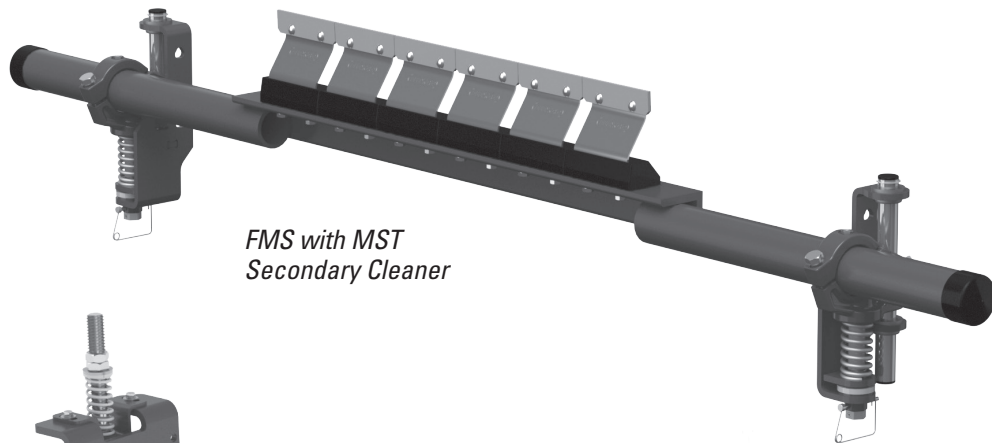


# FMS Secondary Cleaner

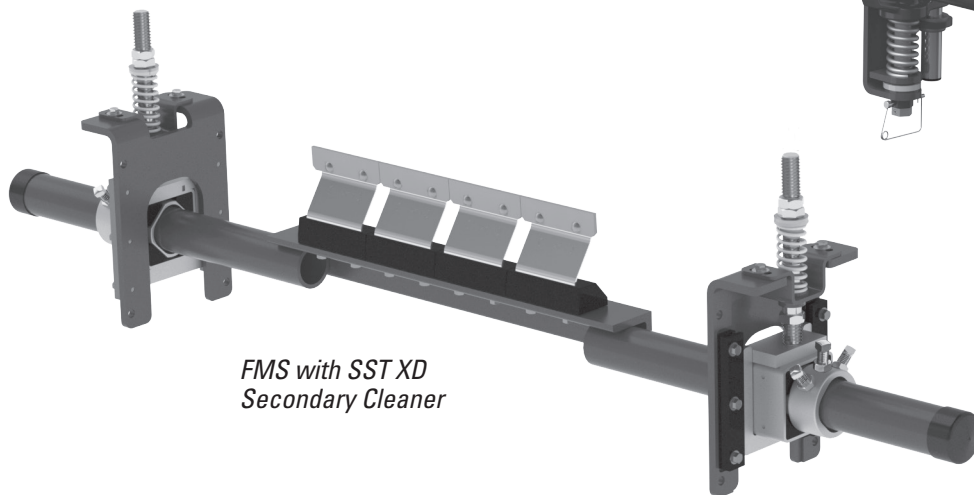
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## Installation, Operation and Maintenance Manual

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*FMS with MST  
Secondary Cleaner*



*FMS with SST XD  
Secondary Cleaner*

# MHS HD Secondary Cleaner

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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.

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# Section 1 - Important Information

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## 1.1 General Introduction

We at Flexco are very pleased that you have selected an FMS Secondary 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](http://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 FMS Secondary 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 Field Representative.

# Section 2 - Safety Considerations and Precautions

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Before installing and operating the FMS Secondary 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.

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## 2.1 Stationary Conveyors

The following activities are performed on stationary conveyors:

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

### **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

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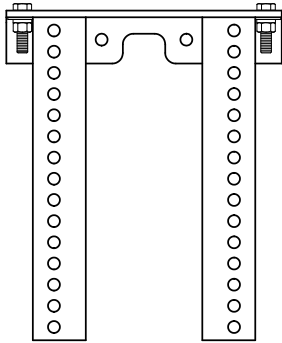
### 3.1 Checklist

- 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)

# Section 3 - Pre-installation Checks and Options

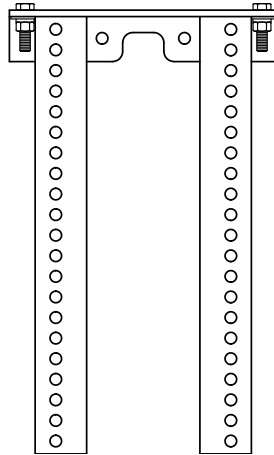
## 3.2 Optional Installation Accessories

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



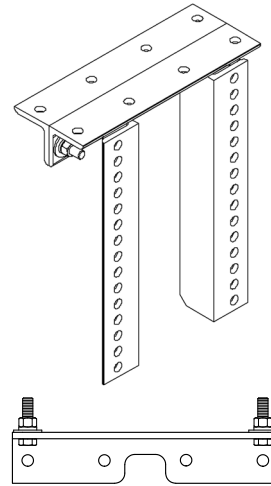
**SST Standard Mounting Bracket Kit (for SST XD Tensioner)**  
(Item Code: 76071)

- For most secondary cleaner installs.
- 325 x 388 mm (13 x 15-1/2")



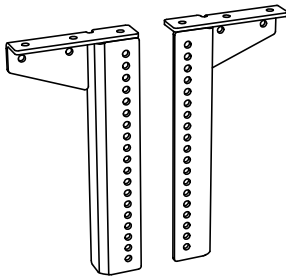
**SST Long Mounting Bracket Kit (for SST XD Tensioner)**  
(Item Code: 76072)

- For installations that require extra length legs.
- 325 x 538 mm (13 x 21-1/2")

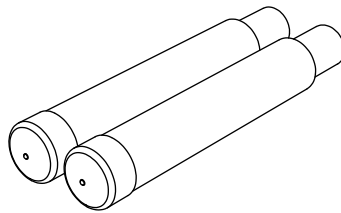


**SST Optional Top Angle Kit (for SST XD Tensioner)**  
(Item Code: 76073)

- Used with both standard and long mounting bracket kits for additional mounting options.
- 325 mm (13") Length



**MST Drop Bracket Kit (for MST Tensioner Only)**  
(incl. 2 brackets)  
(Item Code: 79434)



**Pole Extender Kit (incl. 2 pole extenders)**  
(Item Code: 76024)

- For cleaner sizes 1800 mm (72") and larger
- Provides 750 mm (30") of extended pole length

### Optional Mounting Kits (includes 2 brackets/bars)

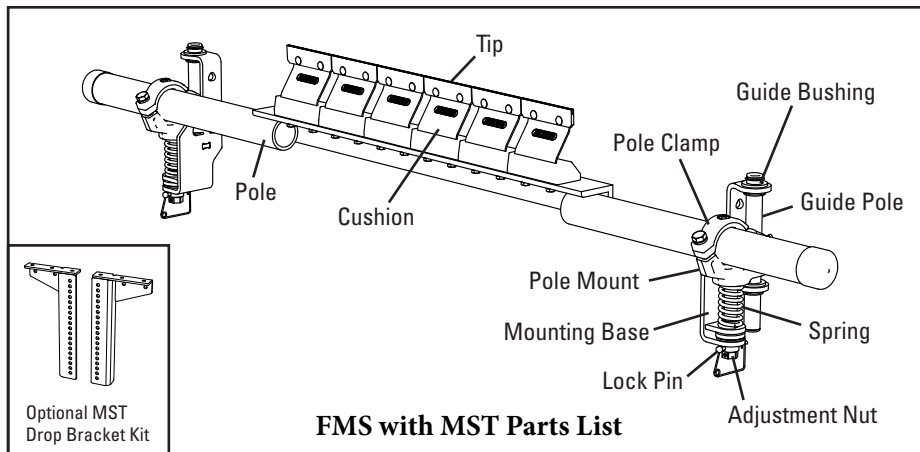
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Standard Mounting Bracket Kit *	SSTSMB	76071	15.6
Long Mounting Bracket Kit *	SSTLMB	76072	19.7
Optional Top Angle Kit *	SSTOTA	76073	4.8
Pole Extender Kit	MAPEK	76024	9.9
MST Drop Bracket Kit	MSTDDB	79434	12.6

\*Hardware Included

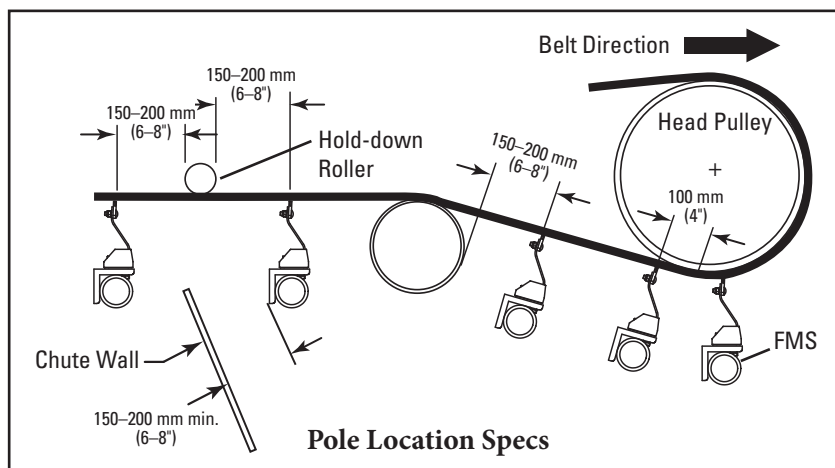
Lead time: 1 working day

## Section 4 - Installation Instructions

### 4.1 FMS - MST Tensioner



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



#### Tools Needed:

- 10 mm (3/8") Wrench
- 14 mm (9/16") Wrench
- 19 mm (3/4") Wrench
- 25 mm (1") Wrench
- 29 mm (1-1/8") Wrench
- **OR** Large Adjustable/  
Crescent Wrenches (x2)
- Ratchet with 19 mm (3/4") Socket
- 150 mm (6") C-Clamps (x2)
- Torch (as needed)
- Welder (as needed)
- Tape Measure
- Level
- Marking Pen or Soapstone
- Allen Key Set



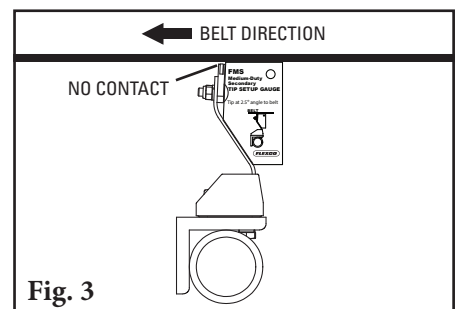
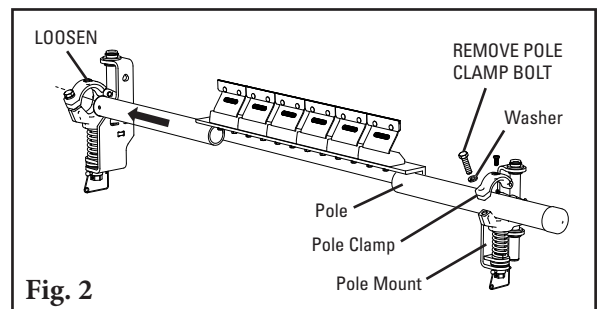
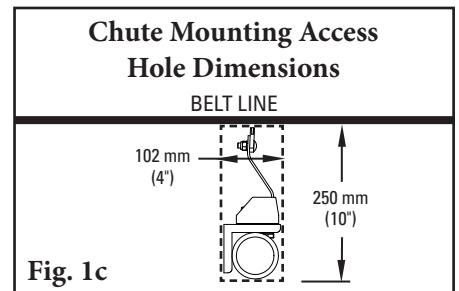
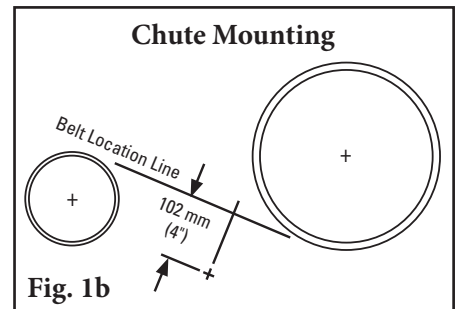
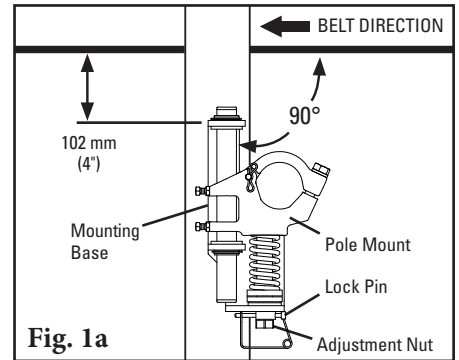
# Section 4 - Installation Instructions

## 4.1 FMS - MST Tensioner

1. **Install the spring tensioner mounting bases.** The preferred mounting orientation relative to the belt direction is shown in Fig. 1a; if necessary, the tensioners may be mounted for the opposite belt direction. Clamp the mounting base into position so the top flange is 102 mm (4") below the bottom of the belt. Bolt or weld the mounting base in place. Locate and install the mounting base on the opposite side. Remove the tensioner lock pins and turn the adjustment nuts to fully lower the pole mount.

**NOTE:** For chute mounting, a belt location line must be drawn on the chute wall so the mounting base can be aligned 102 mm (4") below the belt (Fig. 1b). Cut access holes as needed.

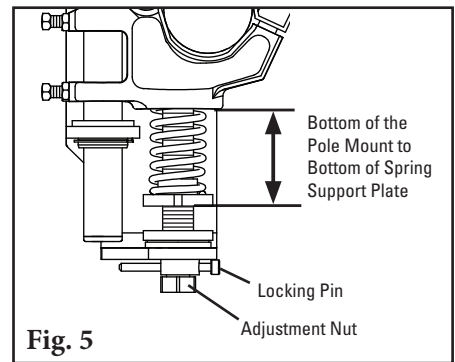
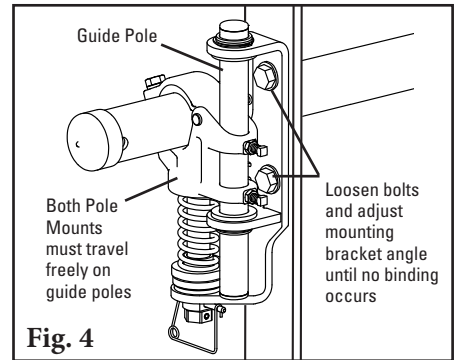
2. **Install the pole.** Remove the pole clamp bolt and lift/remove the top half of the pole clamp from the tensioner on the near side of the conveyor, and loosen the pole clamp bolt on the opposite side. Next, slide the pole across the conveyor and through the loosened pole clamp, then place the near end of pole in the remaining pole clamp (Fig. 2). Replace the top half of the pole clamp, reinstall the bolt and tighten both bolts finger tight.
3. **Set the blade angle.** Center the pole/blades on the belt. Rotate the pole until the tips align with the FMS tip setup gauge provided (Fig. 3). Tighten the pole clamp bolt on each pole mount to lock the pole in place. Use an allen key to lock the set screw. There should be no blade-to-belt contact while locking the pole into position. If contact occurs, double check the dimension from Step 1.



# Section 4 - Installation Instructions

## 4.1 FMS - MST Tensioner

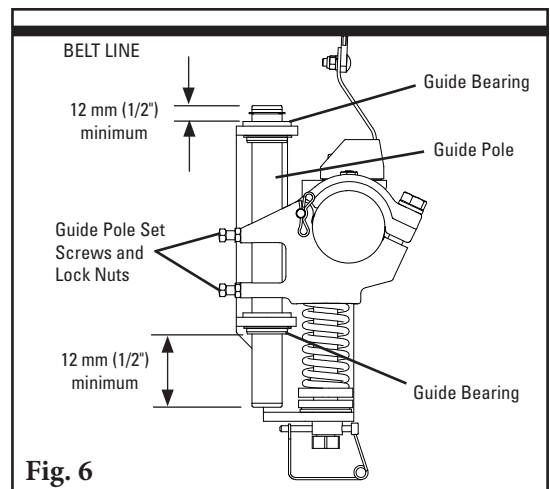
4. **Ensure the tensioner travels freely.** Pull up and push down on each pole end to ensure the pole mount travels freely on the guide pole. If there is any sign of binding, loosen the bolts on the mounting base and pivot until the tensioner moves freely (Fig. 4). Retighten bolts.
5. **Set the blade tension.** Turn the adjustment nuts until the correct spring compression is reached (Fig. 5). Spring compression is determined by the spring length. See the chart below for the correct spring length for your belt width. Replace locking pins.
6. **Secure the guide poles.** Ensure the ends of the guide pole extend at least 13 mm (1/2") outside of the top and bottom guide bearings. If an adjustment is necessary, loosen the guide pole set screws and lock nuts, then tap the guide pole up/down. Retighten the guide pole set screws and lock nuts (Fig. 6).
7. **Check the movement of each tensioner** to ensure they do not bind up. If there are binding concerns, refer to Step 4.
8. **Test run the cleaner and inspect the cleaning performance.** If vibration occurs or more cleaning efficiency is desired, increase the blade tension by making 3 mm (1/8") compression adjustments on the tension springs.



**MST Spring Length Chart**

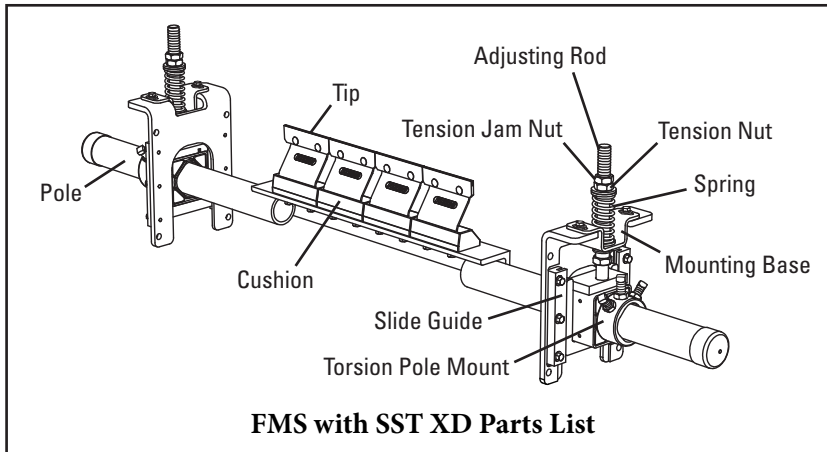
Belt Width		White Springs		Silver Springs		Black Springs	
mm	in.	mm	in.	mm	in.	mm	in.
450	18	73	2 7/8	89	3 1/2	89	3 1/2
600	24	67	2 5/8	86	3 3/8	89	3 1/2
750	30	60	2 3/8	83	3 1/4	86	3 3/8
900	36	54	2 1/8	79	3 1/8	83	3 1/4
1050	42	N/A	N/A	76	3	79	3 1/8
1200	48	N/A	N/A	73	2 7/8	79	3 1/8
1350	54	N/A	N/A	70	2 3/4	76	3
1500	60	N/A	N/A	70	2 3/4	73	2 7/8
1800	72	N/A	N/A	N/A	N/A	70	2 3/4

Shading indicates preferred spring option.

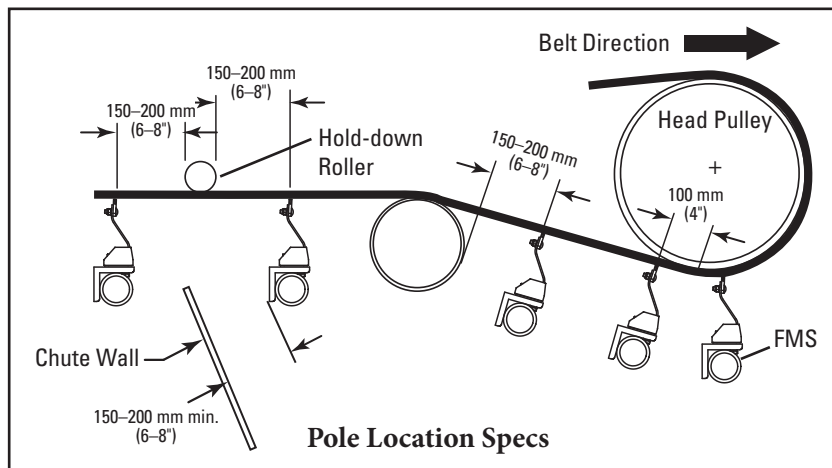


## Section 4 - Installation Instructions

### 4.2 FMS - SST XD Tensioner



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



#### Tools Needed:

- 10 mm (3/8") Wrench
- 14 mm (9/16") Wrench
- 19 mm (3/4") Wrench
- 25 mm (1") Wrench
- 29 mm (1-1/8") Wrench
- **OR** Large Adjustable/  
Crescent Wrenches (x2)
- Ratchet with 19 mm (3/4") Socket
- 150 mm (6") C-Clamps (x2)
- Torch (as needed)
- Welder (as needed)
- Tape Measure
- Level
- Marking Pen or Soapstone

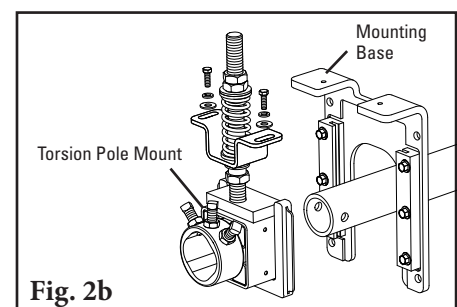
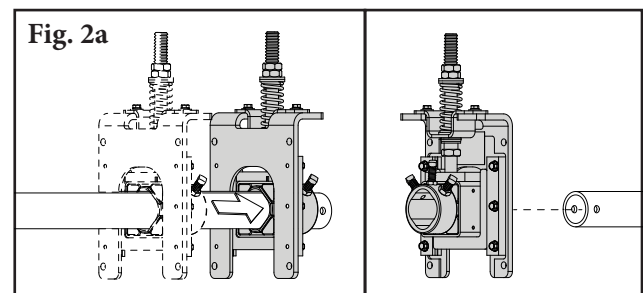
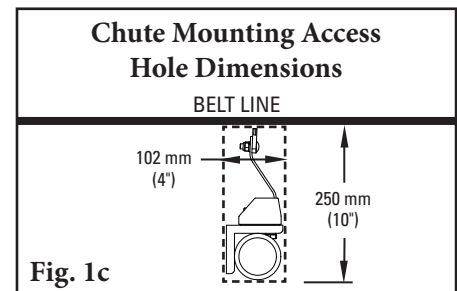
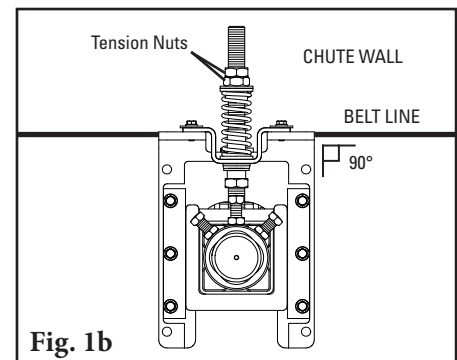
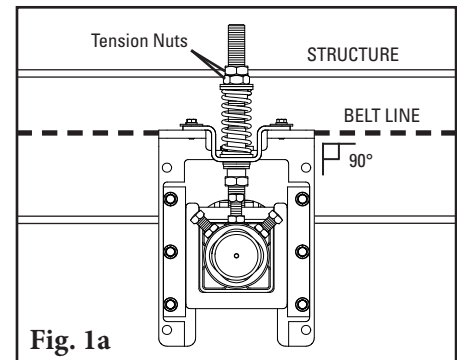
## Section 4 - Installation Instructions

### 4.2 FMS - SST XD Tensioner

1. **Install the spring tensioner mounting bases.** (For push-up tensioning refer to additional instructions on Page 14.) Clamp one mounting base into position so the top flange of the base is even with the belt line (Fig. 1a). Bolt or weld the mounting base in place. Locate and install the mounting base on the opposite side.

**NOTE:** For chute mounting, a belt location line must be drawn on the chute wall so the mounting base can be aligned with the belt (Fig. 1b). Cut access holes as needed (Fig. 1c).

2. **Install the pole.** Slide the pole into one torsion pole mount as far as needed and locate the other end into the opposite mount (Fig. 2a). If there is not enough space, remove one of the torsion pole mounts from the mounting base, slide the pole through the mounting base and reassemble (Fig. 2b).



# Section 4 - Installation Instructions

## 4.2 FMS - SST XD Tensioner

3. **Set the blade angle.** Center the pole/blades on the belt. Rotate the pole until the tips align with the FMS tip setup gauge provided (Fig. 3). Tighten the pole clamp bolts on each pole mount to lock the pole in place. Use allen key to lock in set screw. There should be no blade-to-belt contact while locking the pole into position. If contact occurs, double check the dimension from Step 1.
4. **Set the blade tension.** Loosen the top tension jam nuts on both sides. Turn the tension nuts until the correct spring compression is reached. Spring compression is determined by spring length. See the chart for the correct spring length for your belt width.
5. **Set adjusting rod sleeve.** After setting the blade tension, screw the adjusting rod sleeve(s) into the UHMW bushing until 38 mm (1-1/2") is showing (Fig. 4). Tighten the adjusting rod sleeve jam nut.
6. **Test run the cleaner and inspect the cleaning performance.** If vibration occurs or more cleaning efficiency is desired, increase the blade tension by making 3 mm (1/8") compression adjustments on the tension springs. If vibration occurs on cleaner with air tensioner, increase blade layback.

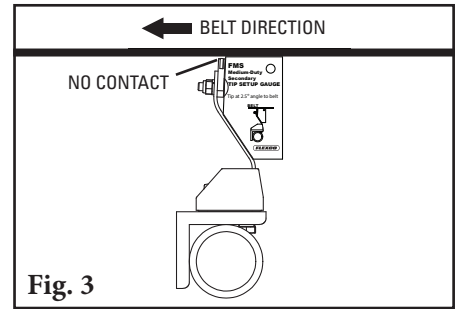


Fig. 3

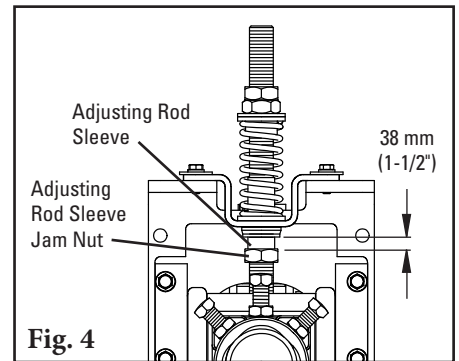
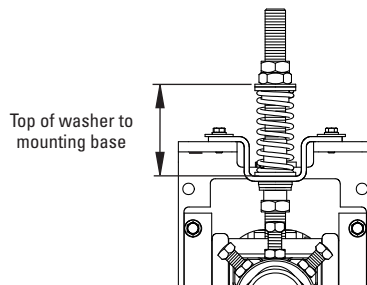


Fig. 4



SST XD Spring Length Chart

Belt Width		White Springs		Silver Springs		Black Springs	
mm	in.	mm	in.	mm	in.	mm	in.
450	18	86	3 3/8	102	4	N/A	N/A
600	24	79	3 1/8	98	3 7/8	N/A	N/A
750	30	73	2 7/8	95	3 3/4	N/A	N/A
900	36	N/A	N/A	95	3 3/4	98	3 7/8
1050	42	N/A	N/A	92	3 5/8	95	3 3/4
1200	48	N/A	N/A	89	3 1/2	92	3 5/8
1350	54	N/A	N/A	86	3 3/8	92	3 5/8
1500	60	N/A	N/A	83	3 1/4	89	3 1/2
1800	72	N/A	N/A	N/A	N/A	86	3 3/8

Shading indicates preferred spring option.

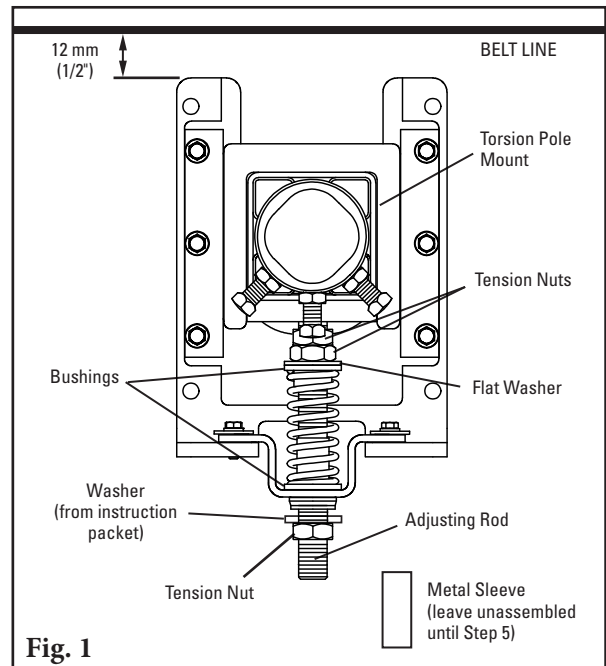
## Section 4 - Installation Instructions

### 4.3 FMS - SST XD - Push-up Tensioning

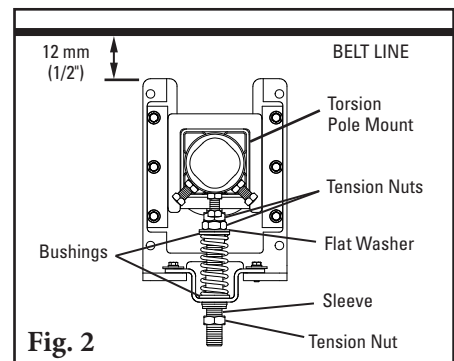
- 1. Reconfigure the standard pull-up tensioner to the push-up style.** Remove the 3 tension nuts, flat washer, 2 bushings, spring, sleeve and hat bracket; reassemble (Fig. 1) with 2 tension nuts, flat washer, 2 bushings, spring and hat bracket on upper end of adjusting rod. Add washer (from instruction packet) and third tension nut to bottom of adjusting rod.
- 2. Install the tensioner mounting bases.** Mount the bases to the structure or chute so that the tops of the base legs are 12 mm (1/2") below the belt (Fig. 1).
- 3. Install the cleaner pole and set the blade angle.** Follow the installation steps from the cleaner instructions on Page 13.

**NOTE:** Be sure the lock bolts on the torsion pole mount have been securely tightened to lock the pole in place before moving to Step 4.

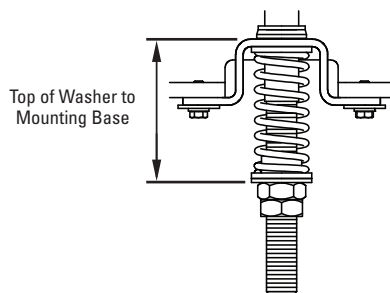
- 4. Set the blade tension.** Remove the bottom tension nut and washer from the adjusting rod. Turn the two upper tension nuts until the spring is compressed to the length shown on the Spring Length Chart. Tighten the two tension nuts together to prevent loosening.
- 5. Replace the sleeve.** Position the sleeve over the adjusting rod and turn it until it is in the middle of the bushing. Replace the bottom tension nut and tighten until it locks the sleeve in place (Fig. 2).



**Fig. 1**



**Fig. 2**



**SST XD Spring Length Chart**

Belt Width		White Springs		Silver Springs		Black Springs	
mm	in.	mm	in.	mm	in.	mm	in.
450	18	86	3 3/8	102	4	N/A	N/A
600	24	79	3 1/8	98	3 7/8	N/A	N/A
750	30	73	2 7/8	95	3 3/4	N/A	N/A
900	36	N/A	N/A	95	3 3/4	98	3 7/8
1050	42	N/A	N/A	92	3 5/8	95	3 3/4
1200	48	N/A	N/A	89	3 1/2	92	3 5/8
1350	54	N/A	N/A	86	3 3/8	92	3 5/8
1500	60	N/A	N/A	83	3 1/4	89	3 1/2
1800	72	N/A	N/A	N/A	N/A	86	3 3/8

Shading indicates preferred spring option.

## 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 FMS 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 ones on pages 10 or 13.
- When maintenance tasks are completed, test run the conveyor to ensure the cleaner is performing properly.



# Section 6 - Maintenance

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## 6.4 Maintenance Log

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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# Section 6 - Maintenance

## 6.5 Cleaner Maintenance Checklist

Site: \_\_\_\_\_ Inspected by: \_\_\_\_\_ Date: \_\_\_\_\_

Belt Cleaner: \_\_\_\_\_ Serial Number: \_\_\_\_\_

### Beltline Information:

Beltline Number: \_\_\_\_\_ Belt Condition: \_\_\_\_\_

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

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: \_\_\_\_\_

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## Section 7 - Troubleshooting

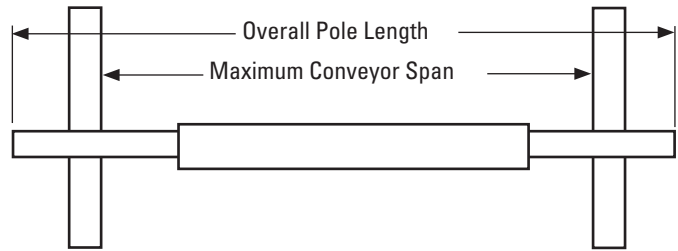
Problem	Possible Cause	Possible Solutions
Vibration	Cleaner secure bolts not set	Ensure all locking nuts are tight (Loctite)
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge) 1-3° into belt
	Belt tension too high	Ensure cleaner can conform to belt, or replace with 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
	UHMW bearing worn out or missing	Replace 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 (check tip angle with gauge) 1-3° into belt
	Material buildup in chute	Frequently clean unit of buildup
Cleaner not conforming to belt	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge) 1-3° into belt
	Belt tension too high	Ensure cleaner can conform to belt (introduce hold-down roller), 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 (introduce hold-down roller), or replace with alternate Flexco secondary cleaner
Material passing cleaner	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge) 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
	Belt worn or grooved	Introduce water spray pole or brush cleaner
	Cleaner cannot conform	Ensure cleaner can conform to belt (introduce hold-down roller), or replace with alternate Flexco secondary cleaner
Damage to mechanical fastener	Incorrect cleaner blade selection	Change blade type to accommodate fastener style (C or V)
	Belt not skived correctly	Spot and redo splice correctly, lowering the profile flush or below belt surface
	Blade angle incorrect	Reset with gauge
Missing material in belt center	Cupped Belt	Install hold-down roller and reset blade angle with gauge
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary
Missing material on outer edges	Cupped Belt	Install hold-down roller and reset blade angle with gauge
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary
MST Tensioners binding	Tensioners not aligned properly	Adjust mounting bases until tensioners travel without binding
	Material buildup on tensioner guide pole	Clean off guide pole

# Section 8 - Specs and CAD Drawings

## 8.1 Specs and Guidelines

### Pole Length Specifications\*

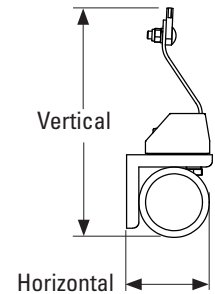
CLEANER SIZE		BLADE WIDTH		POLE LENGTH		MAXIMUM CONVEYOR SPAN	
mm	in.	mm	in.	mm	in.	mm	in.
450	18	450	18	1800	72	1550	62
600	24	600	24	1950	78	1700	68
750	30	750	30	2100	84	1850	74
900	36	900	36	2250	90	2000	80
1050	42	1050	42	2400	96	2150	86
1200	48	1200	48	2550	102	2300	92
1350	54	1350	54	2700	108	2450	98
1500	60	1500	60	2850	114	2600	104
1800	72	1800	72	3150	126	2900	116
2100	84	2100	84	3450	138	3200	128
2400	96	2400	96	3750	150	3500	140



\*For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 750 mm (30") of extended pole length. See Page 7.  
Pole Diameter - 73 mm (2-7/8")

### Clearance Guidelines for Installation

HORIZONTAL CLEARANCE REQUIRED		VERTICAL CLEARANCE REQUIRED	
mm	in.	mm	in.
89	3-1/2	245	10



### MST Spring Length Chart

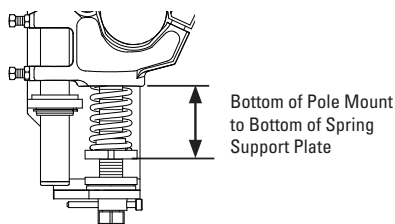
Belt Width		White Springs		Silver Springs		Black Springs	
mm	in.	mm	in.	mm	in.	mm	in.
450	18	73	2 7/8	89	3 1/2	89	3 1/2
600	24	67	2 5/8	86	3 3/8	89	3 1/2
750	30	60	2 3/8	83	3 1/4	86	3 3/8
900	36	54	2 1/8	79	3 1/8	83	3 1/4
1050	42	N/A	N/A	76	3	79	3 1/8
1200	48	N/A	N/A	73	2 7/8	79	3 1/8
1350	54	N/A	N/A	70	2 3/4	76	3
1500	60	N/A	N/A	70	2 3/4	73	2 7/8
1800	72	N/A	N/A	N/A	N/A	70	2 3/4

Shading indicates preferred spring option.

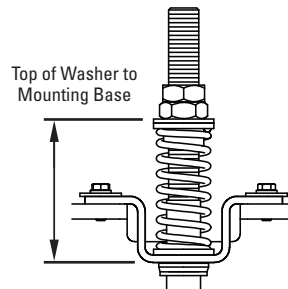
### SST XD Spring Length Chart

Belt Width		White Springs		Silver Springs		Black Springs	
mm	in.	mm	in.	mm	in.	mm	in.
450	18	86	3 3/8	102	4	N/A	N/A
600	24	79	3 1/8	98	3 7/8	N/A	N/A
750	30	73	2 7/8	95	3 3/4	N/A	N/A
900	36	N/A	N/A	95	3 3/4	98	3 7/8
1050	42	N/A	N/A	92	3 5/8	95	3 3/4
1200	48	N/A	N/A	89	3 1/2	92	3 5/8
1350	54	N/A	N/A	86	3 3/8	92	3 5/8
1500	60	N/A	N/A	83	3 1/4	89	3 1/2
1800	72	N/A	N/A	N/A	N/A	86	3 3/8

Shading indicates preferred spring option.



Bottom of Pole Mount to Bottom of Spring Support Plate



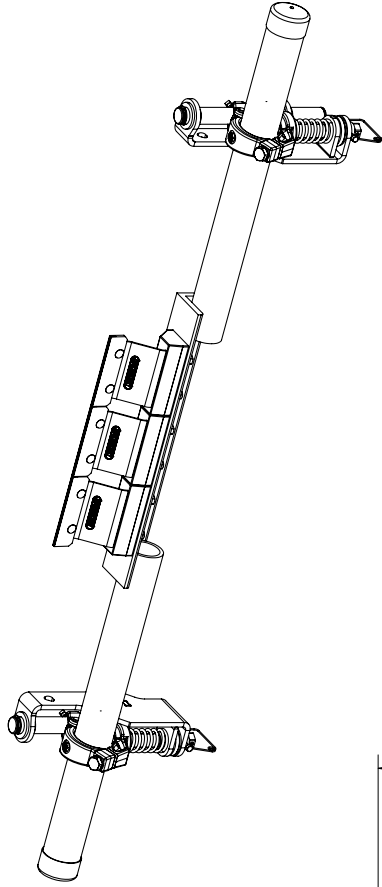
Top of Washer to Mounting Base

### Specifications:

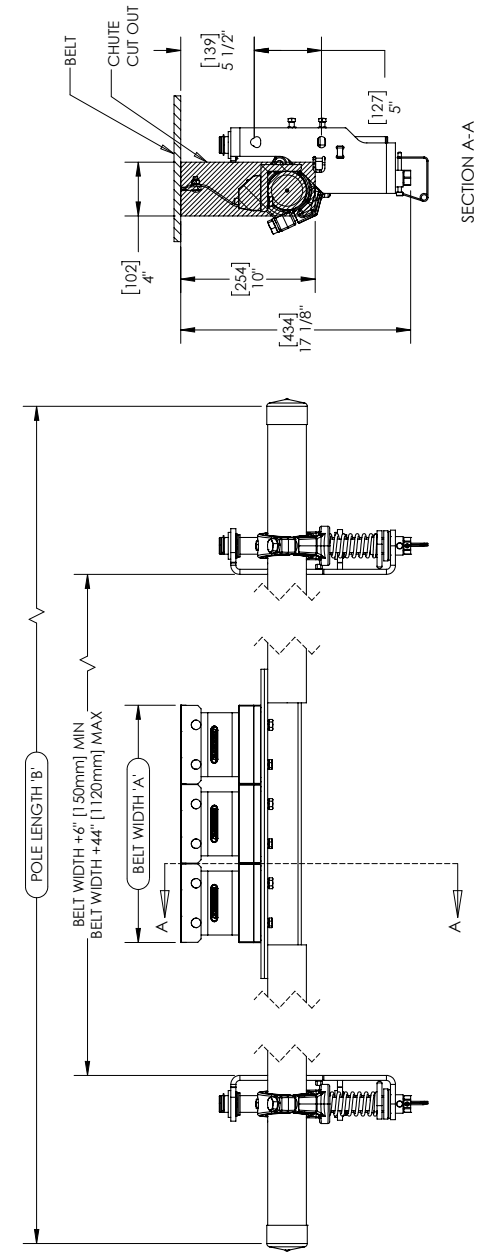
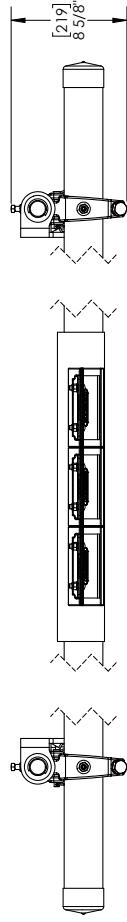
- Maximum Belt Speed ..... 5 M/sec (1000 FPM)
- Temperature Rating ..... -35 to 148°C (-30 to 300°F)
- Usable Blade Wear Length ..... 9 mm (3/8")
- Blade ..... **C-Tip:** Impact Resistant Tungsten Carbide (works with mechanical fasteners)  
..... **V-Tip:** Long Life Tungsten Carbide (for vulcanized belts only)
- Available for Belt Widths..... 450 to 1800 mm (18 to 72") Other sizes available upon request.
- CEMA Cleaner Rating..... Class 4

# Section 8 - Specs and CAD Drawings

## 8.2 CAD Drawing - FMS - MST Tensioner



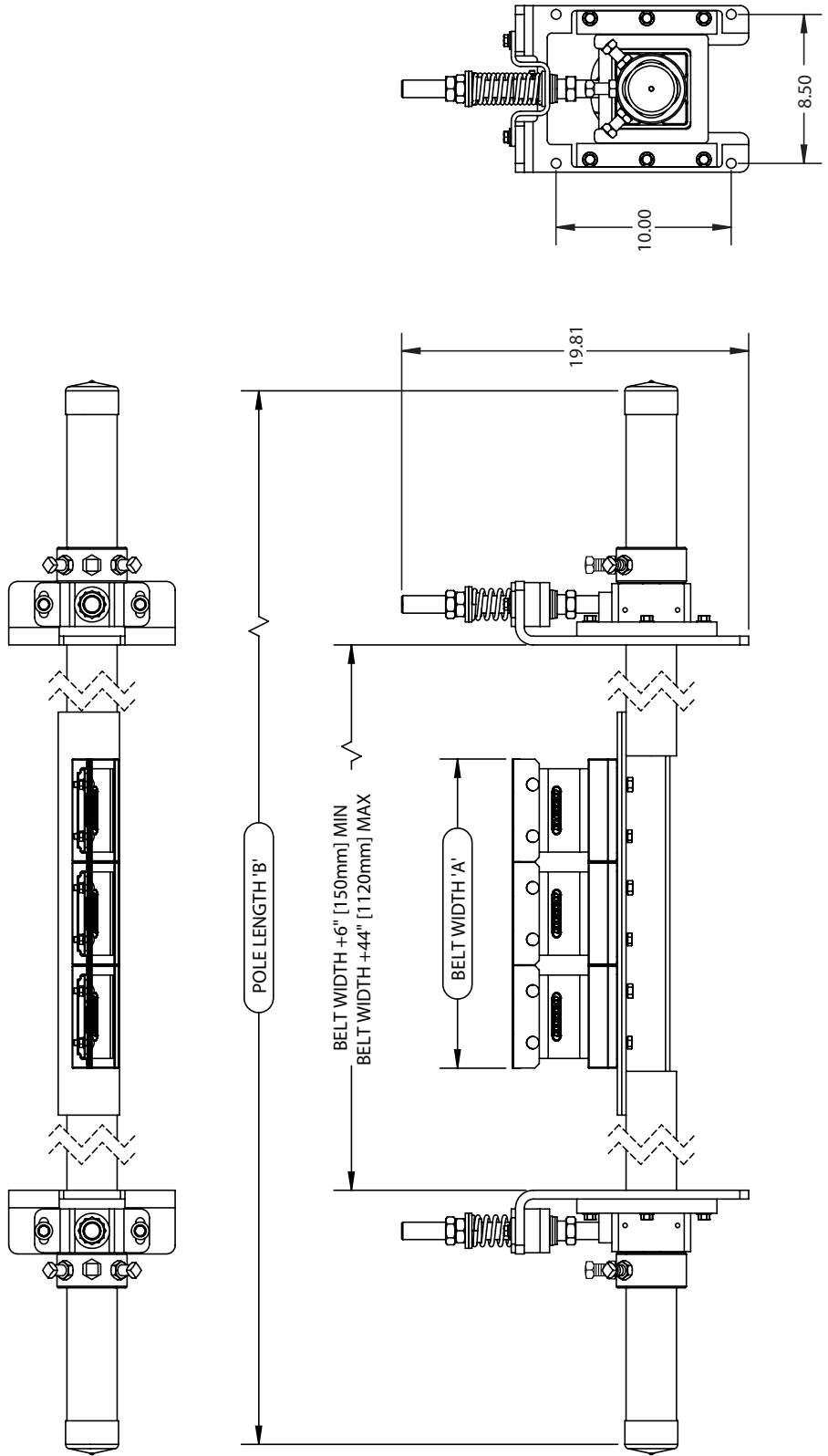
SPECIFICATIONS			FMS C-CLEANER		ITEM ① POLE		ITEM ② SPRING	
BELT WIDTH 'A'	POLE LENGTH 'B'		ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE	P/N	COLOR
	(in)	(mm)						
18	450	72	FMS-18	79637	MHSP-18	76178	75846	WHITE
24	600	78	FMS-24	79638	MHSP-24	75918	75846	WHITE
30	700	84	FMS-30	79639	MHSP-30	75919	75846	WHITE
36	900	90	FMS-36	79640	MHSP-36	75920	75843	SILVER
42	1050	96	FMS-42	79641	MHSP-42	75921	75843	SILVER
48	1200	102	FMS-48	79642	MHSP-48	75922	75843	SILVER
54	1350	108	FMS-54	79643	MHSP-54	75923	75843	SILVER
60	1500	114	FMS-60	79644	MHSP-60	75924	75844	BLACK
72	1800	126	FMS-72	79645	MHSP-72	75925	75844	BLACK



# Section 8 - Specs and CAD Drawings

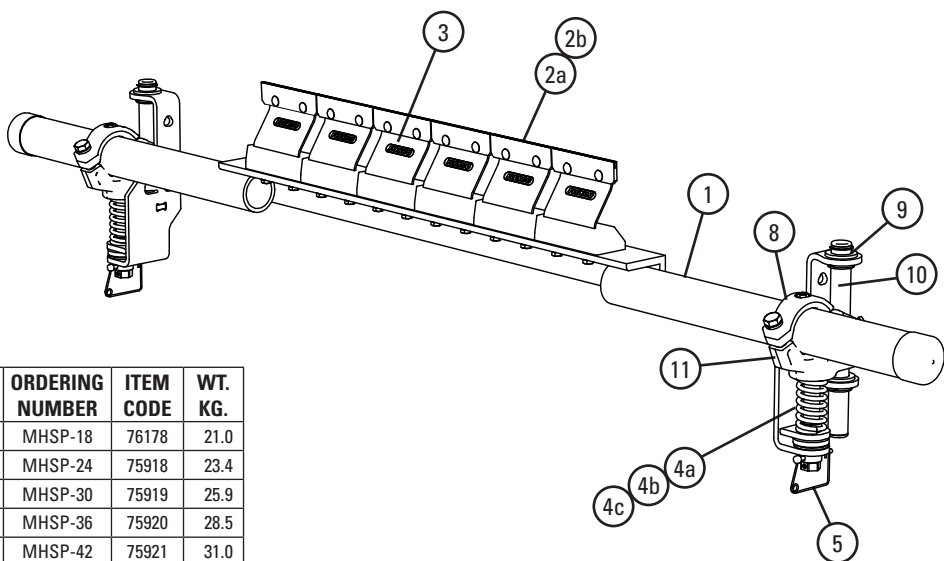
## 8.3 CAD Drawing - FMS - SST XD Tensioner

SPECIFICATIONS				FMS C CLEANERS		POLE		SPRING	
Belt Width 'A'		Pole Length 'B'		Order Number	Item Code	Order Number	Item Code	P/N	Color
in.	mm	in.	mm						
18	450	72	1828	FMS-18-SSTXD	92185	MHSP-18	76178	75846	WHITE
24	600	78	2133	FMS-24-SSTXD	92186	MHSP-24	75918	75846	WHITE
30	750	84	2286	FMS-30-SSTXD	92187	MHSP-30	75919	75846	WHITE
36	900	90	2438	FMS-36-SSTXD	92188	MHSP-36	75920	75843	SILVER
42	1050	96	2590	FMS-42-SSTXD	92189	MHSP-42	75921	75843	SILVER
48	1200	102	2743	FMS-48-SSTXD	92190	MHSP-48	75922	75843	SILVER
54	1350	108	2895	FMS-54-SSTXD	92191	MHSP-54	75923	75844	BLACK
60	1500	114	3200	FMS-60-SSTXD	92192	MHSP-60	75924	75844	BLACK
72	1800	126	3750	FMS-72-SSTXD	92193	MHSP-72	75925	75844	BLACK



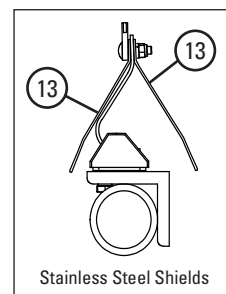
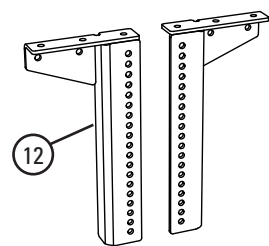
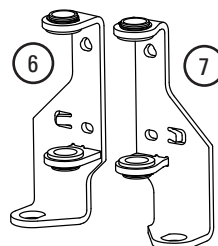
# Section 9 - Replacement Parts

## 9.1 Replacement Parts List - FMS - MST Tensioner



### Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. KG.
1	450mm (18") Pole	MHSP-18	76178	21.0
	600mm (24") Pole	MHSP-24	75918	23.4
	750mm (30") Pole	MHSP-30	75919	25.9
	900mm (36") Pole	MHSP-36	75920	28.5
	1050mm (42") Pole	MHSP-42	75921	31.0
	1200mm (48") Pole	MHSP-48	75922	33.5
	1350mm (54") Pole	MHSP-54	75923	36.0
	1500mm (60") Pole	MHSP-60	75924	38.5
1800mm (72") Pole	MHSP-72	75925	43.6	
2a	C-Tip*	ICT6	74535	0.3
2b	V-Tip* (for vulcanized belts only)	RSA150	73628	0.6
3	FMS Cushion Kit*	FMSC	79699	1.9
4a	Tension Spring - White (1 ea.) for belts 450-750mm (18-30")	STS-W	75846	0.2
4b	Tension Spring - Silver (1 ea.) for belts 900-1350mm (36-54")	STS-S	75843	0.4
4c	Tension Spring - Black (1 ea.) for belts 1500-1800mm (60-72")	STS-B	75844	0.5
5	MST Adjusting Mechanism	MSTAM	79435	1.3
6	MST Mounting Bracket - LH (incl. bushings)	MST-MBL	79436	2.6
7	MST Mounting Bracket - RH (incl. bushings)	MST-MBR	79437	2.6
8	MST HD Clamp*	MSTCHD	79439	1.1
9	MST Bushing Kit (incl. 4 bushings)	MSTBK	79440	0.1
10	MST Guide Pole	MSTGT	79441	0.7
11	MST HD Pole Mount*	MSTPMHD	79451	3.3
12	MST Drop Brackets (2)	MSTDB	79434	12.6
13	P SS Shield	PSSS	74773	0.2
-	MST HD Spring Tensioner - White* (incl. 1 ea. items 6, 7; 2 ea. items 4a, 5, 8, 10 & 11)	MSTHD-W	79431	16.7
-	MST HD Spring Tensioner - Silver* (incl. 1 ea. items 6, 7; 2 ea. items 4b, 5, 8, 10 & 11)	MSTHD-S	79432	17.0
-	MST HD Spring Tensioner - Black* (incl. 1 ea. items 6, 7; 2 ea. items 4c, 5, 8, 10 & 11)	MSTHD-B	79433	17.3



\*Hardware Included  
Lead time: 1 working day

### MST Spring Tensioner Selection Chart

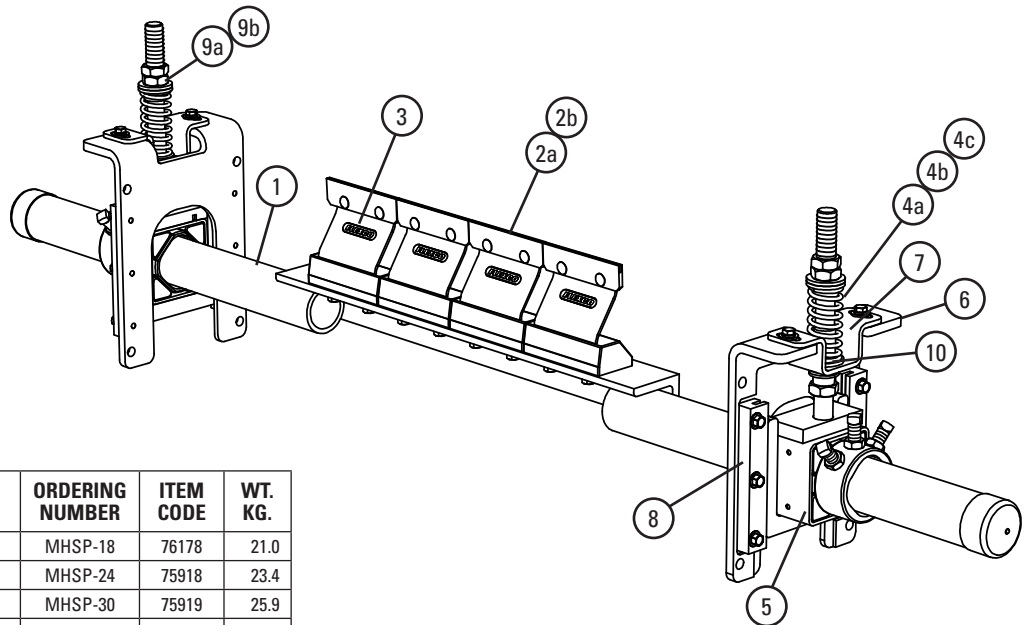
CLEANER SIZE	79431 MSTHD-W	79432 MSTHD-S	79433 MSTHD-B
FMS 450-750mm (18-30")	X		
FMS 900-1350mm (36-54")		X	
FMS 1500-1800mm (60-72")			X

U.S. Patent No. 6,823,983



# Section 9 - Replacement Parts

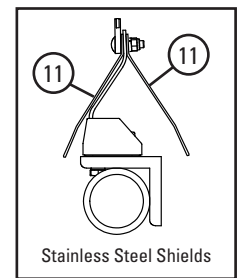
## 9.2 Replacement Parts List - FMS - SST XD Tensioner



### Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. KG.
1	450mm (18") Pole	MHSP-18	76178	21.0
	600mm (24") Pole	MHSP-24	75918	23.4
	750mm (30") Pole	MHSP-30	75919	25.9
	900mm (36") Pole	MHSP-36	75920	28.5
	1050mm (42") Pole	MHSP-42	75921	31.0
	1200mm (48") Pole	MHSP-48	75922	33.5
	1350mm (54") Pole	MHSP-54	75923	36.0
	1500mm (60") Pole	MHSP-60	75924	38.5
1800mm (72") Pole	MHSP-72	75925	43.6	
2	C-Tip*	ICT6	74535	0.3
2a	V-Tip* (for vulcanized belts only)	RSA150	73628	0.6
3	FMS Cushion Kit*	FMSC	79699	1.9
4a	Tension Spring - White (1 ea.) for belts 450-750mm (18-30")	STS-W	75846	0.2
4b	Tension Spring - Silver (1 ea.) for belts 900-1200mm (36-48")	STS-S	75843	0.4
4c	Tension Spring - Black (1 ea.) for belts 1350-2100mm (54-84")	STS-B	75844	0.5
5	HD Torsion Pole Mount* (1 ea.) (incl. HD adjusting rod, nuts & sleeve) (See 9 & 9a for bushings)	SSTHDP	77868	6.8
6	SST XD Mounting Base Kit* (incl. 1 mounting base, 2 slide guides, top hat bracket & bottom bushing)	SSTXDMK	91412	4.6
7	SST Hat Bracket (Pair)	SSTHB	79582	1.4
8	Slide Guide Kit* (incl. 2 slide guides)	STGK2	77867	0.5
9a	SST Bushing Kit - White/Silver (incl. 2 bushings)	SSTBK-W	76636	0.0
9b	SST Bushing Kit - Black (incl. 2 bushings)	SSTBK-B	76637	0.0
10	SST Lower Bushing Kit (Pair)	SSTLBK	79493	0.1
11	P Stainless Steel Shield	PSSS	74773	0.2
-	SST XD Spring Tensioner* - White (incl. 2 ea. items 4a, 5, 6, & 9a)	SSTXD-W	91408	27.5
-	SST XD Spring Tensioner* - Silver (incl. 2 ea. items 4b, 5, 6, & 9a)	SSTXD-S	91409	27.8
-	SST XD Spring Tensioner* - Black (incl. 2 ea. items 4c, 5, 6, & 9b)	SSTXD-B	91410	28.1

\*Hardware Included  
Lead time: 1 working day



### Spring Tensioner Selection Chart

CLEANER SIZE	91408 SSTXD-W	91409 SSTXD-S	91410 SSTXD-B
FMS 450-750mm (18-30")	X		
FMS 900-1200mm (36-48")		X	
FMS 1350-1800mm (54-72")			X

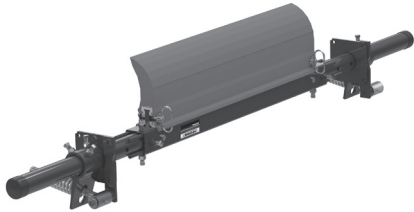


## Section 10 - Other Flexco Conveyor Products

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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 250 mm (10") 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](http://www.flexco.com) for other Flexco locations and products, or to find an authorised distributor.

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