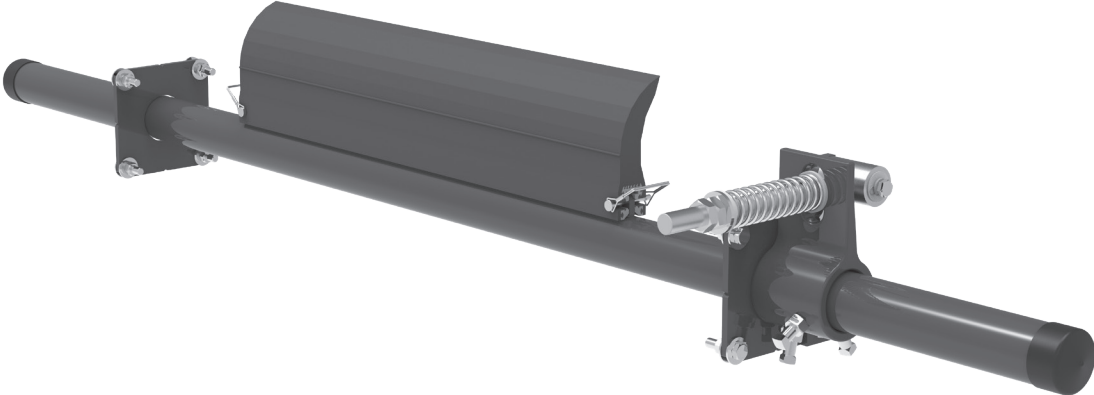


MSP Precleaner

Installation, Operation and Maintenance Manual



MSP Precleaner

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

1.1 General Introduction

We at Flexco are very pleased that you have selected a Flexco precleaner 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 visit our web site or contact 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 MSP Precleaner 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 Engineer or your Flexco Distributor.

Section 2 - Safety Considerations and Precautions

Before installing and operating the MSP Precleaner, 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
- Blade replacement
- Repairs
- Tension adjustments
- Cleaning

DANGER

It is imperative that OSHA/MSHA Lockout/Tagout (LOTO) regulations, 9 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

Conveyor chutes contain 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. Unforeseeable 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?
 - Are there obstructions that may require cleaner location adjustments?
(see 3.2 - Cleaner Location Adjustments)
 - Is the install on an open head pulley requiring mounting structure?
(see 3.3 - Optional Installation Accessories)

Section 3 - Pre-installation Checks and Options

3.2 Cleaner Location Adjustments

In certain applications it is necessary to modify the location of the precleaner pole due to permanent obstacles that obstruct the desired location. Relocating the pole location can be done easily and does not hinder the performance of the cleaner as long as the “C” dimension is maintained.

NOTE: In the following example we will be lowering the pole location in the “Y” direction, but the same method could also be applied in the “X” direction.

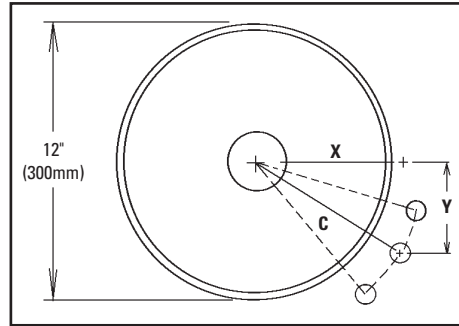
Conveyor situation:

Pulley Diameter: 12" (300mm)

X = 6 1/8" (155mm)

Y = 5 1/2" (140mm)

C = 8 1/4" (210mm)



- Determine the given location dimensions and define the change needed.** After laying out the given X & Y dimensions, determine the distance of the modification required for adequate clearance of the pole and tensioning system. (In the example we decide to lower the pole 2" (50mm) to clear the support structure).
- Write down known dimensions.** We can now determine two of the three required dimensions which will allow us to find the third. We know we cannot alter the “C” dimension, so this will remain the same. Also we are required to lower the unit in the “Y” dimension 2" (50mm), so we add 2" (50mm) to the given “Y” dimension.

X = ?

Y = 5 1/2 + 2 = 7 1/2" (140 + 50 = 190mm)

C = 8 1/4" (210mm)

- Determine final dimension.** On a flat vertical surface, using a level, draw one horizontal line and one vertical line, creating a right triangle (Fig 3a). Measure down from the intersection the determined “Y” dimension and mark (Fig 3b). With the tape measure starting at the modified “Y” mark, swing the tape across the “X” line and mark at the “C” dimension where it crosses the “X” line (Fig 3c). Measure from the intersection to the “C” intersection and this will be your new “X” dimension (Fig. 3d).

X = 3 1/2" (89mm)

Y = 7 1/2" (190mm)

C = 8 1/4" (210mm)

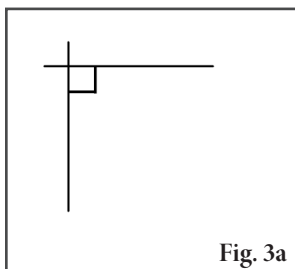


Fig. 3a

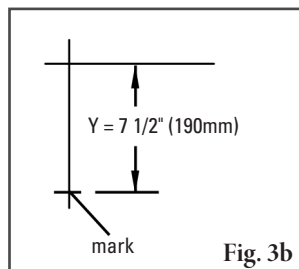


Fig. 3b

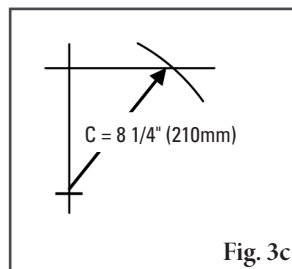


Fig. 3c

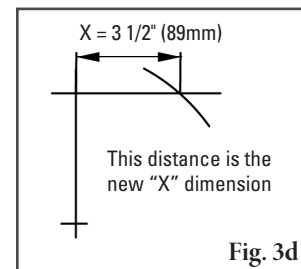



Fig. 3d

Section 3 - Pre-Installation Checks and Options

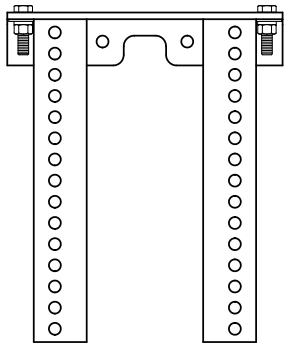
3.3 Optional Installation Accessories

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

- 
- Optional Mounting Bar Kit (incl. bolts, nuts and washers)**
(Item Code: 75830)
- For mounting precleaners on open head pulleys.
 - Weld on both sides of pulley and bolt on steel plates.
 - 1 1/2 x 16" (38 x 405mm) with (4) 5/8" (16mm) tapped holes

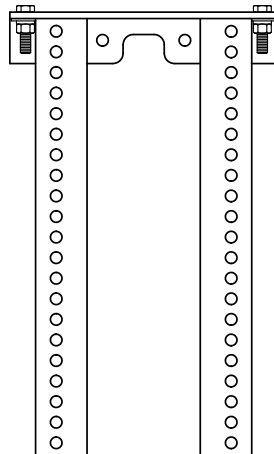


- Mounting Plate Kit (incl. 2 plates)**
(Item Code: 76537)
- For use with Mounting Bars to mount cleaners on open head pulleys.
 - 16 x 32" (400 x 800mm) with (4) 5/8" (16mm) holes



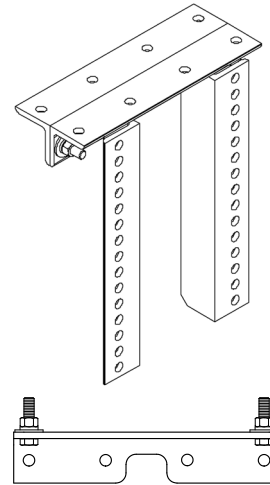
- SST Standard Mounting Bracket Kit (for SST XD Tensioner)**
(Item Code: 76071)

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



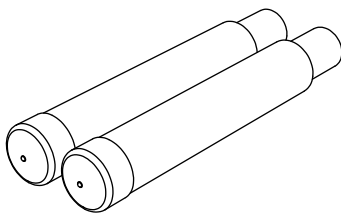
- SST Long Mounting Bracket Kit (for SST XD Tensioner)**
(Item Code: 76072)

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



- 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.
- 13" (325mm) Length



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

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

Optional Mounting Kits (includes 2 brackets/bars)

DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
Optional Mounting Bar Kit *	MMBK	75830	19.5
Mounting Plate Kit (incl. 2 plates)	MMPK	76537	140.0
Standard Mounting Bracket Kit *	SSTSMB	76071	34.3
Long Mounting Bracket Kit *	SSTLMB	76072	43.5
Optional Top Angle Kit *	SSTOTA	76073	10.5
Pole Extender Kit	MAPEK	76024	21.9

*Hardware Included
Lead time: 1 working day

Section 3 - Pre-Installation Checks and Options

3.4 Correct Blade Installation and Tensioning

For optimal cleaning efficiency and long wear life, the ConShear™ blade must be located and tensioned correctly on the belt head pulley. 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 Location:

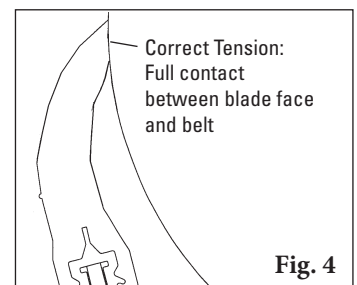
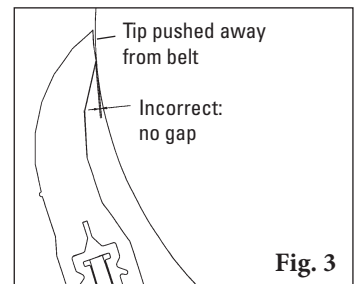
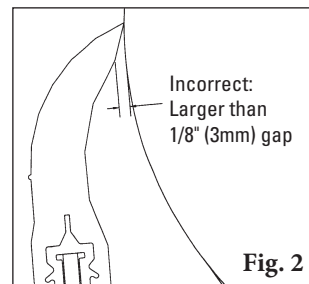
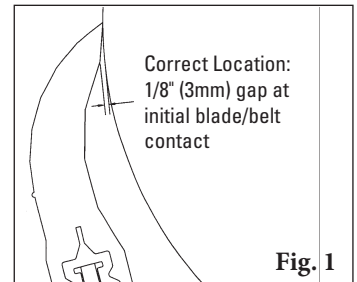
When blade contact is made against the head pulley (prior to tensioning), there should be a 1/16–1/8" (2–3mm) gap at the bottom of the blade face (Fig. 1).

Possible Problems:

- Pole location too far out - The initial blade/belt contact gap will be larger than 1/8" (3mm) (Fig. 2). If the blade is correctly tensioned it may flip through before it is fully worn. If tensioned too lightly, it will develop the "smile effect" quickly and not clean properly.
- Pole location too far in - If there is no gap at the initial blade/belt contact (Fig. 3), the tip of the blade may not be touching the belt. In this case, the blade will push away and lose its shearing (cleaning) effect. The blade may also develop a flap at the tip which may trap material.

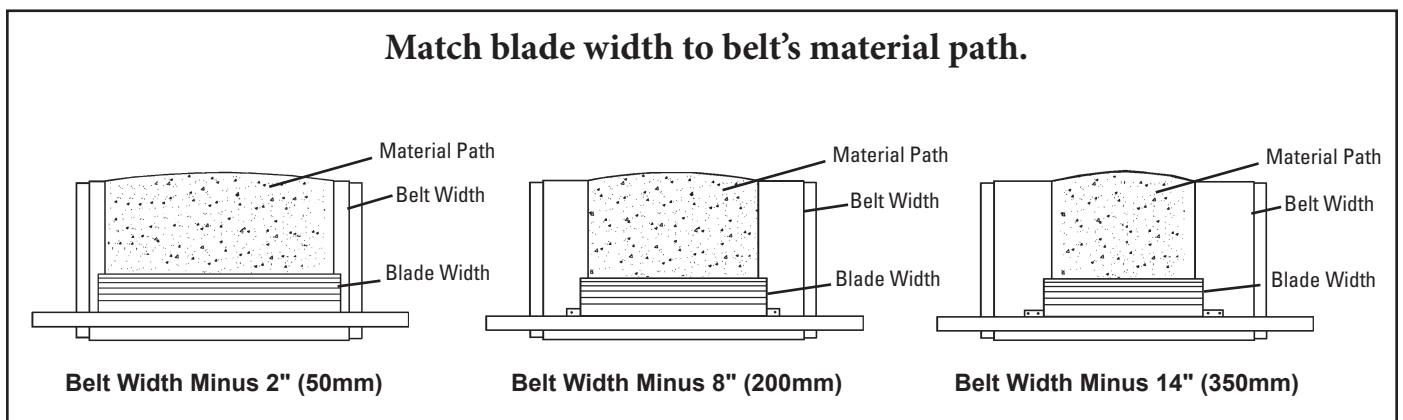
Correct Tensioning:

The blade should be tensioned until the gap is gone (Fig. 4).



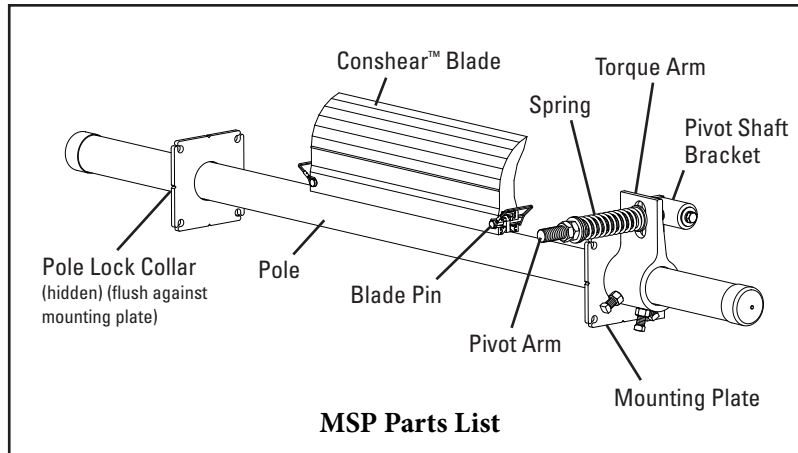
The "Material Path" Option

For optimal cleaning and reduced blade retensioning, the cleaner blade width should be sized to fit the material path of the belt. The material path is typically the center 2/3 of the belt width. Choosing a blade only slightly wider than the material path can decrease differential blade wear which reduces blade retensioning maintenance, as well as reducing the frequency of blade replacement.



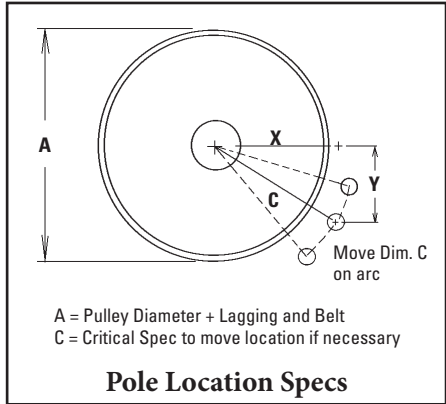
Section 4 - Installation Instructions

4.1 MSP Precleaner



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

- Tools Needed:**
- 9/16" (14mm) Wrench
 - 5/8" (16mm) Wrench
 - 3/4" (19 mm) Wrench
 - 15/16" (24mm) Wrench
 - 1-3/8" (35mm) Wrench
 - OR Large Adjustable/ Crescent Wrench
 - Torch or welder (as needed)
 - Tape Measure
 - Level
 - Marking pen or soapstone



Pole Location Chart

A		X		Y		C	
in.	mm	in.	mm	in.	mm	in.	mm
10	250	2 5/8	68	9	230	9 4/8	240
11	275	3 4/8	88	9	230	9 6/8	246
12	300	4	102	9	230	9 7/8	252
13	325	5 1/8	130	9	230	10 3/8	264
14	350	5 5/8	142	9	230	10 5/8	270
15	375	6 4/8	164	9	230	11 1/8	282
16	400	7 1/8	176	9	230	11 1/2	290
17	425	7 7/8	196	9	230	12	302
18	450	8 1/4	204	9	230	12 1/4	308
19	475	9	222	9	230	12 3/4	320
20	500	9 3/8	232	9	230	13	326
21	525	10	248	9	230	13 1/2	338
22	550	10 3/4	266	9	230	14	352
23	575	11 3/8	282	9	230	14 1/2	364
24	600	12	298	9	230	15	376
25	625	12 5/8	312	9	230	15 1/2	388
26	650	13 1/4	330	9	230	16	402
27	675	13 7/8	344	9	230	16 1/2	414
28	700	14 3/8	358	9	230	17	426
29	725	15	372	9	230	17 1/2	438
30	750	15 5/8	390	9	230	18	452
31	775	16 1/8	402	9	230	18 1/2	464
32	800	16 3/4	416	9	230	19	476
33	825	17 1/4	430	9	230	19 1/2	488
34	850	17 7/8	446	9	230	20	502
35	875	18 3/8	460	9	230	20 1/2	514
36	900	19	474	9	230	21	526
37	925	19 1/2	486	9	230	21 1/2	538
38	950	20	502	9	230	22	552
39	975	20 5/8	514	9	230	22 1/2	564
40	1000	21 1/8	528	9	230	23	576
41	1025	21 3/4	542	9	230	23 1/2	588
42	1050	22 1/4	556	9	230	24	602

1. Locate the correct pole position. Measure and determine Dimension A (see instructions above). Find Dimension A on the Pole Location Chart at right and determine Dimensions X, Y and C. Measure out horizontally from the center of the pulley shaft Dim X and mark. From that mark, draw a long vertical line down, then measure and mark Dim Y. This indicates the location of the center of the cleaner pole. Measure and mark both sides.

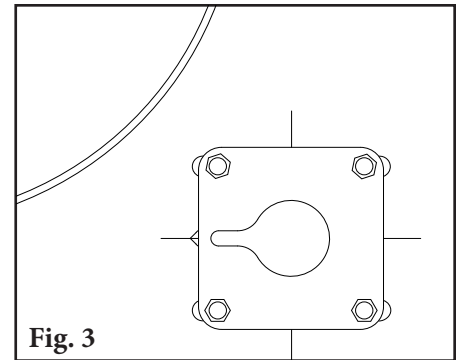
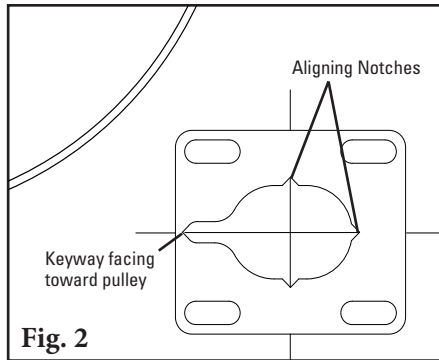
NOTE: If the location is obstructed, use Dim. C and move on an arc from the center of the pulley shaft to find an open position. Dim. C must remain constant to correctly locate the pole (see drawing above).

NOTE: For open head installs, first add mounting support materials to the structure.

Section 4 - Installation Instructions

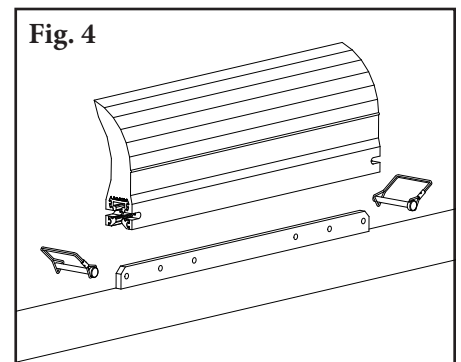
4.1 MSP Precleaner

2. **Mark and cut the mounting plate holes.** Using the mounting plate template provided in the instruction packet, position the large pole access hole on the chute, aligning the hole notches with the layout lines. Position the keyway toward the pulley. Trace the pole cutout and mounting holes (Fig. 2). Cut the holes on both sides of the chute.

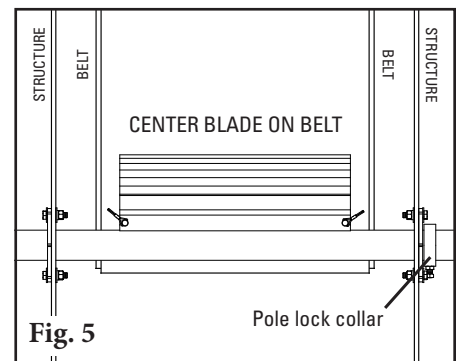


NOTE: Hole cutouts are slotted for later adjustment if needed.

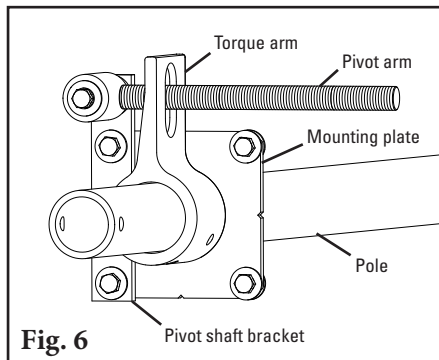
3. **Install the mounting plates.** Bolt the mounting plates to the chute with bolts provided. Center plates on the slotted holes and tighten bolts (Fig. 3).
4. **Install the pole.** Remove both blade pins and blade from the pole and insert the pole in through the mounting plates (Fig. 4).



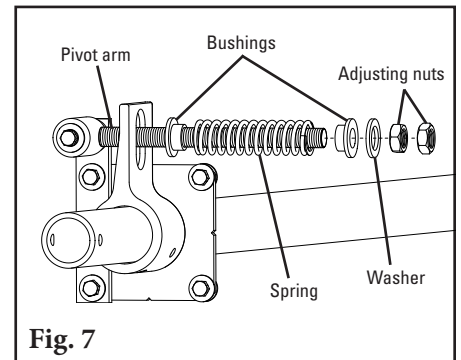
5. **Center the cleaner on the belt and lock in place.** Reinstall the blade with both blade pins. Center the blade on the belt and install the pole lock collar onto the pole (on the end opposite the end to be used for the tensioner), snugly up to the mounting plate. Rotate the blade up to the belt and check to insure that the blade is square to the pulley face (Fig. 5). If not, loosen a mounting plate on one side and adjust the plate forward or backward to square the blade to the pulley, and retighten the bolts.



6. **Install the QMT spring tensioner.** Remove the adjusting nuts and springs from the pivot rod. Insert the pivot arm through the slot in the torque arm. Slide the torque arm onto the pole end (be sure the rotation of the arm is correct to tension the blade) and rotate it until the pivot shaft bracket lines up with the desired bolt holes (Fig. 6). Remove half of the bolts, nuts, and washers from the mounting plate and reinstall them through the pivot shaft bracket and mounting plate.



7. **Reassemble the spring assembly.** Slide the spring, washer and bushings onto the pivot arm and turn the two adjusting nuts so about 1/4" (6mm) of the pivot arm is exposed above the nuts (Fig. 7).



Section 4 - Installation Instructions

4.1 MSP Precleaner

- 8. Tension the blade to the belt.** Rotate the blade until it makes contact with the belt. While holding the spring bushing flat on the torque arm, rotate the torque arm until the pivot arm is against the end of the slot nearest the pole. Tighten the locking bolts and jam nuts on the torque arm (Fig. 8).

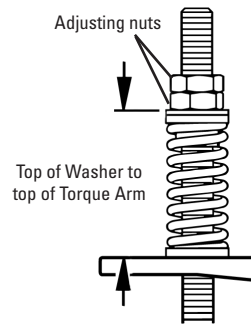
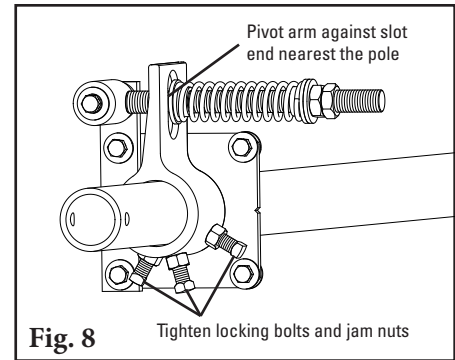
NOTE: The torque arm should be up against the mounting plate.

- 9. Set the correct blade tension.** Refer to the chart on the pivot shaft bracket for the spring length required for the blade 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. Tighten the jam nut.

- 10. Confirm the correct pole location.** After the cleaner is installed, slide the Pole Location Gauge (provided in the instruction packet) between the cleaner pole and the pulley, until it stops at a step (Fig. 9). Read the flat area where the pole is resting (Fig. 9a). This diameter should be equal to Dim A used in Step 1.

NOTE: If the diameter reading on the Pole Location Gauge does not read the same as in Step 1, check the “C” dimension and correct accordingly.

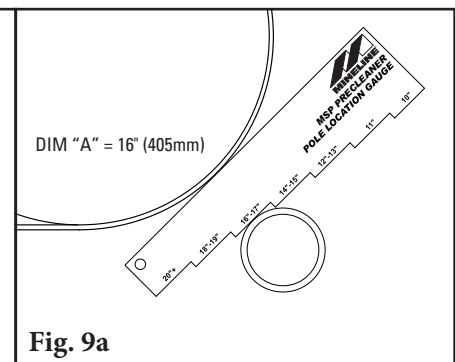
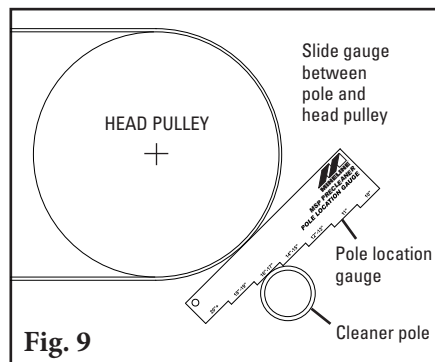
Test run the cleaner. Run the conveyor for at least 15 minutes and inspect the cleaning performance. Check the spring length for proper tensioning. Make adjustments as necessary.



OMT Spring Length Chart

Blade Width		Purple Springs		White Springs		Gold Springs	
in.	mm	in.	mm	in.	mm	in.	mm
16	400	5 1/4	131	6 1/4	159	N/A	N/A
22	550	4 3/4	121	6 1/8	156	N/A	N/A
28	700	4 1/8	105	5 7/8	149	N/A	N/A
34	850	N/A	N/A	5 3/4	146	6 1/8	156
40	1000	N/A	N/A	5 5/8	143	6 1/8	156
46	1150	N/A	N/A	5 1/2	140	6	152
52	1300	N/A	N/A	5 3/8	137	5 7/8	149
58	1450	N/A	N/A	5 1/8	130	5 7/8	149
64	1600	N/A	N/A	5	127	5 3/4	146
70	1750	N/A	N/A	4 7/8	124	5 5/8	143
76	1900	N/A	N/A	N/A	N/A	5 5/8	143
82	2050	N/A	N/A	N/A	N/A	5 1/2	140
88	2200	N/A	N/A	N/A	N/A	5 1/4	131
94	2350	N/A	N/A	N/A	N/A	5 1/8	130
100	2500	N/A	N/A	N/A	N/A	5 1/8	130
106	2650	N/A	N/A	N/A	N/A	5	127

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 MSP Precleaner 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 can determine:

- If the spring length is the correct length for optimal tensioning.
- If the belt looks clean or if there are areas that are dirty.
- If the 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 the 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.

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

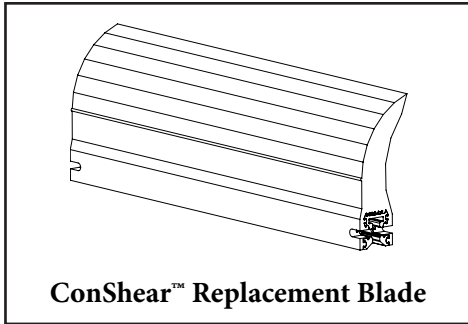
6.3 Routine Physical Inspection (every 6-8 weeks)

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.
- Check both blade pins and retaining clips for proper installation and condition. 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



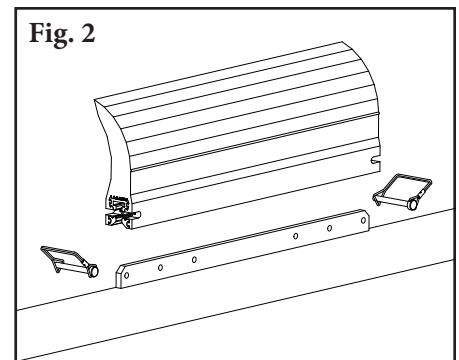
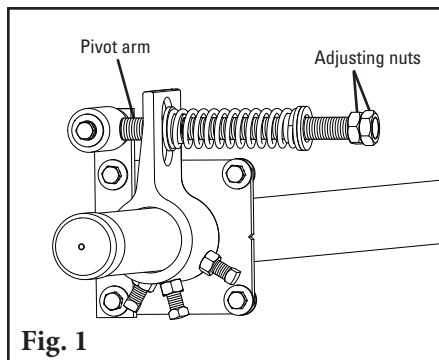
Tools Needed:

- (2) 1-1/2" (38mm) Wrench
- OR** (2) Large Adjustable/Crescent Wrench
- Tape Measure
- Wire Brush (for cleaning pole)
- Small Putty Knife (for cleaning pole)

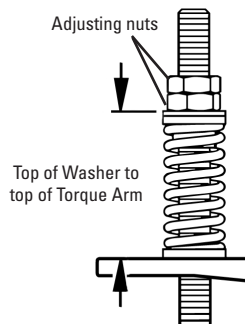
PHYSICALLY LOCK OUT AND TAG THE CONVEYOR AT THE POWER SOURCE BEFORE YOU BEGIN CLEANER INSTALLATION.

1. **Remove the tension.** Loosen the adjusting nuts until flush with the pivot arm (Fig. 1).
2. **Remove the worn blade.** Remove the blade pins to remove the blade from the pole (Fig. 2). Clean all fugitive material from the pole.

NOTE: If blade is hard to remove use a screwdriver or hammer to loosen.



3. **Install the new blade.** First, slide the new blade onto the pole, and lock it into place with the far blade pin. Then, reinstall the remaining blade pin.
4. **Reset the correct blade tension.** Refer to the chart for the spring length required for the blade width. Lightly pull the pivot arm toward the end of the torque arm slot nearest the pole and turn the adjusting nut until the required spring length is achieved. Tighten the jam nut.



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

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.

QMT Spring Length Chart

Blade Width		Purple Springs		White Springs		Gold Springs	
in.	mm	in.	mm	in.	mm	in.	mm
16	400	5 1/4	131	6 1/4	159	N/A	N/A
22	550	4 3/4	121	6 1/8	156	N/A	N/A
28	700	4 1/8	105	5 7/8	149	N/A	N/A
34	850	N/A	N/A	5 3/4	146	6 1/8	156
40	1000	N/A	N/A	5 5/8	143	6 1/8	156
46	1150	N/A	N/A	5 1/2	140	6	152
52	1300	N/A	N/A	5 3/8	137	5 7/8	149
58	1450	N/A	N/A	5 1/8	130	5 7/8	149
64	1600	N/A	N/A	5	127	5 3/4	146
70	1750	N/A	N/A	4 7/8	124	5 5/8	143
76	1900	N/A	N/A	N/A	N/A	5 5/8	143
82	2050	N/A	N/A	N/A	N/A	5 1/2	140
88	2200	N/A	N/A	N/A	N/A	5 1/4	131
94	2350	N/A	N/A	N/A	N/A	5 1/8	130
100	2500	N/A	N/A	N/A	N/A	5 1/8	130
106	2650	N/A	N/A	N/A	N/A	5	127

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: _____

Section 6 - Maintenance

6.6 Cleaner Maintenance Checklist

Site: _____ Inspected by: _____ Date: _____

Belt Cleaner: _____ Serial Number: _____

Blade Width: Belt minus 2" (50mm) Belt minus 8" (200mm) Belt minus 14" (350mm)

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) 120" (2700mm)

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

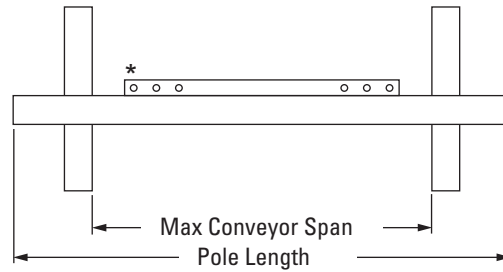
Problem	Possible Cause	Possible Solutions
Poor Cleaning Performance	Cleaner under-tensioned	Adjust to correct tension - see chart
	Cleaner over-tensioned	Adjust to correct tension - see chart
	Cleaner installed in wrong location	Verify "C" dimension, relocate to correct dimension
	Cleaner blade worn or damaged	Replace cleaner blade
Rapid Blade Wear	Tension on cleaner too high/low	Adjust to correct tension - see chart
	Cleaner not located correctly	Check cleaner location for correct dimensions
	Blade attack angle incorrect	Check cleaner location for correct dimensions
	Material too abrasive for blade	Option: if vulcanized belt, switch to alternate cleaner with metal blades
	Mechanical splice damaging blade	Repair, skive or replace splice
Center wear on blade (smile effect)	Blade wider than material path	Replace blade with width to match material path
	Tension on cleaner too high/low	Adjust to correct tension - see chart
Unusual wear or damage to blade	Mechanical splice damaging blade	Repair, skive or replace splice
	Belt damaged or ripped	Repair or replace belt
	Cleaner not correctly located	Verify "C" dimension, relocate to correct dimension
	Damage to pulley or pulley lagging	Repair or replace pulley
Vibration or noise	Cleaner not located correctly	Verify "C" dimension, relocate to correct dimension
	Blade attack angle incorrect	Verify "C" dimension, relocate to correct dimension
	Cleaner running on empty belt (dry)	Use a spray pole when the belt is empty
	Cleaner tension too high/low	Adjust to correct tension or slight adjust to diminish
	Cleaner locking bolts not secure	Check and tighten all bolts and nuts
	Cleaner not square to head pulley	Verify "C" dimension, relocate to correct dimension
	Material buildup in chute	Clean up build-up on cleaner and in chute
Cleaner being pushed away from pulley	Cleaner tension not set correctly	Ensure correct tension/increase tension slightly
	Sticky material is overburdening cleaner	Increase tension; replace with cleaner with metal tips; replace with larger size cleaner
	Cleaner not set up correctly	Confirm location dimensions are equal on both sides
	Pole too far out ("C" dimension too large)	Verify "C" dimension, relocate to correct dimension

Section 8 - Specs and CAD Drawing

8.1 Specs and Guidelines

Pole Length Specifications*

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

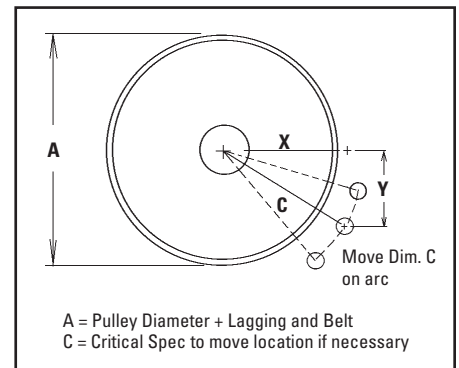
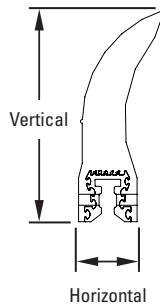


*Each pole size can be used with a blade size either belt width minus 2" (50mm), belt width minus 8" (200mm), or belt width minus 14" (350mm).

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

Clearance Guidelines for Installation

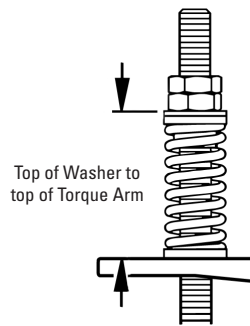
HORIZONTAL CLEARANCE REQUIRED		VERTICAL CLEARANCE REQUIRED	
in.	mm	in.	mm
4	100	10	250



QMT Spring Length Chart

Blade Width		Purple Springs		White Springs		Gold Springs	
in.	mm	in.	mm	in.	mm	in.	mm
16	400	5 1/4	131	6 1/4	159	N/A	N/A
22	550	4 3/4	121	6 1/8	156	N/A	N/A
28	700	4 1/8	105	5 7/8	149	N/A	N/A
34	850	N/A	N/A	5 3/4	146	6 1/8	156
40	1000	N/A	N/A	5 5/8	143	6 1/8	156
46	1150	N/A	N/A	5 1/2	140	6	152
52	1300	N/A	N/A	5 3/8	137	5 7/8	149
58	1450	N/A	N/A	5 1/8	130	5 7/8	149
64	1600	N/A	N/A	5	127	5 3/4	146
70	1750	N/A	N/A	4 7/8	124	5 5/8	143
76	1900	N/A	N/A	N/A	N/A	5 5/8	143
82	2050	N/A	N/A	N/A	N/A	5 1/2	140
88	2200	N/A	N/A	N/A	N/A	5 1/4	131
94	2350	N/A	N/A	N/A	N/A	5 1/8	130
100	2500	N/A	N/A	N/A	N/A	5 1/8	130
106	2650	N/A	N/A	N/A	N/A	5	127

Shading indicates preferred spring option.



Pole Location Chart

A		X		Y		C	
in.	mm	in.	mm	in.	mm	in.	mm
10	250	2 5/8	68	9	230	9 4/8	240
11	275	3 4/8	88	9	230	9 6/8	246
12	300	4	102	9	230	9 7/8	252
13	325	5 1/8	130	9	230	10 3/8	264
14	350	5 5/8	142	9	230	10 5/8	270
15	375	6 4/8	164	9	230	11 1/8	282
16	400	7 1/8	176	9	230	11 1/2	290
17	425	7 7/8	196	9	230	12	302
18	450	8 1/4	204	9	230	12 1/4	308
19	475	9	222	9	230	12 3/4	320
20	500	9 3/8	232	9	230	13	326
21	525	10	248	9	230	13 1/2	338
22	550	10 3/4	266	9	230	14	352
23	575	11 3/8	282	9	230	14 1/2	364
24	600	12	298	9	230	15	376
25	625	12 5/8	312	9	230	15 1/2	388
26	650	13 1/4	330	9	230	16	402
27	675	13 7/8	344	9	230	16 1/2	414
28	700	14 3/8	358	9	230	17	426
29	725	15	372	9	230	17 1/2	438
30	750	15 5/8	390	9	230	18	452
31	775	16 1/8	402	9	230	18 1/2	464
32	800	16 3/4	416	9	230	19	476
33	825	17 1/4	430	9	230	19 1/2	488
34	850	17 7/8	446	9	230	20	502
35	875	18 3/8	460	9	230	20 1/2	514
36	900	19	474	9	230	21	526
37	925	19 1/2	486	9	230	21 1/2	538
38	950	20	502	9	230	22	552
39	975	20 5/8	514	9	230	22 1/2	564
40	1000	21 1/8	528	9	230	23	576
41	1025	21 3/4	542	9	230	23 1/2	588
42	1050	22 1/4	556	9	230	24	602

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Specifications:

- Maximum Belt Speed700 FPM (3.5 m/s)
- Temperature Rating-30 to 180°F (-35 to 82°C)
- Minimum Pulley Diameter10" (250mm)
- Blade Height7-1/4" (185mm)
- Usable Blade Wear Length4" (100mm)
- Blade Material..... Polyurethane (proprietary blend for abrasion resistance and long wear)
- Available for Belt Widths.....24 to 84" (600 to 2100mm).
Other sizes available upon request.
- CEMA Cleaner Rating.....Class 3



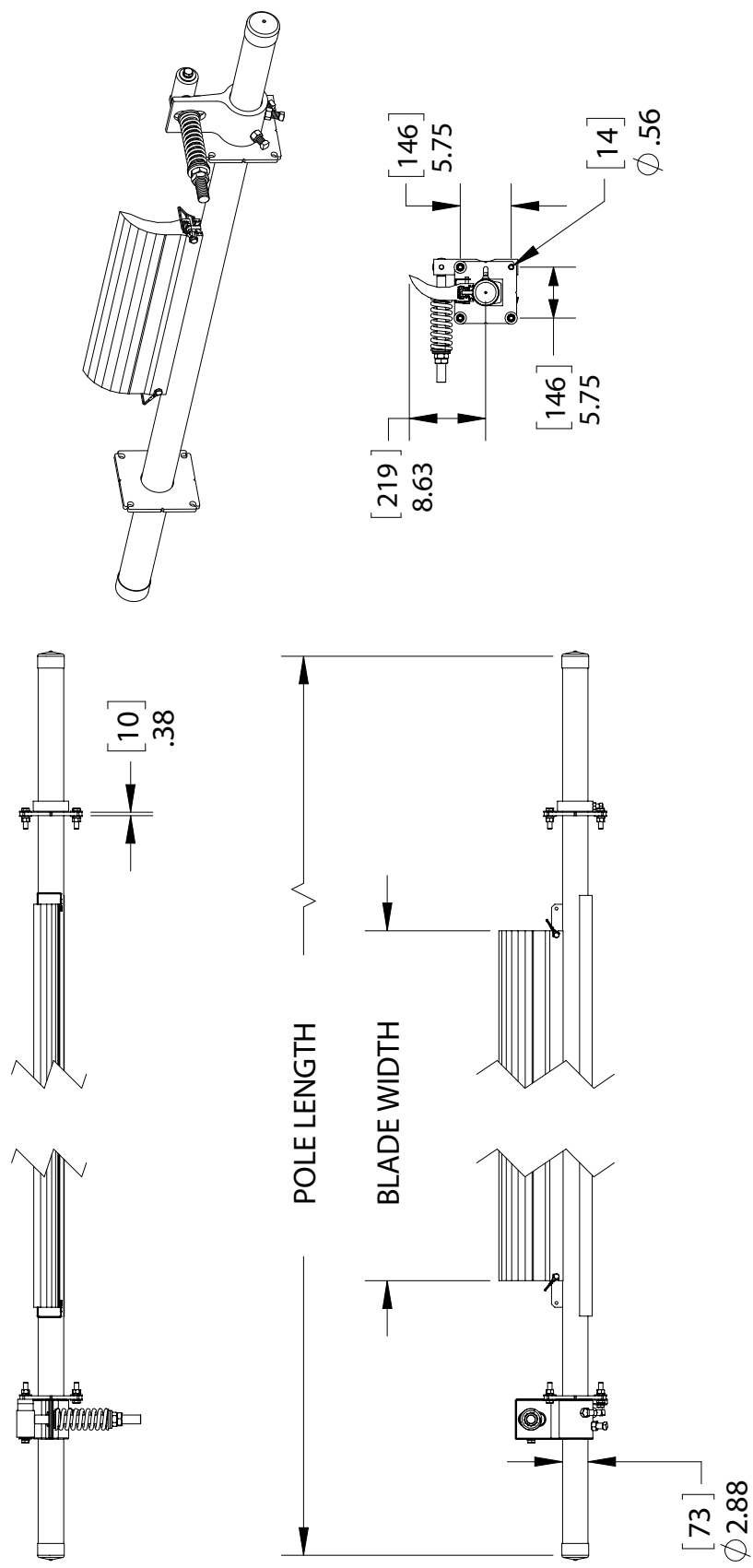
Section 8 - Specs and CAD Drawing

8.2 CAD Drawing - MSP Precleaner

BLADE WIDTH MINUS 2" (50MM)				
BELT WIDTH	BLADE WIDTH	ITEM CODE	ITEM CODE	
IN	MM	IN	MM	
24	600	22	550	75787
30	750	28	700	75788
36	900	34	850	75789
42	1050	40	1000	75790
48	1200	46	1150	75791
54	1350	52	1300	75792
60	1500	58	1450	75793
72	1800	70	1750	75794
84	2100	82	2050	76796
96	2400	94	2350	90143
108	2700	106	2650	90144

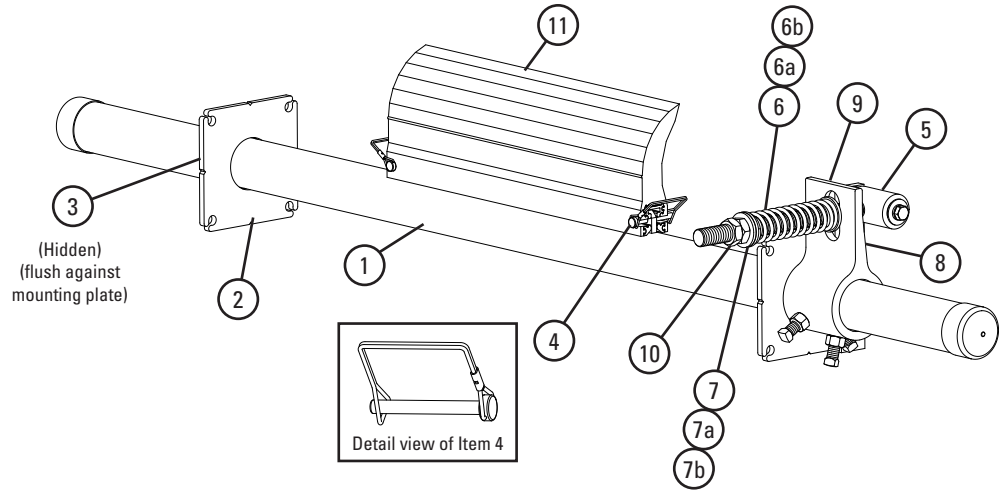
BLADE WIDTH MINUS 8" (200MM)				
BELT WIDTH	BLADE WIDTH	ITEM CODE	ITEM CODE	
IN	MM	IN	MM	
24	600	16	400	75795
30	750	22	550	75796
36	900	28	700	75797
42	1050	34	850	75798
48	1200	40	1000	75799
54	1350	46	1150	75800
60	1500	52	1300	75801
66	1650	58	1450	76693
72	1800	64	1600	75802
84	2100	76	1900	76797
96	2400	88	2200	90145
108	2700	100	2500	90146

BLADE WIDTH MINUS 14" (350MM)				
BELT WIDTH	BLADE WIDTH	ITEM CODE	ITEM CODE	
IN	MM	IN	MM	
42	1050	28	700	77658
48	1200	34	850	77659
54	1350	40	1000	77660
60	1500	46	1150	77661
72	1800	58	1450	77662
84	2100	70	1750	77663



Section 9 - Replacement Parts

9.1 Replacement Parts List



Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
1	24" (600mm) Pole	MSPP24	75803	42.5
	30" (750mm) Pole	MSPP30	75804	46.0
	36" (900mm) Pole	MSPP36	75805	50.5
	42" (1050mm) Pole	MSPP42	75806	55.5
	48" (1200mm) Pole	MSPP48	75807	60.0
	54" (1350mm) Pole	MSPP54	75808	64.0
	60" (1500mm) Pole	MSPP60	75809	67.0
	72" (1800mm) Pole	MSPP72	75810	76.0
84" (2100mm) Pole	MSPP84	76807	88.6	
2	Mounting Plate Kit* (2 ea.)	MSPMPK	75811	8.3
3	Pole Lock* (1 ea.)	MSPPL	75816	1.9
4	Blade Pin Kit* (1 ea.)	MSPBP	107852	0.1
5	Pivot Arm Kit* (1 ea.)	QMTPAK	76096	4.3
6	Tension Spring - Purple (1 ea.) for blades 10–28" (250–700mm)	QMTS-P	75845	0.6
6a	Tension Spring - White (1 ea.) for blades 34–70" (850–1750mm)	PSTS-W	75898	1.7
6b	Tension Spring - Gold (1 ea.) for blades 76–82" (1900–2050mm)	QMTS-G	76484	2.5
7	Bushing Kit - Purple (2 ea.)	QMTBK-P	76097	0.1
7a	Bushing Kit - White (2 ea.)	QMTBK-W	76098	0.2
7b	Bushing Kit - Gold (2 ea.)	QMTBK-G	76540	0.3
8	Pivot Shaft Bracket Kit* (1 ea.)	QMTPSBK	76099	4.3
9	Torsion Arm Kit* (1 ea.)	PSTA	75896	11.4
10	Jam Nut Kit QMT Tensioner	JNK-C	79893	0.3
-	QMT Spring Tensioner* - Purple (incl. 1 ea. Items 5, 6, 7, 8, & 9) for blades 10–28" (250–700mm)	QMT-P	76074	20.4
-	QMT Spring Tensioner* - White (incl. 1 ea. Items 5, 6a, 7a, 8, & 9) for blades 34–70" (850–1750mm)	QMT-W	76075	21.8
-	QMT Spring Tensioner* - Gold (incl. 1 ea. Items 5, 6b, 7b, 8, & 9) for blades 76–82" (1900–2050mm)	QMT-G	76483	23.2

*Hardware Included
Lead Time: 1 working day

Replacement ConShear™ Blades

REF	BLADE WIDTH		ORDERING NUMBER	ITEM CODE	WT. LBS.
	in.	mm			
11	10	250	CRB10	75628	4.6
	16	400	CRB16	75629	7.3
	22	550	CRB22	75630	10.1
	28	700	CRB28	75631	12.8
	34	850	CRB34	75632	15.5
	40	1000	CRB40	75633	18.3
	46	1150	CRB46	75634	21.0
	52	1300	CRB52	75635	23.8
	58	1450	CRB58	75636	26.5
	64	1600	CRB64	75775	29.2
	70	1750	CRB70	75773	32.0
	76	1900	CRB76	76940	34.7
	82	2050	CRB82	76941	37.5

Blade width for your belt width's material path: Belt Width Minus 2" (50mm), Belt Width Minus 8" (200mm), or Belt Width Minus 14" (350mm).
Lead Time: 1 working day

Spring Tensioner Selection Chart

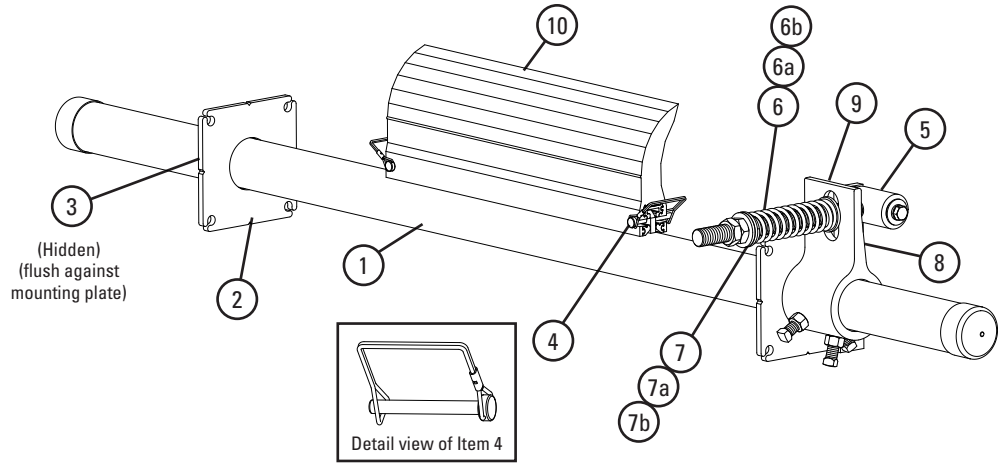
CLEANER BLADE WIDTH	76074 QMT-P	76075 QMT-W	76843 QMT-G
ConShear™ 10–28" (250–700mm)	X		
ConShear™ 34–70" (850–1750mm)		X	
ConShear™ 76–82" (1900–2050mm)			X

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Section 9 - Replacement Parts

9.2 Replacement Parts List - Stainless Steel



Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
1	24" (600mm) SS Pole	MSPP24-S/S	77472	42.5
	30" (750mm) SS Pole	MSPP30-S/S	77473	46.0
	36" (900mm) SS Pole	MSPP36-S/S	77474	50.5
	42" (1050mm) SS Pole	MSPP42-S/S	77475	55.5
	48" (1200mm) SS Pole	MSPP48-S/S	77476	60.0
	54" (1350mm) SS Pole	MSPP54-S/S	77477	64.0
	60" (1500mm) SS Pole	MSPP60-S/S	77478	67.0
	72" (1800mm) SS Pole	MSPP72-S/S	77479	76.0
84" (2100mm) SS Pole	MSPP84-S/S	77480	88.6	
2	SS Mounting Plate Kit* (2 ea.)	MSPMPK-S/S	77582	8.3
3	SS Pole Lock* (1 ea.)	MSPPL-S/S	77524	1.9
4	Blade Pin Kit* (1 ea.)	MSPBP	107852	0.1
5	SS Pivot Arm Kit* (1 ea.)	QMPAK-S/S	77587	4.3
6	SS Tension Spring - Purple (1 ea.) for blades 10–28" (250–700mm)	QMTS-P-S/S	77450	0.6
6a	SS Tension Spring - White (1 ea.) for blades 34–70" (850–1750mm)	QMTS-W-S/S	77451	1.7
6b	SS Tension Spring - Gold (1 ea.) for blades 76–82" (1900–2050mm)	QMTS-G-S/S	77452	2.5
7	Bushing Kit - Purple (2 ea.)	QMTBK-P	76097	0.1
7a	Bushing Kit - White (2 ea.)	QMTBK-W	76098	0.2
7b	Bushing Kit - Gold (2 ea.)	QMTBK-G	76540	0.3
8	SS Pivot Shaft Bracket Kit* (1 ea.)	QMTPSBK-S/S	77588	4.3
9	Torsion Arm Kit* (1 ea.)	PSTA-S/S	77442	11.4
-	SS QMT Spring Tensioner* - Purple (incl. 1 ea. Items 5, 6, 7, 8, & 9) for blades 10–28" (250–700mm)	QMT-P-S/S	77584	20.4
-	SS QMT Spring Tensioner* - White (incl. 1 ea. Items 5, 6a, 7a, 8, & 9) for blades 34–70" (850–1750mm)	QMT-W-S/S	77585	21.8
-	SS QMT Spring Tensioner* - Gold (incl. 1 ea. Items 5, 6b, 7b, 8, & 9) for blades 76–82" (1900–2050mm)	QMT-G-S/S	77586	23.2

*Hardware Included
Lead Time: 1 working day

Shaded items are made to order.
Lead time: 3 weeks

Replacement ConShear™ Blades

REF	BLADE WIDTH		ORDERING NUMBER	ITEM CODE	WT. LBS.
	in.	mm			
10	10	250	CRB10	75628	4.6
	16	400	CRB16	75629	7.3
	22	550	CRB22	75630	10.1
	28	700	CRB28	75631	12.8
	34	850	CRB34	75632	15.5
	40	1000	CRB40	75633	18.3
	46	1150	CRB46	75634	21.0
	52	1300	CRB52	75635	23.8
	58	1450	CRB58	75636	26.5
	64	1600	CRB64	75775	29.2
	70	1750	CRB70	75773	32.0
	76	1900	CRB76	76940	34.7
	82	2050	CRB82	76941	37.5

Blade width for your belt width's material path: Belt Width Minus 2" (50mm),
Belt Width Minus 8" (200mm), or Belt Width Minus 14" (350mm).
Lead Time: 1 working day

Spring Tensioner Selection Chart

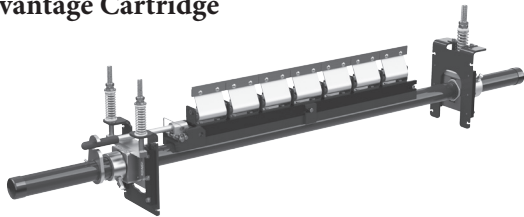
CLEANER BLADE WIDTH	77584 QMT-P-S/S	77585 QMT-W-S/S	77586 QMT-G-S/S
ConShear™ 10–28" (250–700mm)	X		
ConShear™ 34–70" (850–1750mm)		X	
ConShear™ 76–82" (1900–2050mm)			X

U.S. Patent No. D482,508S

Section 10 - Other Flexco Conveyor Products

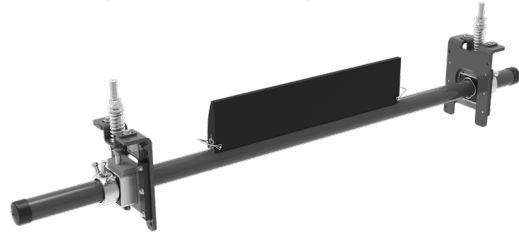
Flexco provides many conveyor products that help your conveyors to run more efficiently and safely. These components solve typical conveyor problems and improve productivity. Here is a quick overview on just a few of them:

MHS Secondary Cleaner with Service Advantage Cartridge



- An easy slide-out cartridge for service
- Cartridge design to speed up blade-change maintenance
- Patented PowerFlex™ Cushions for superior cleaning performance with Flexco mechanical splices

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

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

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

DRX Impact Beds



- Exclusive Velocity Reduction Technology™ 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

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.

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