application:
  F-Blade - for mechanically spliced belts.
  C-Blade - for Flexco Solid Plate mechanically spliced and vulcanized belts.
- For chute mounting it is necessary to cut an access hole. See access hole dimensions.
- Follow all safety precautions when using a cutting torch.
- If welding, protect all fastener threads from weld spatter.
- For cleaner clearance requirements see 8.1 - Specifications and Guidelines.



Access Hole Dimensions

Belt Width		H Dimension	
in.	mm	in.	mm
18–42	450–1050	8	200
48–96	1200–2400	10	250

Section 4 - Installation Instructions

4.1 U-Type® Secondary Belt Cleaner

1. **Install the blade in the pole.**

   a. Loosen both locknuts on the blade retaining bolts. Turn blade retaining bolts out 8 turns (Fig. 1a).

   b. Loosen (but do not remove) all plate retaining bolts (Fig. 1b).

   c. Install the new blade as shown in Fig. 1b. The flap on the blade should face away from bladeholder screws.

   d. Center the blade in the holder.

   e. Tighten all plate retaining screws.

   f. Tighten blade retaining screws 8 turns and tighten the blade retaining screw locknuts.

2. **Choose conveyor location where cleaner will be installed.**
   The U-Type may be positioned at any spot from where belt leaves head pulley on down the conveyor line (see positions A to B - Cleaner Location Options). If a chute area is too small due to a snub pulley, it may be necessary to mount cleaner behind chute (see position C - Cleaner Location Options). In chute applications a minimum of 6–8" (150–200 mm) is required between cleaner and chute wall to prevent clogging of material.

3. **Install mounting brackets.**

   a. Using a level, lightly raise return side belt (take out cupping or sagging on edges) to find belt's true parallel path to the structure; and mark reference point #1 on structure. Measure down 3" (75 mm) from reference point #1 and mark reference point #2 (Fig. 2a). Make sure brackets are the same distance away from head pulley or a reference point on both sides of the structure. If there is no structure to mount to, install mounting bracket kit first.

   b. Position mounting brackets so centerline marks on brackets are in line with reference points #2 on the structure (Fig. 2b).

   c. Clamp or weld into position.

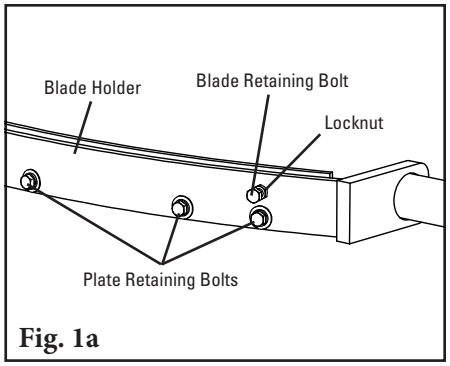


Fig. 1a

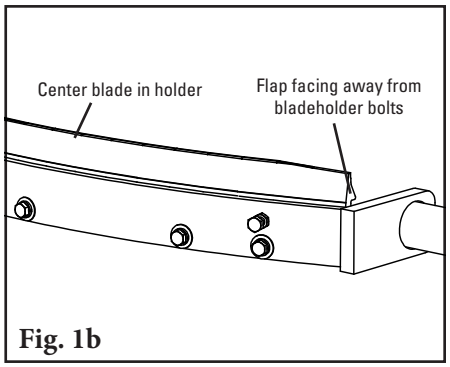


Fig. 1b

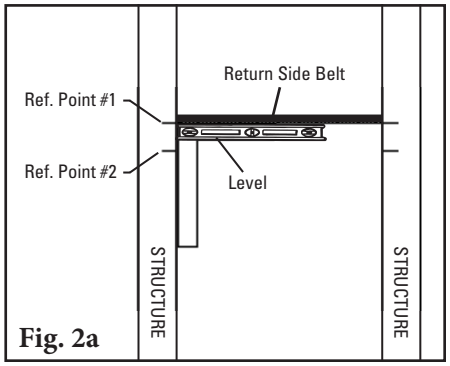


Fig. 2a

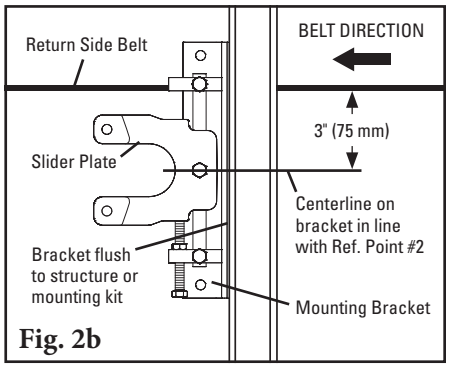


Fig. 2b

Section 4 - Installation Instructions

4.1 U-Type® Secondary Belt Cleaner

4. Install the pole into the slider plates.

a. Set pole ends into slider plate on both sides (Fig. 3a).

b. Slide pole bearings onto both ends of the pole with flange facing away from the belt (Fig. 3b).

c. Slide the stop collar onto both ends of the pole (Fig. 3b). Do not tighten at this time.

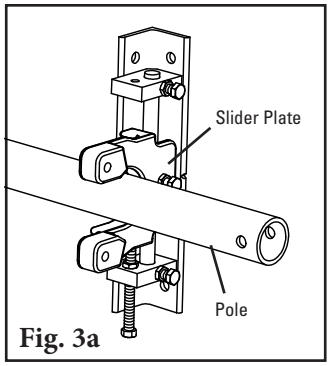


Fig. 3a

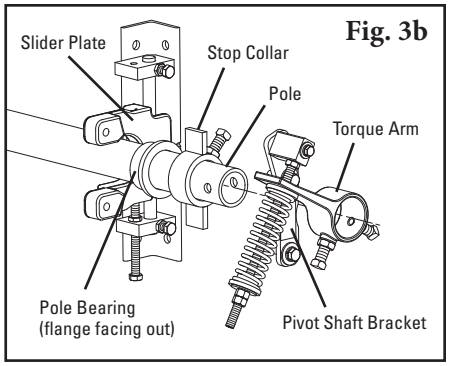


Fig. 3b

d. Slide torque arms onto both ends of pole and attach both pivot shaft brackets to slider plates (Fig. 3b). The blade and torque arm must face in the direction of belt travel (Fig. 3c), or if clearance is an issue, switched to a rotated tensioner configuration and assembled as shown (Fig. 3d).

e. Move slider plate to bottom of bracket to allow blade to rotate up into position in the next steps.

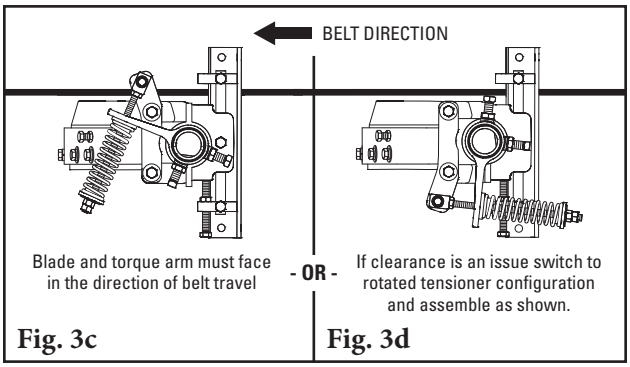


Fig. 3c Fig. 3d

5. Tighten torque arm set screws.

a. Spring tension nuts should be moved near the end of the threaded rod. Insert a screwdriver or small rod through holes on end of cleaner pole. Pushing on screwdriver or rod, rotate the cleaner blade into a position with pole parallel to belt (Fig. 4a). Blade should not be touching belt at this time. The gap before tensioning between the torque arm and pivot block should be approx. 2" (50 mm).

b. Center the blade to the belt and make sure the torque arm, stop collar, bearing, and slide plate are tight on both sides. Then tighten the stop collar set screw and lock nut with the stop collar touching the top of the bearing mount stop to hold the blade parallel to the belt, and remove the screwdriver or rod.

c. Push the torque arm down to contact the spring and tighten the torque arm set screws and lock nuts on both sides of the cleaner (Fig. 4b).

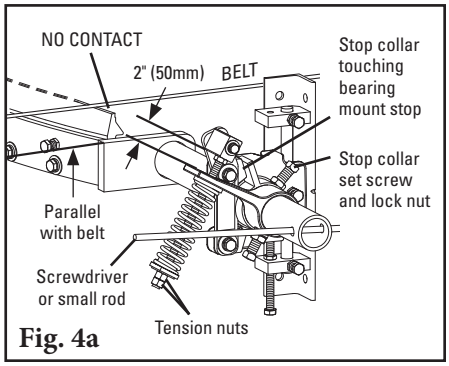


Fig. 4a

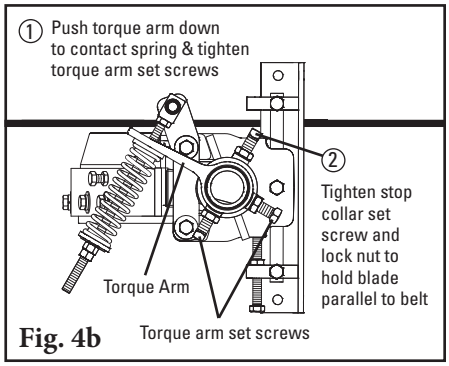


Fig. 4b

Section 4 - Installation Instructions

4.1 U-Type® Secondary Belt Cleaner

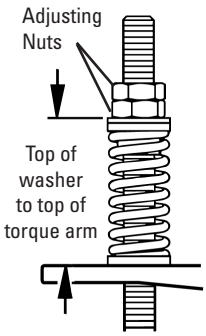
6. **Adjust the blade to the belt.**

   a. Loosen slide plate set screws and lock nuts. Adjust by turning adjusting bolts up or down (Fig. 5).

   b. Adjust blade up or down until both blade ends and the center make full contact with belt. If possible, adjust both sides of the cleaner up to the belt at the same time for even blade contact across belt (reduces chance of overtensioning on one side).

   NOTE: In some cases, due to irregular belt wear or cupping, independent final adjustments on both sides may be necessary.

   c. Tighten lock nuts on adjusting bolts to secure blade in correct position. Also tighten slide plate set screws and lock nuts.



7. **Set the blade tension.**

   a. Set spring length to determined length. Tighten spring tension nuts on threaded rod.

   NOTE: There should be uniform contact between blade and belt.

   b. If blade is not in full contact with belt at edges and center, either raise or lower pole position of cleaner and reapply tension.

   c. Please note, when fully tensioned there should be approximately 3/4–1-1/2" (19–38 mm) of space between the torque arm and pivot block (Fig. 5).

8. **Set the blade travel stop.** Set both stop collars to a clearance of 1/4" (6 mm) between stop collar and bottom bearing mount stop for UC cleaners, or 1/2" (13 mm) for UF cleaners (Fig. 6). This is to prevent the blade from moving into the belt. Tighten the set screws and lock nuts.

9. **Test run the cleaner.** Run the conveyor for at least 15 minutes and inspect the cleaning performance. Check the spring length for proper tensioning. Make adjustments as necessary.

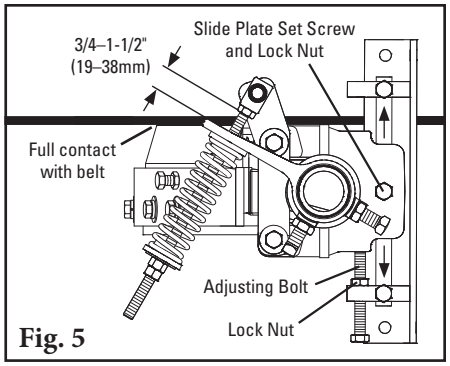


Fig. 5

UST Spring Length Chart

Blade Width		Purple Springs		Silver Springs		White Springs	
in.	mm	in.	mm	in.	mm	in.	mm
18	450	5 5/8	143	N/A	N/A	N/A	N/A
24	600	5 1/4	133	6	152	N/A	N/A
30	750	4 5/8	117	5 3/4	146	6 1/8	156
36	900	4 1/4	108	5 5/8	143	6	152
42	1050	N/A	N/A	5 1/4	133	5 3/4	146
48	1200	N/A	N/A	4 7/8	124	5 1/2	140
54	1350	N/A	N/A	4 5/8	117	5 3/8	137
60	1500	N/A	N/A	N/A	N/A	5 1/4	133
72	1800	N/A	N/A	N/A	N/A	4 7/8	124
84	2100	N/A	N/A	N/A	N/A	4 5/8	117

Shading indicates preferred spring option.

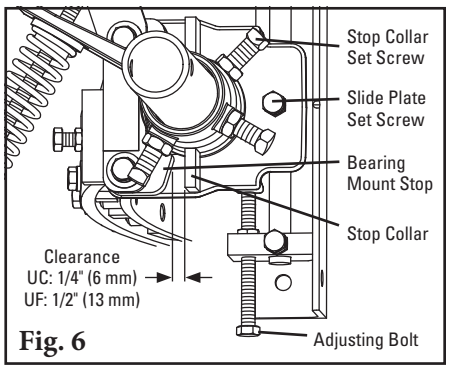


Fig. 6

Section 4 - Installation Instructions

4.2 U-Type® Secondary Belt Cleaner - Optional J-Bolt Tensioner

1. **Install the blade in the pole:**

   a. Loosen both locknuts on the blade retaining bolts. Turn blade retaining bolts out 8 turns (Fig. 1a).

   b. Loosen (but do not remove) all plate retaining bolts (Fig. 1b).

   c. Install the new blade as shown in Fig. 1b. The flap on the blade should face away from bladeholder screws.

   d. Center the blade in the holder.

   e. Tighten all plate retaining screws.

   f. Tighten blade retaining screws 8 turns and tighten the blade retaining screw locknuts.

2. **Choose conveyor location where cleaner will be installed.**
   The U-Type may be positioned at any spot from where belt leaves head pulley on down the conveyor line (see positions A to B - Cleaner Location Options). If a chute area is too small due to a snub pulley, it may be necessary to mount cleaner behind chute (see position C - Cleaner Location Options). In chute applications a minimum of 6–8" (150–200 mm) is required between cleaner and chute wall to prevent clogging of material.

3. **Install the mounting brackets onto the structure.**

   a. Using a square, lightly raise return side belt (take out cupping or sagging on edges) to find belt's true parallel path to the structure; and mark reference point #1 on the structure on both sides of the conveyor. Measure down 3-3/8" (84mm) from reference point #1 on both sides and mark reference point #2 (Fig. 2a).

   b. Position the mounting brackets so the centerline marks on the brackets are in line with reference points #2 on the structure (Fig. 2b).

   c. Clamp or weld into position.

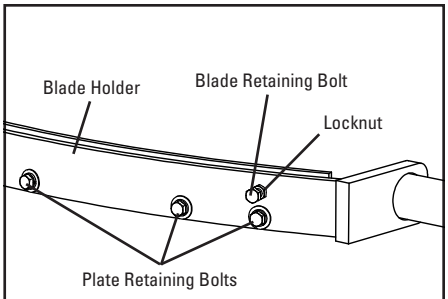


Fig. 1a

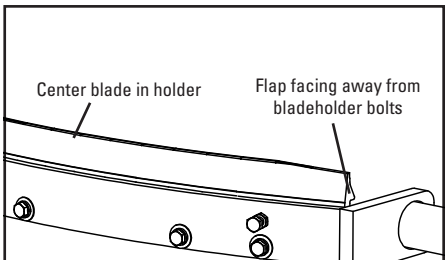


Fig. 1b

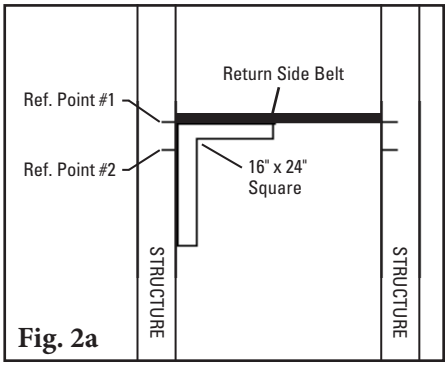


Fig. 2a

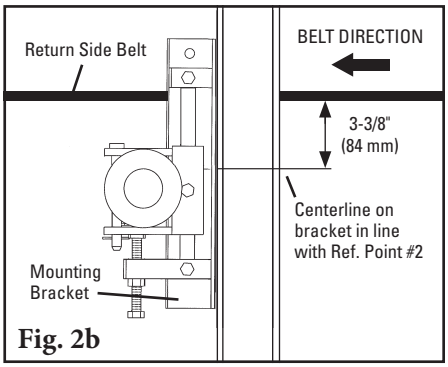


Fig. 2b

Section 4 - Installation Instructions

4.2 U-Type® Secondary Belt Cleaner - Optional J-Bolt Tensioner

4. Install cleaner pole into bearing mounts in both mounting brackets.

a. Remove the nylon bearings from both bearing mounts. Remove the spring clip and pull the retaining pin out of one bearing mount. Slide the cleaner pole into the bearing mount on the opposite side and position it into the bearing mount where the retaining pin was removed. Reinsert the retaining pin and lock into place with the spring clip (Fig. 3a).

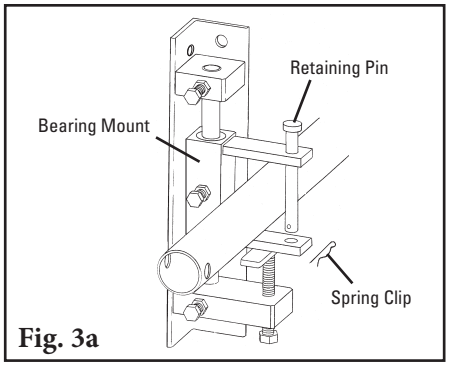


Fig. 3a

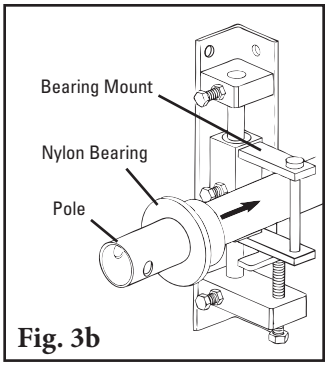


Fig. 3b

b. Slide a nylon bearing onto each pole end with the flanged end facing away from the belt. The nylon bearing will fit snugly into the bearing mount (Fig. 3b).

c. Position the pole so the blade is centered to the belt. With the blade centered, draw a line around the pole at the nylon bearing. This line can be used as a reference point to ensure the pole/blade remains centered to belt while other steps are completed.

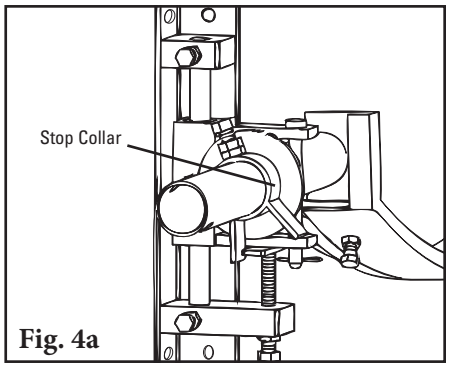


Fig. 4a

5. Install the stop collars.

a. Slide one stop collar onto the most convenient pole end (Fig. 4a).

b. Insert a screwdriver or small rod thrugh holes on end of the cleaner pole. Pushing on the rod, move the blade into a positon that is parallel to belt (Fig. 4b). The blade should not be touching the belt at this time.

c. Tighten the stop collar set screw and lock nut to hold the blade parallel to the belt and remove the screwdriver or rod.

d. Install the second stop collar on the other pole end. Do not tighten the set screw and lock nut at this time.

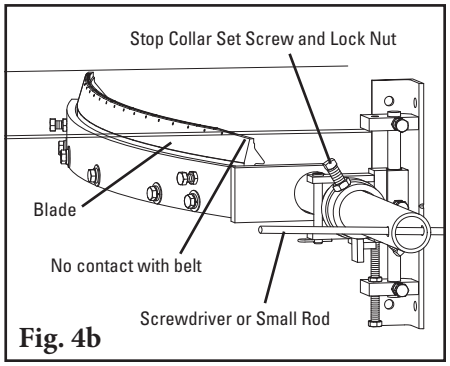


Fig. 4b

6. Adjust blade to belt.

a. Loosen bearing mount set screws and lock nuts. Adjustments will be made by turning the adjusting bolts either up or down (Fig. 5).

b. Adjust blade either up or down until both blade ends and the center make full contact with belt.

NOTE: In some cases, due to irregular belt wear or cupping, independent final adjustments on both sides may be necessary.

c. Tighten the lock nuts on the adjusting bolts to secure the blade in the correct position, and tighten the bearing mount set screws and lock nuts.

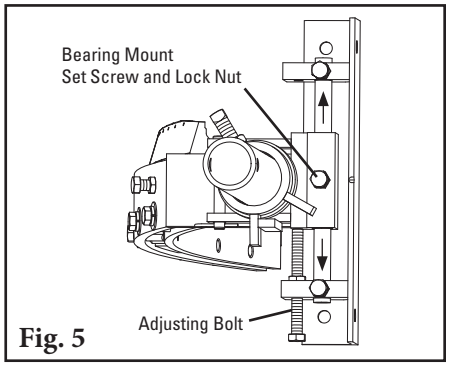


Fig. 5

4.2 U-Type® Secondary Belt Cleaner - Optional J-Bolt Tensioner

7. **Mount the tensioning system.**

   a. Slide one adjusting arm onto the pole end with the untightened stop collar (Fig. 6a).

   b. Assemble the spring, J-bolt, and mount to the adjusting arm. Locate the position for the J-bolt mount (Fig. 6b).

   NOTE: Allow at least 2" (50 mm) of space for upward movement of the J-bolt end for future adjustments.

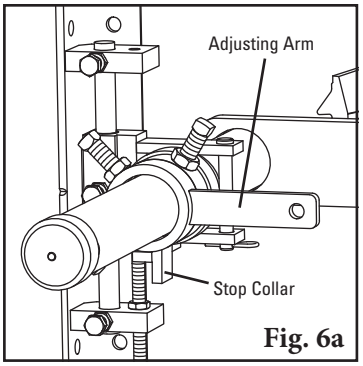


Fig. 6a

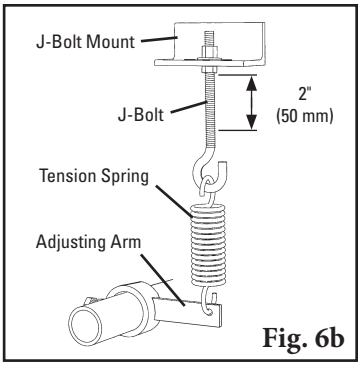


Fig. 6b

   c. The J-bolt mount can be mounted in any position (360°) around the pole as long as the J-bolt and spring remain perpendicular to the adjusting arm (Fig. 6c).

   d. Weld or bolt the J-bolt mount into position.

   e. Tighten the adjusting arm set screw and lock nut to secure the position on the pole.

   f. Adjust the J-bolt to apply light tension on the tension spring.

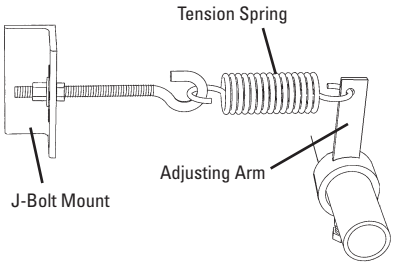


Fig. 6c

8. **Set up the stop collar and assemble the opposite tensioning system.**

   a. Loosen the stop collar (Fig. 7).

   b. Slide the second adjusting arm on the pole end; assemble and mount the tensioning system.

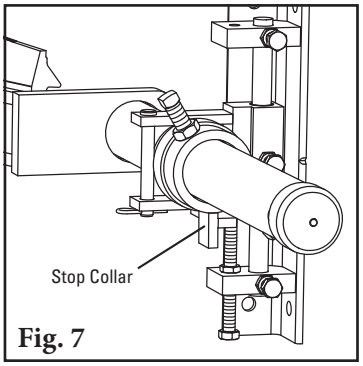


Fig. 7

9. **Set the spring tension.**

   a. Loosen the J-bolt jam nuts and turn the tensioner adjusting nuts until both springs have about .03" (.75 mm) of space between all coils (Use the Spring Tension Gauge included.) (Fig. 8).

   NOTE: There should be uniform contact between blade and belt.

   b. If the blade is not in full contact with the belt edges and center, raise or lower the position of the pole and reapply the tension.

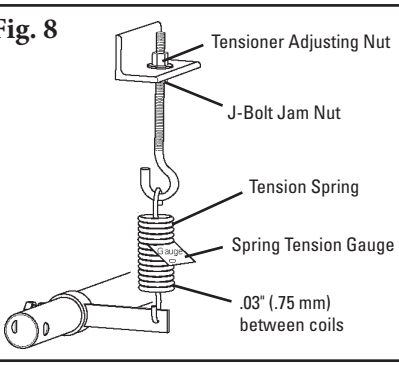


Fig. 8

10. **Set the blade travel stop.** Set both stop collars to a clearance of 1/4" (6 mm) for UC cleaners, or 1/2" (13 mm) for UF cleaners, from the bearing mount stops (Fig. 9). (This is to prevent the blade from moving into the belt.) Tighten the set screws and lock nuts.

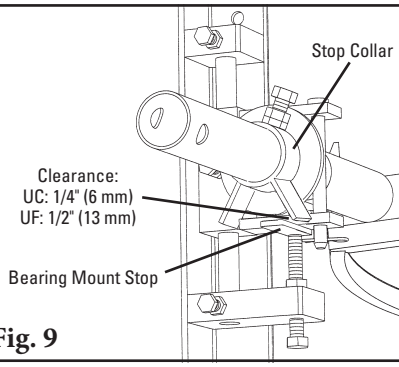


Fig. 9

11. **Test run the cleaner.** Run the conveyor for at least 15 minutes and inspect the cleaning performance. Make adjustments as necessary.

Section 5 - Pre-Operation Checklist and Testing

5.1 Pre-Op Checklist

- Recheck that all fasteners are tightened properly.
- Add pole caps.
- Apply all supplied labels to the cleaner.
- Check the blade location on the belt.
- Be sure that all installation materials and tools have been removed from the belt and the conveyor area.

5.2 Test Run the Conveyor

- Run the conveyor for at least 15 minutes and inspect the cleaning performance.
- Check the tensioner spring for recommended length (proper tensioning).
- Make adjustments as necessary.

  NOTE: Observing the cleaner when it is running and performing properly will help to detect problems or when adjustments are needed later.

Section 6 - Maintenance

Flexco belt cleaners are designed to operate with minimum maintenance. However, to maintain superior performance some service is required. When the cleaner is installed a regular maintenance program should be set up. This program will ensure that the cleaner operates at optimal efficiency and problems can be identified and fixed before the cleaner stops working.

All safety procedures for inspection of equipment (stationary or operating) must be observed. The U-Type® Secondary Belt Cleaner operates at the discharge end of the conveyor and is in direct contact with the moving belt. Only visual observations can be made while the belt is running. Service tasks can be done only with the conveyor stopped and by observing the correct lockout/tagout procedures.

6.1 New Installation Inspection

After the new cleaner has run for a few days a visual inspection should be made to ensure the cleaner is performing properly. Make adjustments as needed.

6.2 Routine Visual Inspection (every 2-4 weeks)

A visual inspection of the cleaner and belt should look for:

- If spring length is the correct length for optimal tensioning
- If belt looks clean or if there are areas that are dirty
- If blade is worn out and needs to be replaced
- If there is damage to the blade or other cleaner components
- If fugitive material is built up on cleaner or in the transfer area
- If there is cover damage to the belt
- If there is vibration or bouncing of the cleaner on the belt
- If a snub pulley is used, a check should be made for material buildup on the pulley
- Significant signs of carryback

If any of the above conditions exist, a determination should be made on when the conveyor can be stopped for cleaner maintenance.

6.3 Routine Physical Inspection (every 6-8 weeks)

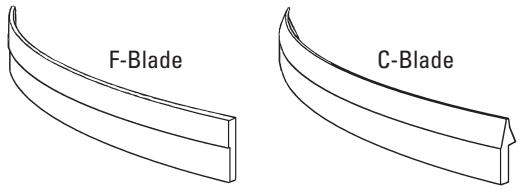
When the conveyor is not in operation and properly locked and tagged out, a physical inspection of the cleaner to perform the following tasks:

- Clean material buildup off of the cleaner blade and pole
- Closely inspect the blade for wear and any damage. Replace if needed.
- Ensure full blade to belt contact
- Inspect the cleaner pole for damage
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Replace any worn or damaged components
- Check the tension of the cleaner blade to the belt. Adjust the tension if necessary using the chart on the cleaner or the one on Page 12.

When maintenance tasks are completed, test run the conveyor to ensure the cleaner is performing properly.

Section 6 - Maintenance

6.4 Blade Replacement Instructions



U-Type® Replacement Blades

Tools Needed:

- 3/4" (19 mm) Wrench
  OR Large Adjustable/Crescent Wrench
- Tape Measure
- Wire Brush (for cleaning pole)
- Small Putty Knife (for cleaning pole)

PHYSICALLY LOCK OUT AND TAG THE CONVEYOR AT THE POWER SOURCE BEFORE YOU BEGIN CLEANER INSTALLATION.

Before You Begin:

- Double-check the blade type needed for your application:
  F-Blade - for mechanically spliced belts.
  C-Blade - for Flexco Solid Plate mechanically spliced and vulcanized belts.

1. **Release the blade tension.** Loosen the tension adjusting nuts on the tensioner pivot rods, allowing the pole to rotate the blade down (Fig. 1).

   For optional J-Bolt Tensioner: Loosen both J-bolt jam nuts and remove the tensioner adjusting nuts and flat washers, allowing the pole to rotate against the stop collar and the blade to rotate down (Fig. 1a).

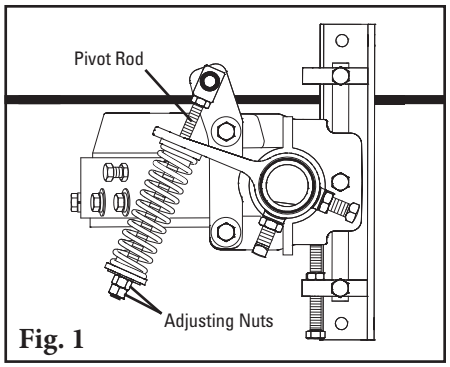


Fig. 1

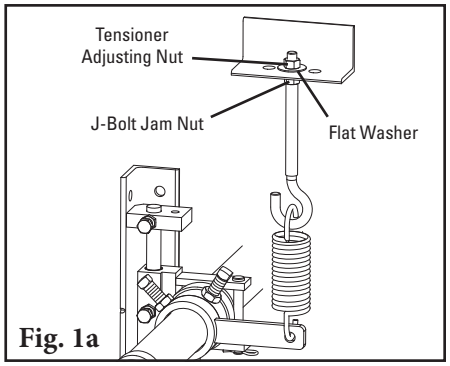


Fig. 1a

2. **Remove the worn blade.**

   a. Loosen both locknuts on the blade retaining screws. Turn the blade retaining screws out 8 turns (Fig. 2a).

   b. Loosen or remove all plate retaining screws.

   c. From one end, insert a screwdriver under the blade and lightly pry the blade up and out of the blade holder (Fig. 2b). Once the blade breaks free, pull it out by hand.

   d. Remove the blade from the holder and clean material buildup from holder with a wire brush (Fig. 2c).

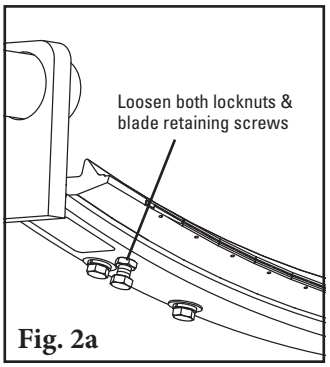


Fig. 2a

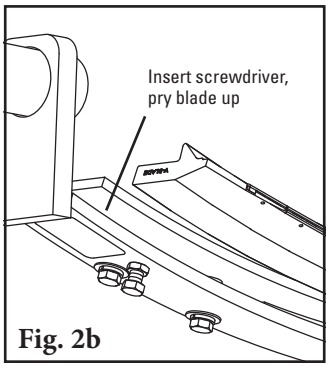


Fig. 2b

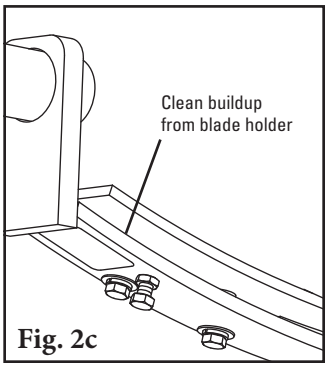


Fig. 2c

6.4 Blade Replacement Instructions

3. **Install the new blade.**

   a. Center the blade in the holder (Fig. 3).

   b. Tighten all plate retaining screws.

   c. Tighten blade retaining screws 8 turns and tighten the blade retaining screw locknuts (Fig 3).

4. **Reset the blade tension.** Refer to the chart for the spring length required for the belt width. Lightly pull the pivot arm toward the end of the torque arm slot nearest the pole and turn the adjusting nuts until the required spring length is achieved.

   For optional J-Bolt Tensioner: Rotate the pole and re-insert the J-bolts through the J-bolt mount holes, and re-install the flat washers and tensioner adjusting nuts on both sides of the cleaner. Turn the tensioner adjusting nuts until both springs have about .03" (.75 mm) of space between all coils (use the Spring Tension Gauge included) of the tension spring (Fig. 4). Lock both J-bolt jam nuts.

   NOTE: The Spring Length Chart is also on the cleaner's pivot shaft bracket for future reference for retensioning maintenance.

5. **Inspect for full blade contact to the belt.**

   NOTE: There should be uniform contact between the blade and belt. If the blade is not in full contact with the belt at the edges and center, raise or lower the pole position of the cleaner and reapply the tension.

6. **Test run the cleaner.** Run the conveyor for at least 15 minutes and inspect the cleaning performance. Check the spring length for proper tensioning. Make adjustments as necessary.

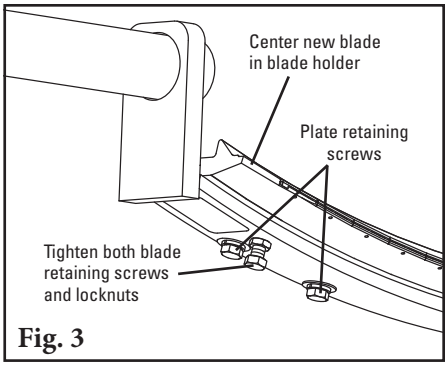


Fig. 3

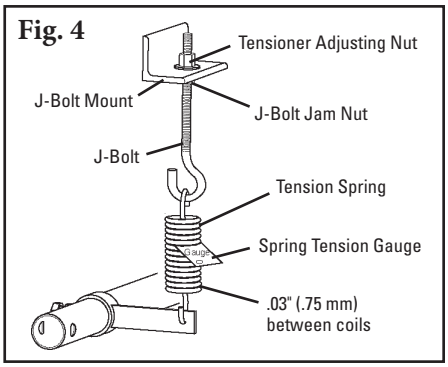
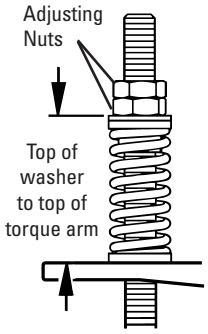


Fig. 4



UST Spring Length Chart

Blade Width		Purple Springs		Silver Springs		White Springs	
in.	mm	in.	mm	in.	mm	in.	mm
18	450	5 5/8	143	N/A	N/A	N/A	N/A
24	600	5 1/4	133	6	152	N/A	N/A
30	750	4 5/8	117	5 3/4	146	6 1/8	156
36	900	4 1/4	108	5 5/8	143	6	152
42	1050	N/A	N/A	5 1/4	133	5 3/4	146
48	1200	N/A	N/A	4 7/8	124	5 1/2	140
54	1350	N/A	N/A	4 5/8	117	5 3/8	137
60	1500	N/A	N/A	N/A	N/A	5 1/4	133
72	1800	N/A	N/A	N/A	N/A	4 7/8	124
84	2100	N/A	N/A	N/A	N/A	4 5/8	117

Shading indicates preferred spring option.

Section 6 - Maintenance

6.5 Maintenance Log

Conveyor Name/No. _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Section 6 - Maintenance

6.6 Cleaner Maintenance Checklist

Belt Cleaner: _____ **Serial Number:** _____

Beltline Information:

Beltline Number: _____ Belt Condition: _____

Belt Width: ☐ 18" (450mm) ☐ 24" (600mm) ☐ 30" (750mm) ☐ 36" (900mm) ☐ 42" (1050mm) ☐ 48" (1200mm) ☐ 54" (1350mm) ☐ 60" (1500mm) ☐ 72" (1800mm) ☐ 84" (2100mm) ☐ 96" (2400mm)

*Head Pulley Diameter (Belt & Lagging):*_____ Belt Speed:_____ fpm Belt Thickness: _____

Belt Splice:_____ Condition of Splice:_____ Number of Splices:_____ ☐ Skived ☐ Unskived

Material conveyed: _____

Days per week run:_____ Hours per day run:_____

Blade Life:

Date blade installed:_____ Date blade inspected:_____ Estimated blade life:_____

Is blade making complete contact with belt? ☐ Yes ☐ No

Distance from wear line: Left _____ Middle _____ Right _____

Blade condition: ☐ Good ☐ Grooved ☐ Smiled ☐ Not contacting belt ☐ Damaged

Measurement of spring: Required _____ Currently _____

Was Cleaner Adjusted: ☐ Yes ☐ No

Pole Condition: ☐ Good ☐ Bent ☐ Worn

Lagging: ☐ Side Lag ☐ Ceramic ☐ Rubber ☐ Other ☐ None

Condition of lagging: ☐ Good ☐ Bad ☐ Other_____

Cleaner's Overall Performance: (Rate the following 1 - 5, 1= very poor - 5 = very good)

Appearance: _____ Comments:_____

Location: _____ Comments:_____

Maintenance: _____ Comments:_____

Performance: _____ Comments:_____

Other comments _____

_____

_____

_____

_____

_____

Section 7 - Troubleshooting

Problem	Possible Cause	Possible Solutions
Vibration	Cleaner secure bolts not set	Ensure all locking nuts are tight (Loctite)
	Cleaner not set up correctly	Ensure cleaner set up properly (1°-3° into belt)
	Belt tension too high	Ensure cleaner can conform to belt, or replace with alternate Flexco secondary cleaner
	Belt flap	Introduce hold-down roller to flatten belt
	Cleaner over-tensioned	Ensure cleaner is correctly tensioned
	Cleaner under-tensioned	Ensure cleaner is correctly tensioned
	Nylon bearing worn out or missing	Replace nylon bearing
Material buildup on cleaner	Cleaner not set up correctly	Ensure cleaner set up properly (1°-3° into belt)
	Buildup on chute	Ensure cleaner is not located too close to back of chute, allowing buildup
	Cleaner being overburdened	Introduce Flexco precleaner
	Excessive sticky material	Frequently clean unit of buildup
Damaged belt cover	Cleaner over-tensioned	Ensure cleaner is correctly tensioned
	Cleaner blade damage	Check blade for wear, damage and chips, replace where necessary
	Attack angle not correct	Ensure cleaner set up properly (1°-3° into belt)
	Material buildup in chute	Frequently clean unit of buildup
	Stop collar in incorrect position	Check stop collar tabs are not resting against slide plate
Cleaner not conforming to belt	Cleaner not set up correctly	Ensure cleaner set up properly (1°-3° into belt)
	Belt tension too high	Ensure cleaner can conform to belt, or replace with alternate Flexco secondary cleaner
	Belt flap	Introduce hold-down roller to flatten belt
	Cleaner cannot conform	Ensure cleaner can conform to belt, or replace with alternate Flexco secondary cleaner
Material passing cleaner	Cleaner not set up correctly	Ensure cleaner set up properly (1°-3° into belt)
	Cleaner tension too low	Ensure cleaner is correctly tensioned
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary
	Cleaner being overburdened	Introduce Flexco precleaner
	Belt flap	Introduce hold-down roller to flatten belt
	Cleaner cannot conform	Ensure cleaner can conform to belt, or replace with alternate Flexco secondary cleaner
	Blade in backwards	Install blade correctly and set correct tension
	Stop collar in incorrect position	Check stop collar tabs are not resting against slide plate
Damage to mechanical fastener	Incorrect cleaner blade selection	Change blade type to accommodate fastener style (UC or UF)
	Belt not skived correctly	Spot and redo splice correctly, lowering the profile flush or below belt surface
	Stop collar in incorrect position	Check stop collar tabs are not resting against slide plate
Missing material in belt center only	Cleaner pole located too high	Ensure cleaner set up properly (1°-3° into belt)
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary
Missing material on outer edges only	Cleaner pole located too low	Ensure cleaner set up properly (1°-3° into belt)
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary

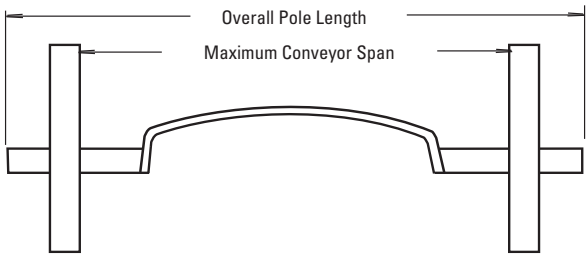
Section 8 - Specs and CAD Drawings

8.1 Specifications and Guidelines

Pole Length Specifications

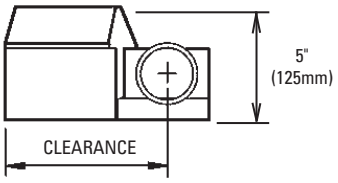
CLEANER SIZE		POLE LENGTH		MAXIMUM CONVEYOR SPAN	
in.	mm	in.	mm	in.	mm
18	450	64	1600	54	1350
24	600	70	1750	60	1500
30	750	76	1900	66	1650
36	900	82	2050	72	1800
42	1050	88	2200	78	1950
48	1200	94	2350	84	2100
54	1350	100	2500	90	2250
60	1500	106	2650	96	2400
72	1800	124	3100	114	2850
84	2100	136	3400	126	3150

Pole Diameter - 18 to 54" (450 to 1350mm) cleaner 2-3/8" (60mm)
Pole Diameter - 60 to 84" (1500 to 2100mm) cleaner 2-7/8" (73mm)



Clearance Guidelines for Installation

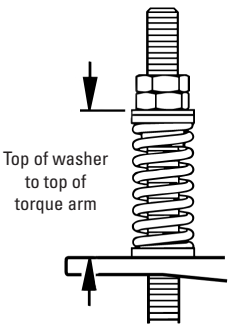
CLEANER SIZE		CLEARANCE	
in.	mm	in.	mm
18	450	6	155
24	600	7	180
30	750	8	205
36	900	8	205
42	1050	9 1/4	235
48	1200	10 1/2	270
54	1350	10 3/4	275
60	1500	10 3/4	275
72	1800	10 3/4	275
84	2100	10 3/4	275
96	2400	10 3/4	275



UST Spring Length Chart

Blade Width		Purple Springs		Silver Springs		White Springs	
in.	mm	in.	mm	in.	mm	in.	mm
18	450	5 5/8	143	N/A	N/A	N/A	N/A
24	600	5 1/4	133	6	152	N/A	N/A
30	750	4 5/8	117	5 3/4	146	6 1/8	156
36	900	4 1/4	108	5 5/8	143	6	152
42	1050	N/A	N/A	5 1/4	133	5 3/4	146
48	1200	N/A	N/A	4 7/8	124	5 1/2	140
54	1350	N/A	N/A	4 5/8	117	5 3/8	137
60	1500	N/A	N/A	N/A	N/A	5 1/4	133
72	1800	N/A	N/A	N/A	N/A	4 7/8	124
84	2100	N/A	N/A	N/A	N/A	4 5/8	117

Shading indicates preferred spring option.

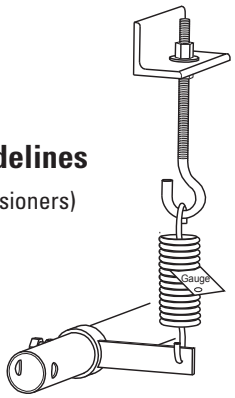


Spring Tensioner Guidelines

(For Cleaners with J-Bolt Tensioners)

- Spring gap = .03" (.7 mm)

* Gauge provided

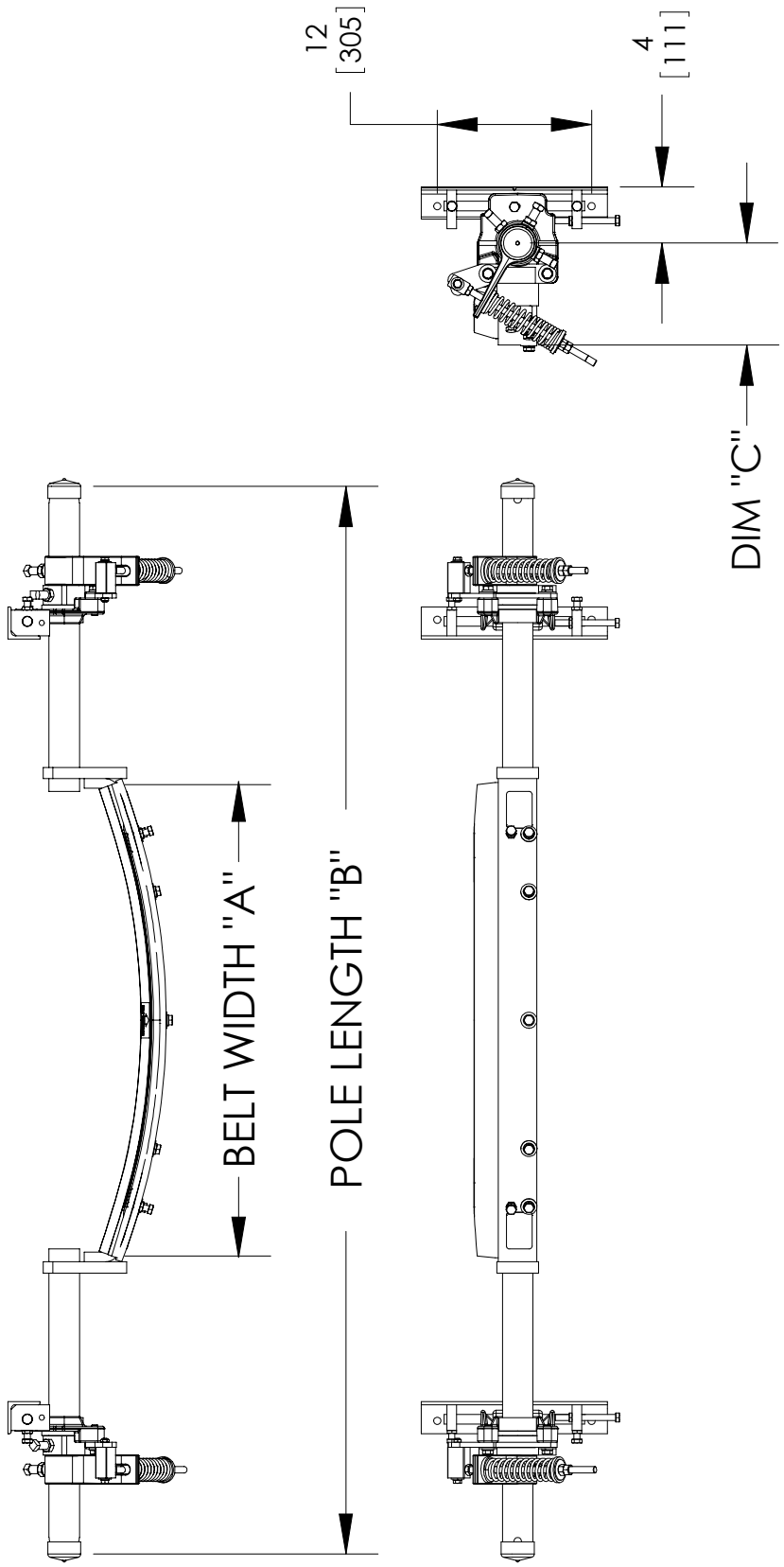


Specifications:

- Maximum Belt Speed .....C-Blade: 1300 FPM (6.6 m/s); F-Blade: 1000 FPM (5 m/s)
- Temperature Rating .....-30 to 180°F (-35 to 82°C)
- Usable Blade Wear Length.....C-Blade: 3/8" (9 mm); F-Blade: 1-3/4" (44 mm)
- Available for Belt Widths .....18 to 84" (450 to 2100 mm). Other sizes available upon request.
- CEMA Cleaner Rating .....Class 5

Section 8 - Specs and CAD Drawings

8.2 CAD Drawing - U-Type® Secondary Belt Cleaner



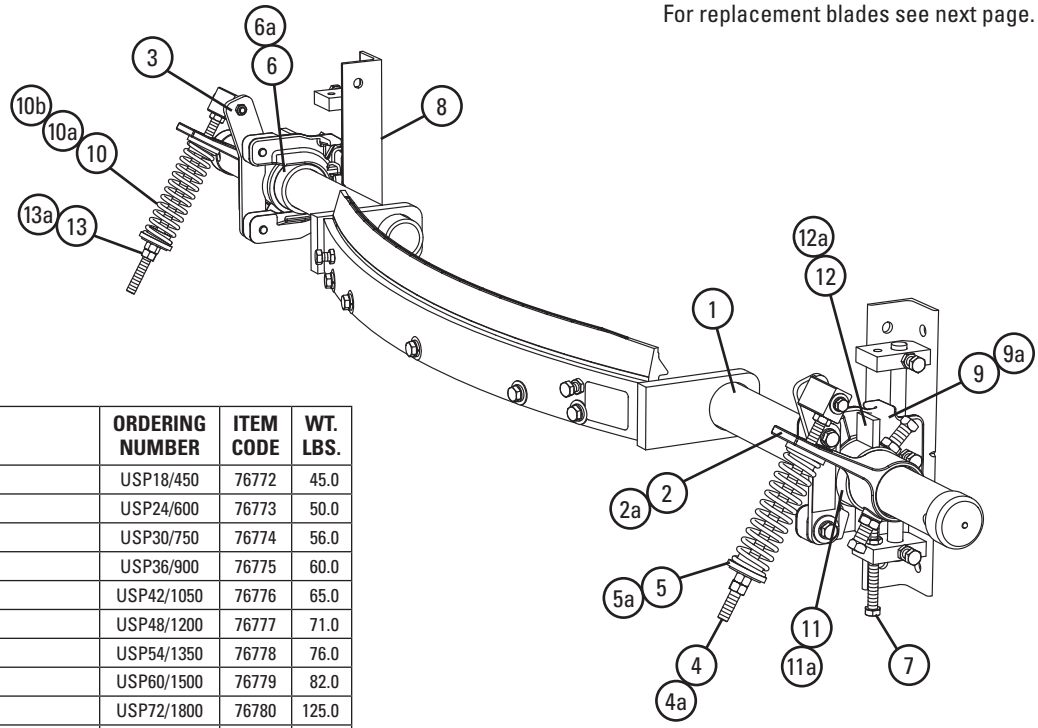
UST U-Type Mild Steel Cleaners - Imperial Mounting Fasteners

C-Blade Cleaner	F-Blade Cleaner	Belt Width "A"		Pole Length "B"		Dim "C"	
		in	mm	in	mm	in	mm
76712	76724	18	450	64	1600	5.91	150
76713	76725	24	600	70	1750	6.85	174
76714	76726	30	750	76	1900	8.00	203
76715	76727	36	900	82	2050	8.00	203
76716	76728	42	1050	88	2200	9.14	232
76717	76729	48	1200	94	2350	10.48	266
76718	76730	54	1350	100	2500	10.57	268
76719	76731	60	1500	106	2650	10.51	267
76720	76732	72	1800	124	3100	10.58	269
76721	76733	84	2100	136	3400	10.11	257
79239	79240	96	2400	148	3700	10.69	272

Section 9 - Replacement Parts

9.1 Replacement Parts List - U-Type® Secondary Belt Cleaner

For replacement blades see next page.



Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
1	18" (450mm) Pole	USP18/450	76772	45.0
	24" (600mm) Pole	USP24/600	76773	50.0
	30" (750mm) Pole	USP30/750	76774	56.0
	36" (900mm) Pole	USP36/900	76775	60.0
	42" (1050mm) Pole	USP42/1050	76776	65.0
	48" (1200mm) Pole	USP48/1200	76777	71.0
	54" (1350mm) Pole	USP54/1350	76778	76.0
	60" (1500mm) Pole	USP60/1500	76779	82.0
	72" (1800mm) Pole	USP72/1800	76780	125.0
	84" (2100mm) Pole	USP84/2100	76781	138.0
2	Torque Arm Kit* (1 ea.) †Δ	ESTAK-EST	76406	3.6
2a	Torque Arm Kit HD* (1 ea.) §	PSTA	75896	11.4
3	Pivot Shaft Bracket Kit* (1 ea.) †Δ	UPSBK	76784	1.7
4	Pivot Rod Kit* (1 ea.) †Δ	UPBKA	114389	2.2
4a	Pivot Rod Kit HD* (1 ea.) §	QMTPAK	76096	4.3
5	Bushing Kit (incl. 2 bushings) †Δ	ESBK-PS	76410	0.1
5a	Bushing Kit HD (incl. 2 bushings) §	QMTBK-W	76098	0.1
6	Standard Pole Bearing (1 ea.) †Δ	USPB2	79206	0.1
6a	HD Pole Bearing (1 ea.) §	UHPB2	79207	0.2
7	Adjusting Bolt Kit (1 ea.) (incl. locknut)	ABU	76788	0.2
8	Mounting Bracket Kit* (1 ea.)	UMBK	76789	9.7
9	Slide Plate Kit* (1 ea.) †Δ	USPK	76790	4.6
9a	HD Slide Plate Kit* (1 ea.) §	UHSPK	76791	5.2
10	Tension Spring - Purple (1 ea.) †	QMTS-P	75845	0.6
10a	Tension Spring - Silver (1 ea.) Δ	ESS-S	76412	1.2
10b	Tension Spring - White (1 ea.) §	PSTS-W	75898	1.7
11	UST Stop Collar Retrofit Kit* †Δ	USTSCK	79202	5.0
11a	HD UST Stop Collar Retrofit Kit* §	USTSCKHD	79204	7.4
12	Stop Collar*	USTSC	79299	1.5
12a	HD Stop Collar*	USTSCHD	79300	2.0
13	ACME Jam Nut Kit UST	JNK-G	114390	0.3
13a	Jam Nut Kit UST HD	JNK-C	79893	0.3
–	UST Spring Tensioner* - Purple † (incl. (1) ea. items 2, 3, 4, 5, 7, 8, 9, 10)	UST-P	76794	25.0
–	UST Spring Tensioner* - Silver Δ (incl. (1) ea. items 2, 3, 4, 5, 7, 8, 9, 10a)	UST-S	77757	25.0
–	HD UST Spring Tensioner* - White § (incl. (1) ea. items 2a, 3a, 4a, 5a, 7, 8, 9a, 10b)	UST-W	76795	40.0
–	Standard Mounting Kit* (incl. (1) ea. items 7, 8, 9) † Δ	USMK	76792	14.6
–	HD Mounting Kit* (incl. (1) ea. items 7, 8, 9a) §	UHMK	76793	15.5

*Hardware included

† Standard components for blade widths 18–42" (450–1050 mm)

Δ Standard components for blade widths 48–54" (1200–1350 mm)

§ HD components for blade widths 60–84" (1500–2100 mm)

Section 9 - Replacement Parts

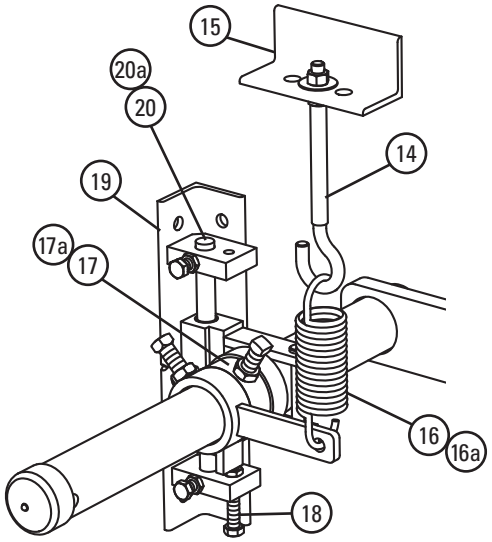
9.2 Replacement Parts List - Optional J-Bolt Tensioner & Blades

Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
14	J-Bolt (incl. locknut & washer)	STJK	74417	0.7
15	J-Bolt Mount (1 ea.)	STJM	74775	3.0
16	Tension Spring (1 ea.) †	STTS	74419	1.4
16a	HD Tension Spring (1 ea.) §	HDTS	74502	2.0
17	Stop Collar †	USTSC	79299	1.5
17a	HD Stop Collar §	USTSCHD	79300	2.0
18	Adjusting Bolt Kit (1 ea.) (incl. locknut)	ABU	76788	0.2
19	Mounting Bracket Kit* (1 ea.)	UMBK	76789	9.7
20	Slide Plate Kit* (1 ea.) †Δ	USPK	76790	4.6
20a	HD Slide Plate Kit* (1 ea.) §	UHSPK	76791	5.2
—	J-Bolt Conversion Kit † (Optional) (incl. (2) ea. items 15, 16, 17, 18)	UBTK	76977	4.7
—	HD J-Bolt Conversion Kit § (Optional) (incl. (2) ea. items 15, 16, 17a, 18a)	UHDBTK	76978	5.2
—	Standard Mounting Kit* (incl. (1) ea. items 8, 9, 10) † Δ	USMK	76792	14.6
—	HD Mounting Kit* (incl. (1) ea. items 8, 9, 10a) §	UHMK	76793	15.5
—	18–54" J-Bolt Complete Tension Kit (incl. (2) ea. items 15–21)†	MMKU	77324	19.3
—	60"+ J-Bolt Complete Tension Kit (incl. (2) ea. items 15a, 16, 17a, 18a, 19, 20, 21a)§	MMKUHD	77327	20.7

*Hardware included

† Standard components for blade widths 18–42" (450–1050 mm)
Δ Standard components for blade widths 48–54" (1200–1350 mm)
§ HD components for blade widths 60–84" (1500–2100 mm)



For use in changing UST to a J-Bolt Tensioner.

Replacement C-Blades
(Impact Resistant Tungsten Carbide)*

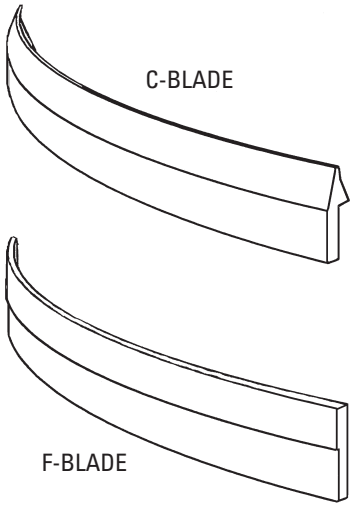
BELT WIDTH		ORDERING NUMBER	ITEM CODE	WT. LBS.
in.	mm			
18	450	URCB18/450	76748	5.0
24	600	URCB24/600	76749	6.7
30	750	URCB30/750	76750	8.4
36	900	URCB36/900	76751	10.1
42	1050	URCB42/1050	76752	11.7
48	1200	URCB48/1200	76753	13.5
54	1350	URCB54/1350	76754	15.0
60	1500	URCB60/1500	76755	16.8
72	1800	URCB72/1800	76756	20.2
84	2100	URCB84/2100	76757	23.5
96	2400	URCB96/2400	76758	30.0

*NOTE: C-Blades can be used on Flexco® Solid Plate, mechanically fastened and vulcanized belts.

Replacement F-Blades
(Polyurethane)*

BELT WIDTH		ORDERING NUMBER	ITEM CODE	WT. LBS.
in.	mm			
18	450	UFB18	74448	3.0
24	600	UFB24	74449	4.0
30	750	UFB30	74450	5.0
36	900	UFB36	74451	6.0
42	1050	UFB42	74452	7.0
48	1200	UFB48	74453	8.0
54	1350	UFB54	74454	9.0
60	1500	UFB60	74455	10.0
72	1800	UFB72	74456	12.0
84	2100	UFB84	74460	14.0
96	2400	UFB96	74461	16.0

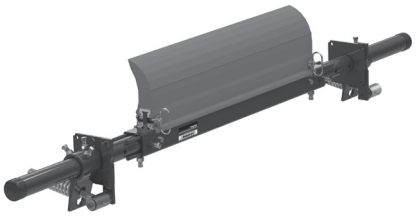
*NOTE: F-Blades (Polyurethane) can be used on mechanically fastened belts and vulcanized belts.



Section 10 - Other Flexco Conveyor Products

Flexco provides many conveyor products that help your conveyors to run more efficiently and safely. These components solve typical conveyor problems and improve productivity. Here is a quick overview on just a few of them:

MMP Precleaner

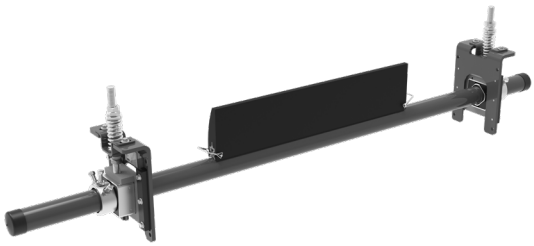


- Extra cleaning power right on the head pulley
- A 10" (250 mm) TuffShear™ blade provides increased blade tension on the belt to peel off abrasive materials
- The unique Visual Tension Check™ ensures optimal blade tensioning and quick, accurate retensioning
- Easy to install and simple to service

DRX Impact Beds

- Exclusive Velocity Reduction Technology™ in order to better protect the belt
- Slide-Out Service™ gives direct access to all impact bars for change-out
- Impact bar supports for longer bar life
- 4 models to custom fit to the application

MDWS DryWipe Secondary Cleaner

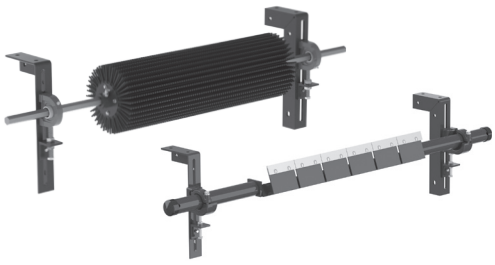


- Wipes the belt dry as final cleaner in system
- Automatic blade tensioning to the belt
- Easy, visual blade tension check
- Simple, one-pin blade replacement

PT Max™ Belt Trainer

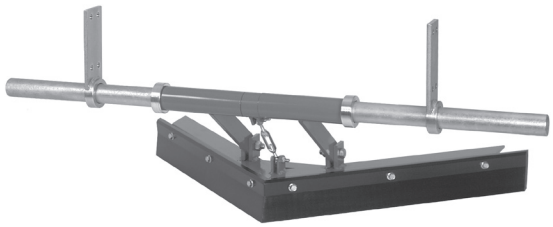
- Patented "pivot & tilt" design for superior training action
- Dual sensor rollers on each side to minimize belt damage
- Pivot point guaranteed not to freeze up
- Available for topside and return side belts

Flexco Specialty Belt Cleaners



- "Limited space" cleaners for tight conveyor applications
- High Temp cleaners for severe, high heat applications
- A rubber fingered cleaner for chevron and raised rib belts
- Multiple cleaner styles in stainless steel for corrosive applications

Belt Plows



- A belt cleaner for the tail pulley
- Exclusive blade design quickly spirals debris off the belt
- Economical and easy to service
- Available in vee or diagonal models

Visit **www.flexco.com** for other Flexco locations and products, or to find an authorized distributor.