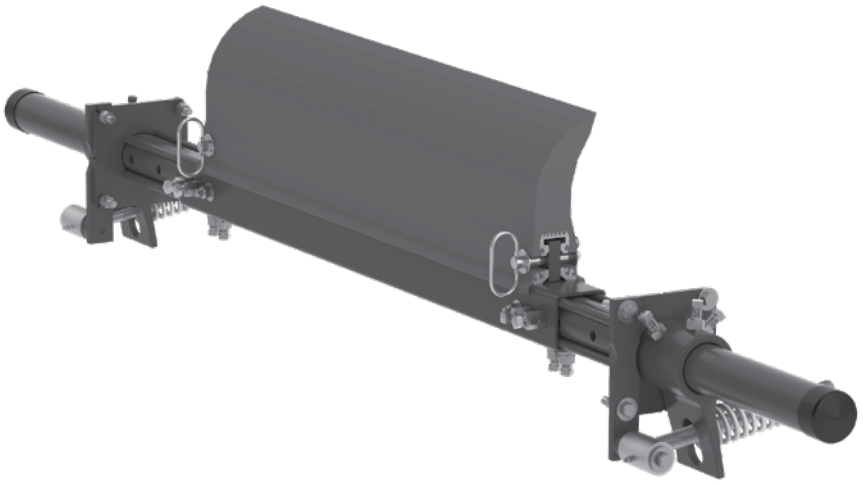
MMP Primary Cleaner

Installation, Operation and Maintenance Manual



FLEXCO

MMP Primary Cleaner

Purchase Date: _____

Purchased From: _____

Installation Date: _____

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

Table of Contents

Section 1 - Important Information

1.1 General Introduction

We at Flexco are very pleased that you have selected an MMP Belt Cleaner for your conveyor system.

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

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

If, however, you have any questions or problems that are not covered, please visit our web site or contact our Customer Service Department:

Customer Service: +27-11-608-4180

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 MMP Primary 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 Engineer or your Flexco Distributor.

Section 2 - Safety Considerations and Precautions

Before installing and operating the MMP Primary Cleaner, it is important to review and understand the following safety information.

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

2.1 Stationary Conveyors

The following activities are performed on stationary conveyors:

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

⚠ DANGER

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

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.

⚠ 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.

Section 3 - Pre-installation Checks and Options

3.1 Checklist

- Check that the cleaner size is correct for the beltline width
- Check the belt cleaner carton and make sure all the parts are included
- Review the "Tools Needed" list on the top of the installation instructions
- Check the conveyor site:
  - Will the cleaner be installed on a chute
  - Is the install on an open head pulley requiring mounting structure (see 3.3 - Optional Installation Accessories)
  - Are there obstructions that may require cleaner location adjustments (see 3.2 - Cleaner Location Adjustments)

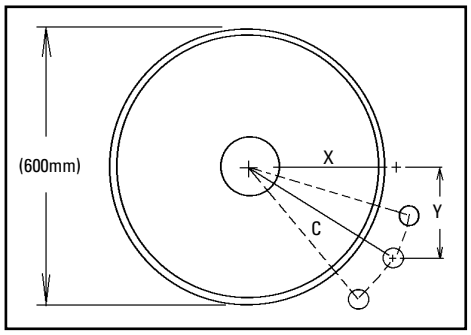
3.2 Cleaner Location Adjustments

In certain applications it is necessary to modify the location of the Primary Cleaner 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: 600mm
X = 315mm
Y = 305mmm
C = 438mm



1. **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 50mmto clear the support structure).

2. **Write down known dimensions.** We can now determine two of the three required dimension 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 50mm, so we add 50mm to the given "Y" dimension.
   X = ?mm
   Y = 300 + 50 = 350mm
   C = 441mm

3. **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 = 260mm
   Y = 350mm
   C = 441mm

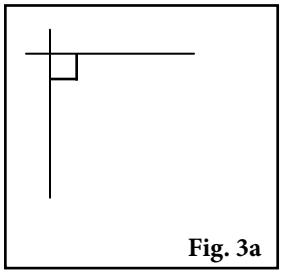


Fig. 3a

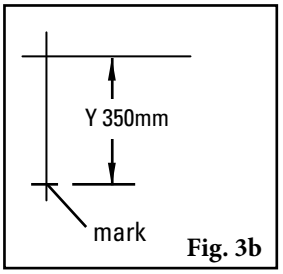


Fig. 3b

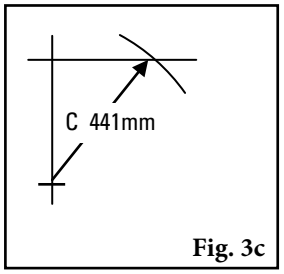


Fig. 3c

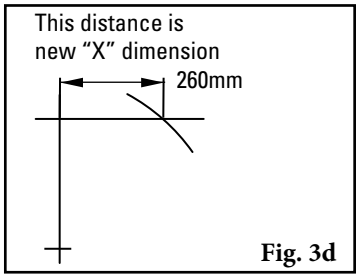
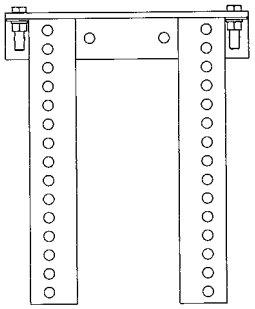


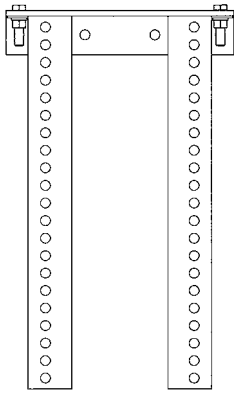
Fig. 3d

3.3 Optional Installation Accessories

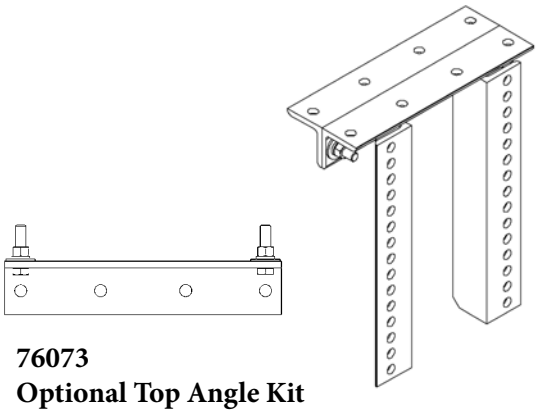
Versatile, adjustable brackets and plates that can be mounted on the conveyor structure so primary cleaners and secondary cleaners can be easily and quickly bolted into place.



76071
Standard Mounting Bracket Kit
- For most secondary cleaner installs.



76072
Long Mounting Bracket Kit
- For installations that require extra length legs.



76073
Optional Top Angle Kit
- Used with both standard and long mounting bracket kits for additional mounting options.

Optional Mounting Kits (incl. 2 brackets/bars)

Description	Ordering Number	Item Code	Wt. Kgs.
Standard Mounting Bracket Kit*	SSTSMB	76071	15.6
Long Mounting Bracket Kit*	SSTLMB	76072	19.7
Optional Top Angle Kit*	SSTOTA	76073	4.8
Optional Mounting Bar Kit *	MMBK	75830	8.8
Mounting Plate Kit (incl. 2 plates)	MMPK	76537	63.5

*Hardware Included
Lead time: 1 working day

Specs and Notes:
- Standard brackets are 325mm W x 388mm L
- Long brackets are 325mm W x 528mm L
- Mounting bars are 38mm W x 400mm L with (4) 16-275mm tapped holes.
- Mounting plates are 400mm W x 800mm L with (4) 16mm holes.

3.4 Correct Blade Installation and Tensioning

For optimal cleaning efficiency and long wear life, the TuffShear™ 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 2mm to 3mm gap at the bottom of the blade face (Fig. 1).

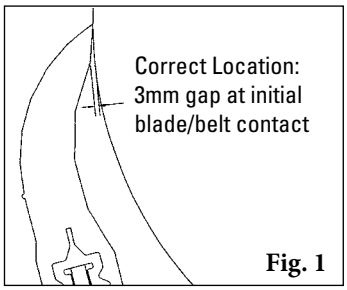


Fig. 1

Possible Problems:

- Pole location too far out - The initial blade/belt contact gap will be larger than 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.

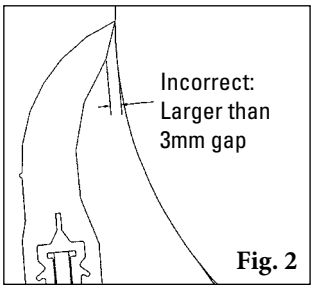


Fig. 2

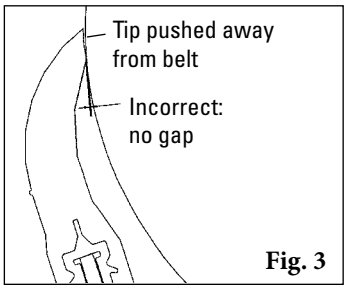


Fig. 3

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

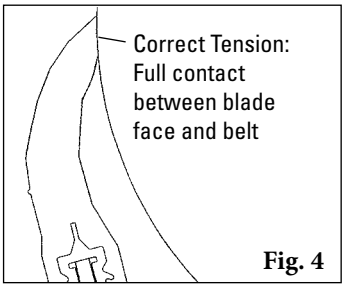
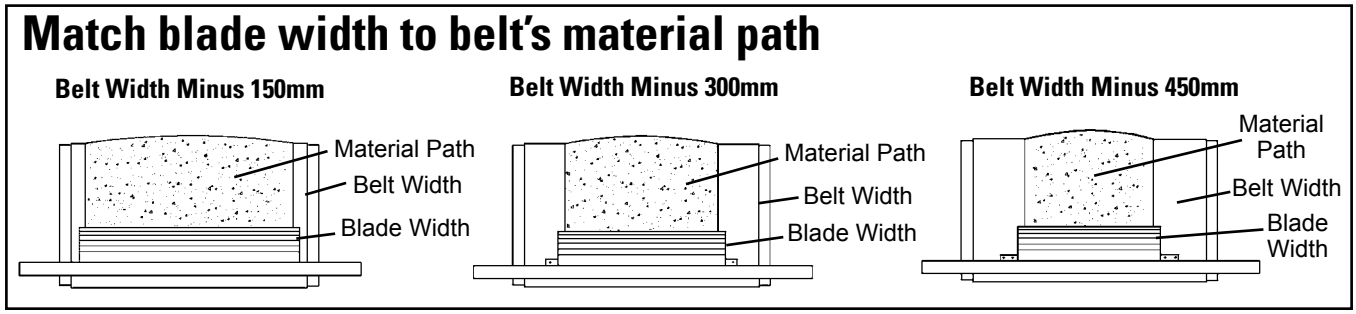


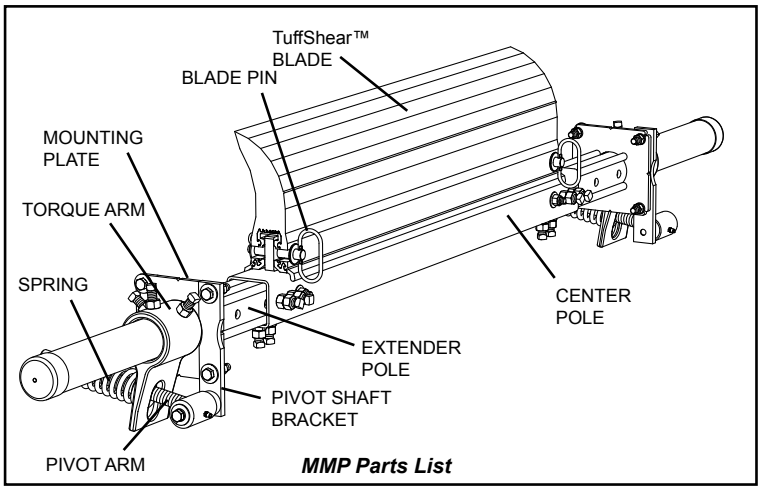
Fig. 4

The "Material Path" Option

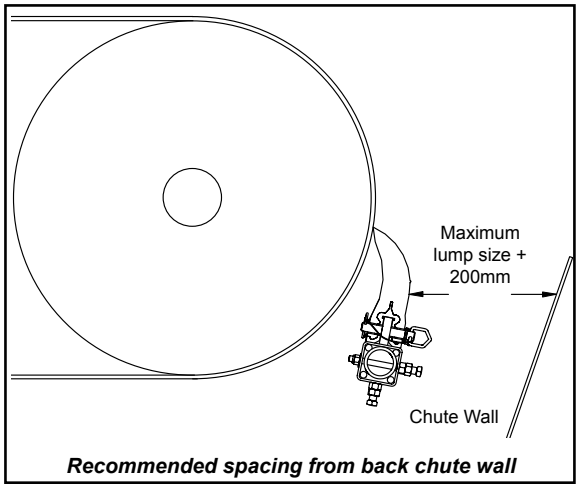
For optimal cleaning and reduced blade retensioning, the cleaner blade width should be sized to fit the material path of the belt. The material path is typically the centre 2/3 of the belt width. Choosing a blade only slightly wider than the material path can decrease differential blade wear which reduces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



Section 4 - Installation Instructions - MMP Primary Cleaner



MMP Parts List



Recommended spacing from back chute wall

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

CAUTION: Components may be heavy. Use safety-approved lifting procedures.

Tools Needed:

- Tape measure
- Level
- 19mm combination wrench
- Ratchet with 19mm socket
- Marking pen or soapstone
- Adjustable pliers
- Large adjustable wrench
- Torch or welder

1. **Find the X, Y & C specifications.** Measure the pulley diameter (including the belt and the lagging) (Fig. 1).

   Pulley Diameter ____mm; X=____mm; Y=____mm; C=____mm.

   (Adjustments can be made to the X & Y coordinates to move away from obstacles as long as the C dimension remains constant. See Section 3.2.)

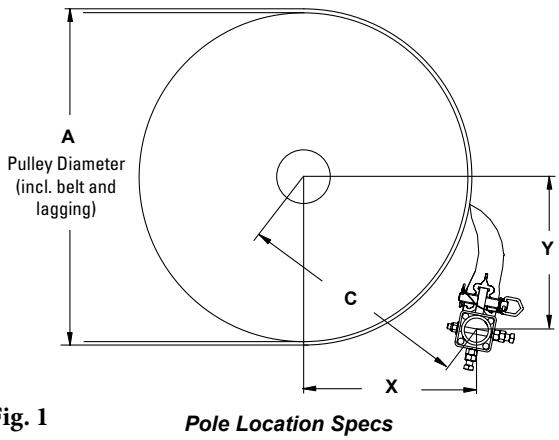


Fig. 1 ***Pole Location Specs***

X & Y Chart for Pole Location

A	X	Y	C
400	204	305	367
425	218	305	375
450	231	305	383
475	244	305	390
500	259	305	400
525	274	305	410
550	288	305	419
575	300	305	428
600	315	305	438
625	328	305	448
650	341	305	457
675	353	305	467
700	366	305	476
725	380	305	487
750	392	305	497
775	403	305	506
800	417	305	517
825	432	305	528
850	444	305	539
875	457	305	549
900	469	305	559
925	483	305	571
950	496	305	582
975	508	305	592
1000	521	305	604
1025	533	305	614
1050	550	305	629
1075	569	305	646
1100	584	305	659
1125	601	305	674
1150	615	305	686
1175	632	305	702
1200	645	305	714

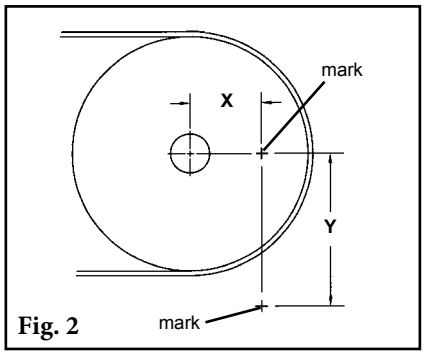


Fig. 2

2. **Lay out the dimensions on the chute wall.** Measure out the X dimension horizontally from the centre of the pulley shaft and mark. (**NOTE:** It may be easier to put a level on top of the pulley shaft, draw a horizontal line and then measure down half the diameter of the shaft and make a line from the front of the shaft. Now subtract half the pulley shaft diameter from the X coordinate and measure on the line and make a mark.) Then measure down vertically the Y dimension and mark. This is the correct position for the centre of the cleaner pole (Fig. 2). Lay out and mark the same dimensions on the other side.

3. **Mark and cut the mounting base holes.** Using the mounting base template provided in the instruction packet, position the large pole hole of the template on the chute with the hole notches aligned with the layout lines. Trace the pole hole and mounting holes (Fig. 3). Each base can be mounted in any position 360° around the pole as long as the pole's centre point does not change. Cut the holes on both sides of the chute.

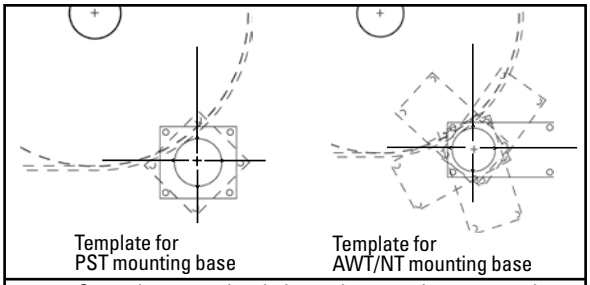


Fig. 3 Center large template hole notches on pole center mark, rotate to desired angle and trace holes

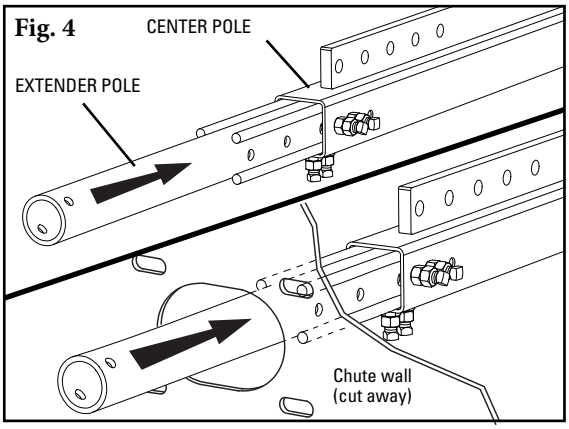


Fig. 4

4. **Assemble the extender poles to the centre pole.** Insert the extender poles through the chute holes and into the centre pole (Fig. 4). Leave the locking bolts loose.

5. **Install the mounting plates.** Position both mounting plates with the keyways toward the pulley and weld or bolt the mounting plates in place using bolts provided (Fig. 5).

6. **Centre the cleaner on the belt and lock in place.** Reinstall the blade (Fig 6a). Slide the pole until the blade is centred or covers the material path (Fig. 6b). **NOTE:** Standard blade coverage is belt width minus 150mm. If less blade coverage is required, there are additional blade hole positions available on the pole for use of belt width minus 300 x 450mm. Adjust the extender poles until the pole ends extend out past the mounting plates at least 150mm on each side for the tensioner installation (Fig. 6c). Slide the extender poles in the centre pole to align with the centre pole mounting holes and insert both bolts. Lock the four centre pole locking bolts and tighten the locking bolt jam nuts.

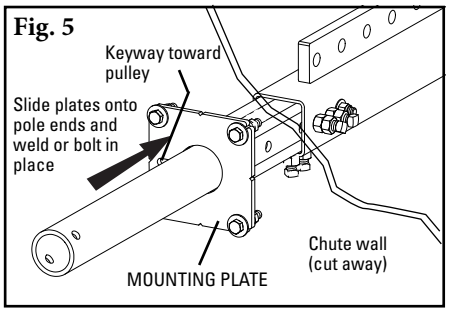


Fig. 5

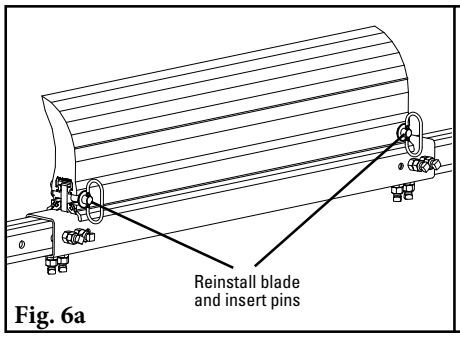


Fig. 6a

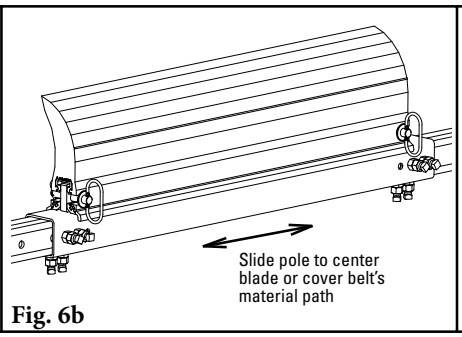


Fig. 6b

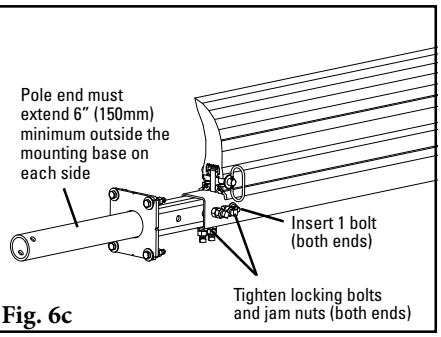


Fig. 6c

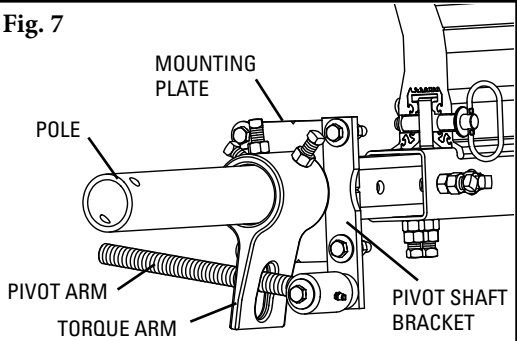
Section 4 - Installation Instructions - MMP Primary Cleaner (cont.)

Install the Tensioning System. For the QMT Spring Tensioner go to step 7S. For the PAT Tensioner proceed to step 7P.

QMT Spring Tensioner

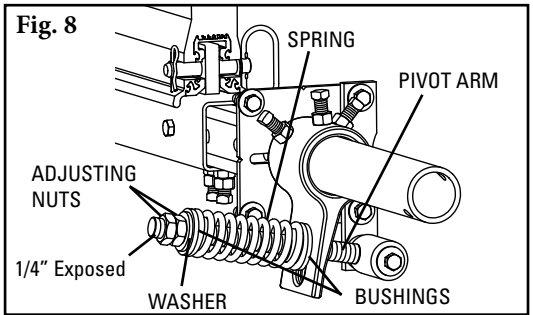
7S. Install the QMT spring tensioner. Remove the adjusting nuts and springs from the pivot rod. Insert the pivot arm through the slot in the torque arm. Slide the torque arm onto the pole end (be sure the rotation of the arm is correct to tension the blade) and rotate it until the pivot shaft bracket lines up with the desired bolt holes (Fig. 7). Remove bolts, nuts and washers from mounting plate and reinstall through pivot shaft bracket and mounting plate.

Fig. 7



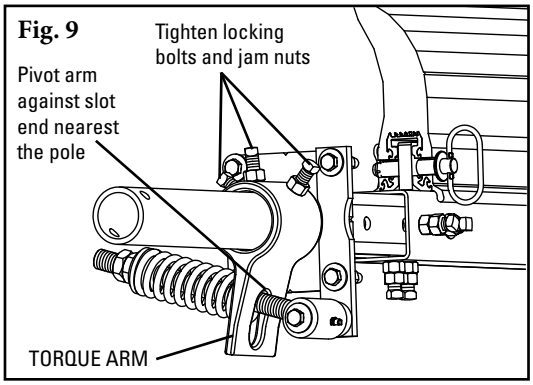
8S. Reassemble the spring assembly. Slide the spring, washer and bushings onto the pivot arm and turn the two adjusting nuts so about 6mm of the pivot arm is exposed above the nuts (Fig. 8).

Fig. 8



9S. Tension the blade to the belt. Rotate the blade until it contacts 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. 9). **NOTE:** The torque arm should be up against the mounting plate.

Fig. 9



10S. Set the correct blade tension. Refer to the chart on the pivot shaft bracket for the spring length required for the belt width. Lightly pull the pivot arm toward the end of the torque arm slot nearest the pole and turn the adjusting nuts until the required spring length is achieved (Fig. 10).

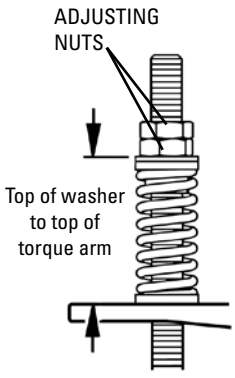


Fig. 10

Spring Length Chart

Blade Width	Purple Springs	White Springs	Gold Springs	Silver Springs
18"	4 3/8"	6"	N/A	N/A
24"	N/A	5 3/4"	6"	N/A
30"	N/A	5 1/2"	5 7/8"	N/A
36"	N/A	5 3/8"	5 3/4"	N/A
42"	N/A	5 1/8"	5 5/8"	6 1/8"
48"	N/A	5"	5 5/8"	6 1/8"
54"	N/A	4 3/4"	5 1/2"	6"
60"	N/A	4 1/2"	5 3/8"	6"
66"	N/A	N/A	5 1/4"	5 7/8"
72"	N/A	N/A	5 1/8"	5 7/8"
78"	N/A	N/A	5"	5 3/4"
84"	N/A	N/A	4 7/8"	5 3/4"
90"	N/A	N/A	N/A	5 3/4"
96"	N/A	N/A	N/A	5 5/8"
102"	N/A	N/A	N/A	5 5/8"
108"	N/A	N/A	N/A	5 1/2"
114"	N/A	N/A	N/A	5 1/2"

Shading indicates preferred spring option.

Portable Air Tensioner (PAT)

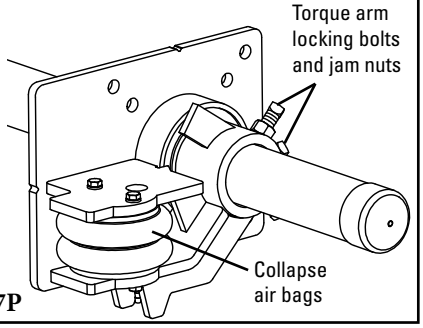


Fig. 7P

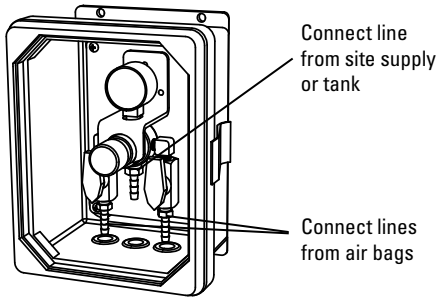


Fig. 8P PAT Control Box

NOTE: PAT Tensioners are shipped with the air bags and torque arms attached to the mounting bases.

7P. Tension the blades to the belt. Collapse both air bags (with C-clamps) and rotate the blades until they are 25mm short of contact with the belt. Tighten the torque arm locking bolts and jam nuts (Fig. 7P).

8P. Connect the supply lines and set tension pressure. With the parts supplied, attach a line to each air bag and run the lines to the outlet side of the control box (Fig. 8P). **NOTE:** Be sure lines are safely away from the belt. Connect a line from the inlet side of the box to the site's supply, or air tank. Test the connections for leaks and set the pressure per the chart on the control box (also shown to right).

Pressure Chart

Blade Width	PSI*
mm	
450	5#
600	6#
800	8#
900	9#
1050	11#
1200	13#
1350	14#
1500	16#
1650	17#
1800	19#
1950	21#
2100	22#
2250	24#
2400	25#
2550	27#
2700	28#
2850	30#

*PSI setting is based on the belt width.

9P. Test run the cleaner. Run the conveyor for at least 15 minutes and inspect cleaning performance. Make adjustments as necessary.

Section 5 - Pre-Operation Checklist and Testing

5.1 Pre-Op Checklist

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

5.2 Test Run the Conveyor

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

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

Section 6 - Maintenance

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

All safety procedures for inspection of equipment (stationary or operating) must be observed. The MMP Primary 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 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
-

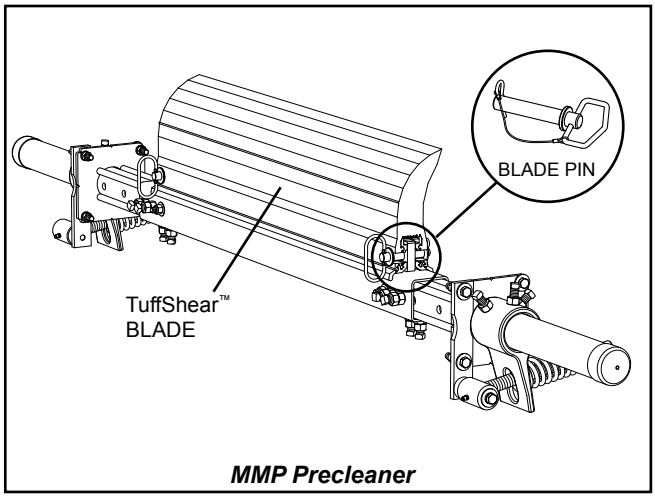
If any of the above conditions exist, a determination should be made on when the conveyor can be stopped for cleaner maintenance.

6.3 Routine Physical Inspection (every 6-8 weeks)

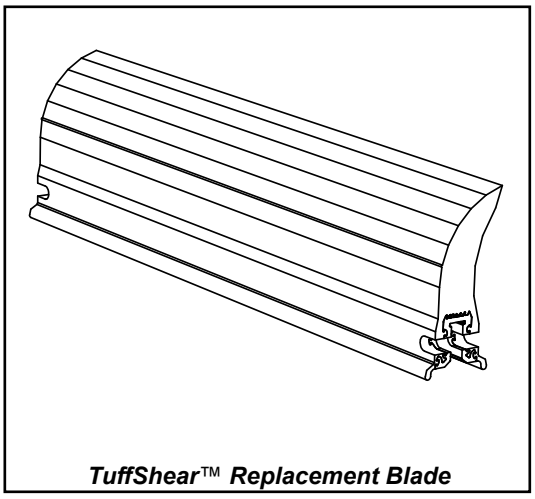
When the conveyor is not in operation and properly locked and tagged out a physical inspection of the cleaner to perform the following tasks:

- 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

6.4 Blade Replacement Instructions



MMP Precleaner



TuffShear™ Replacement Blade

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

Tools Needed:
- Tape measure
- (2) 38mm wrenches or crescent wrenches
- Wire brush (for cleaning pole)
- Small putty knife (for cleaning pole)

1. **Remove the tension.** Loosen the adjusting nuts on both sides and turn them out until they are flush with ends of the pivot arms (Fig. 1) or release pressure from air control box. This releases the tension of the blade on the belt.

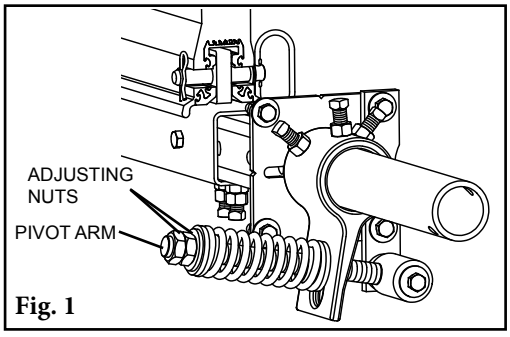
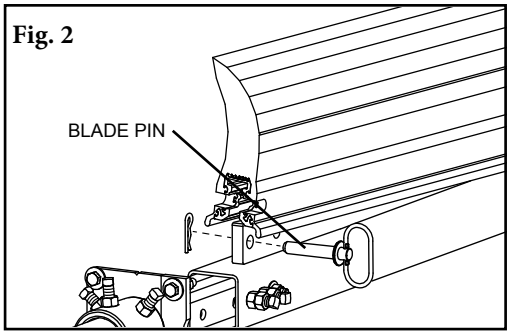


Fig. 1

2. **Remove the worn blade.** Remove one blade pin and remove the blade from the pole (Fig. 2). Clean all fugitive material from the pole.

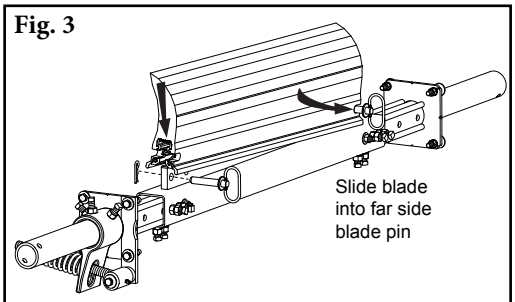
   NOTE: If blade is hard to remove use a screwdriver or hammer to loosen it and then remove.

Fig. 2



3. **Install the new blade.** Slide the new blade onto the pole, locking it into the far blade pin, then reinstall the removed blade pin, washer and clip (Fig. 3).

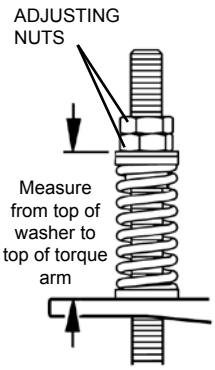
Fig. 3



4. **Reset the correct blade tension.** Refer to the chart for the spring length/PSI required for the belt width. For QMT 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 (Fig. 4).

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

Fig. 4



Spring Length Chart

Blade Width	Purple Springs	White Springs	Gold Springs	Silver Springs
18″	4 3/8″	6″	N/A	N/A
24″	N/A	5 3/4″	6″	N/A
30″	N/A	5 1/2″	5 7/8″	N/A
36″	N/A	5 3/8″	5 3/4″	N/A
42″	N/A	5 1/8″	5 5/8″	6 1/8″
48″	N/A	5″	5 5/8″	6 1/8″
54″	N/A	4 3/4″	5 1/2″	6″
60″	N/A	4 1/2″	5 3/8″	6″
66″	N/A	N/A	5 1/4″	5 7/8″
72″	N/A	N/A	5 1/8″	5 7/8″
78″	N/A	N/A	5″	5 3/4″
84″	N/A	N/A	4 7/8″	5 3/4″
90″	N/A	N/A	N/A	5 3/4″
96″	N/A	N/A	N/A	5 5/8″
102″	N/A	N/A	N/A	5 5/8″
108″	N/A	N/A	N/A	5 1/2″
114″	N/A	N/A	N/A	5 1/2″

Shading indicates preferred spring option.

Pressure Chart

Blade Width mm	PSI*
450	5#
600	6#
800	8#
900	9#
1050	11#
1200	13#
1350	14#
1500	16#
1650	17#
1800	19#
1950	21#
2100	22#
2250	24#
2400	25#
2550	27#
2700	28#
2850	30#

*PSI setting is based on the belt width.

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.

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: _____

6.6 Cleaner Maintenance Checklist

Site: _____ **Inspected by:** _____ **Date:** _____

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

Blade Width: ☐ Belt -6" -150mm ☐ Belt -12" -600mm ☐ Belt -18" -450mm ☐ Belt -24" -600mm ☐ Belt -30" -750mm ☐ Belt -36" -900mm

Beltline Information:
Beltline Number: _____ Belt Condition: _____

Belt Width: ☐ 24" 600mm ☐ 30" 750mm ☐ 36" 900mm ☐ 42" 1050mm ☐ 48" 1200mm ☐ 54" 1350mm ☐ 60" 1500mm ☐ 72" 1800mm ☐ 84" 2100mm ☐ 96" 2400mm ☐ 108" 2700mm ☐ 120" 3000mm

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: ☐ Slide 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: switch to alternate cleaner with metal blades
	Mechanical splice damaging blade	Repair, skive or replace splice
Centre 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	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

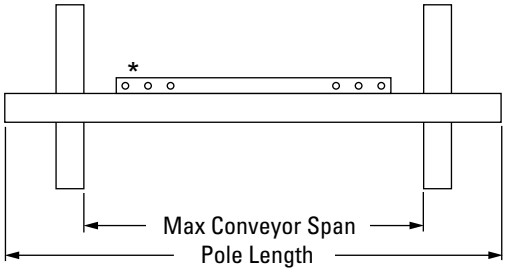
Section 8 - Specs and CAD Drawing

8.1 Specs and Guidelines - MMP

Pole Length Specifications*

Cleaner Size		Max Overall Pole Length		Center Pole Length		Maximum Conveyor Span	
in.	mm	in.	mm	in.	mm	in.	mm
24	600	78	1950	24	600	66	1650
30	750	84	2100	30	750	72	1800
36	900	90	2250	36	900	78	1950
42	1050	96	2400	42	1050	84	2100
48	1200	102	2550	48	1200	90	2250
54	1350	108	2700	54	1350	96	2400
60	1500	114	2850	60	1500	102	2550
72	1800	126	3150	72	1800	114	2850
84	2100	138	3450	84	2100	126	3150
96	2400	150	3750	96	2400	138	3450
108	2700	162	4050	108	2700	150	3750
120	3000	174	4350	120	3000	162	4050

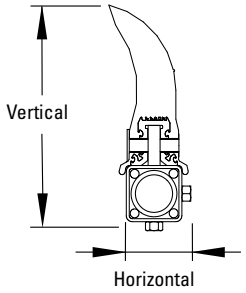
* For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 30" (750mm) of extended pole length.



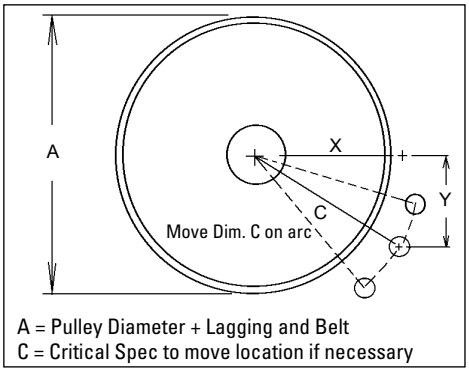
*Each pole size can be used with a blade size matched to the belt's material path (ranging from belt width -6" to belt width -36" in 6" increments). Available down to 18" blade width.

Clearance Guidelines for Installation

Horizontal Clearance Required		Vertical Clearance Required	
mm	in.	mm	in.
100	4	325	13



Pole Location Specs

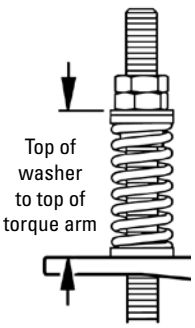


A = Pulley Diameter + Lagging and Belt
C = Critical Spec to move location if necessary

Spring Length Chart

Blade Width		Purple Springs		White Springs		Gold Springs		Silver Springs	
mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
450	18"	111	4 3/8"	152	6"	N/A	N/A	N/A	N/A
600	24"	N/A	N/A	146	5 3/4"	152	6"	N/A	N/A
750	30"	N/A	N/A	140	5 1/2"	149	5 7/8"	N/A	N/A
900	36"	N/A	N/A	137	5 3/8"	146	5 3/4"	N/A	N/A
1050	42"	N/A	N/A	130	5 1/8"	143	5 5/8"	156	6 1/8"
1200	48"	N/A	N/A	127	5"	143	5 5/8"	156	6 1/8"
1350	54"	N/A	N/A	121	4 3/4"	140	5 1/2"	152	6"
1500	60"	N/A	N/A	114	4 1/2"	137	5 3/8"	152	6"
1650	66"	N/A	N/A	N/A	N/A	133	5 1/4"	149	5 7/8"
1800	72"	N/A	N/A	N/A	N/A	130	5 1/8"	149	5 7/8"
1950	78"	N/A	N/A	N/A	N/A	127	5"	146	5 3/4"
2100	84"	N/A	N/A	N/A	N/A	124	4 7/8"	146	5 3/4"
2250	90"	N/A	N/A	N/A	N/A	N/A	N/A	146	5 3/4"
2400	96"	N/A	N/A	N/A	N/A	N/A	N/A	143	5 5/8"
2550	102"	N/A	N/A	N/A	N/A	N/A	N/A	143	5 5/8"
2700	108"	N/A	N/A	N/A	N/A	N/A	N/A	140	5 1/2"
2850	114"	N/A	N/A	N/A	N/A	N/A	N/A	140	5 1/2"

Shading indicates preferred spring option.



Pressure Chart

Blade Width	kPa*
mm	
450	34.5
600	41.4
800	55.2
900	62.1
1050	75.8
1200	89.6
1350	96.5
1500	110.3
1650	117.2
1800	131.0
1950	144.8
2100	151.7
2250	165.5
2400	172.4
2550	186.2
2700	193.1
2850	206.8

*kPa setting is based on the belt width.

Pole Location Chart

A	X	Y	C
400	204	305	367
425	218	305	375
450	231	305	383
475	244	305	390
500	259	305	400
525	274	305	410
550	288	305	419
575	300	305	428
600	315	305	438
625	328	305	448
650	341	305	457
675	353	305	467
700	366	305	476
725	380	305	487
775	392	305	497
775	403	305	506
825	417	305	517
825	432	305	528
850	444	305	539
875	457	305	549
900	469	305	559
925	483	305	571
950	496	305	582
975	508	305	592
1000	521	305	604
1025	533	305	614
1050	550	305	629
1075	569	305	646
1100	584	305	659
1125	601	305	674
1150	615	305	686
1175	632	305	702
1200	645	305	714

Specifications:

- Maximum Belt Speed 5m/s
- Temperature Rating ..... 35°C to 82°C
- Minimum Pulley Diameter 400mm
- Usable Blade Wear Length 150mm
- Blade ..... Urethane (proprietary blend for abrasion resistance and long wear)
- Available for Belt Widths ..... 600 to 3000mm. Other sizes available upon request.
- CEMA Cleaner Rating ..... Class 4

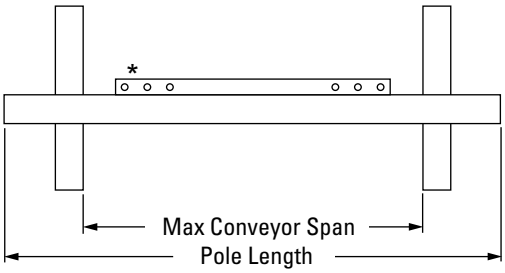
Section 8 - Specs and CAD Drawing

8.1 Specs and Guidelines - MMP UG

Pole Length Specifications*

Cleaner Size		Max Overall Pole Length		Center Pole Length		Maximum Conveyor Span	
in.	mm	in.	mm	in.	mm	in.	mm
48	1200	144	3600	54	1350	132	3300
54	1350	150	3750	60	1500	138	3450
60	1500	156	3900	66	1650	144	3600
72	1800	168	4200	78	1950	156	3900
84	2100	180	4500	90	2250	168	4200
96	2400	192	4800	102	2550	180	4500
108	2700	204	5100	114	2850	192	4800
120	3000	216	4350	126	3150	204	5100

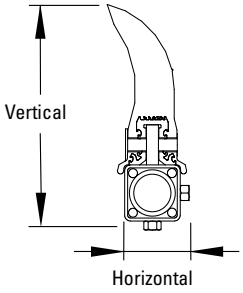
* For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 30" (750mm) of extended pole length.



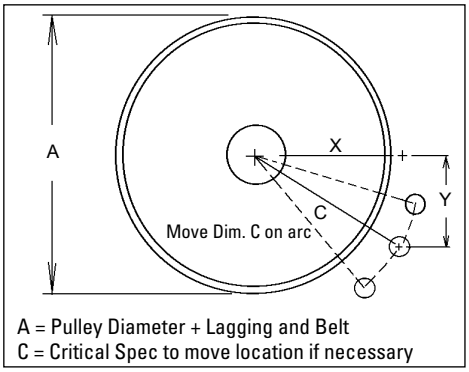
*Each pole size can be used with a blade size either belt width - 6", BW -12", BW -18", BW -24", BW -30", BW -36"

Clearance Guidelines for Installation

Horizontal Clearance Required		Vertical Clearance Required	
mm	in.	mm	in.
100	4	325	13



Pole Location Specs

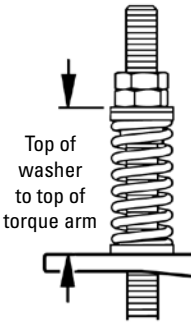


A = Pulley Diameter + Lagging and Belt
C = Critical Spec to move location if necessary

Spring Length Chart

Blade Width		Purple Springs		White Springs		Gold Springs		Silver Springs	
mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
450	18"	111	4 3/8"	152	6"	N/A	N/A	N/A	N/A
600	24"	N/A	N/A	146	5 3/4"	152	6"	N/A	N/A
750	30"	N/A	N/A	140	5 1/2"	149	5 7/8"	N/A	N/A
900	36"	N/A	N/A	137	5 3/8"	146	5 3/4"	N/A	N/A
1050	42"	N/A	N/A	130	5 1/8"	143	5 5/8"	156	6 1/8"
1200	48"	N/A	N/A	127	5"	143	5 5/8"	156	6 1/8"
1350	54"	N/A	N/A	121	4 3/4"	140	5 1/2"	152	6"
1500	60"	N/A	N/A	114	4 1/2"	137	5 3/8"	152	6"
1650	66"	N/A	N/A	N/A	N/A	133	5 1/4"	149	5 7/8"
1800	72"	N/A	N/A	N/A	N/A	130	5 1/8"	149	5 7/8"
1950	78"	N/A	N/A	N/A	N/A	127	5"	146	5 3/4"
2100	84"	N/A	N/A	N/A	N/A	124	4 7/8"	146	5 3/4"
2250	90"	N/A	N/A	N/A	N/A	N/A	N/A	146	5 3/4"
2400	96"	N/A	N/A	N/A	N/A	N/A	N/A	143	5 5/8"
2550	102"	N/A	N/A	N/A	N/A	N/A	N/A	143	5 5/8"
2700	108"	N/A	N/A	N/A	N/A	N/A	N/A	140	5 1/2"
2850	114"	N/A	N/A	N/A	N/A	N/A	N/A	140	5 1/2"

Shading indicates preferred spring option.



Pressure Chart

Blade Width	kPa*
mm	
450	34.5
600	41.4
800	55.2
900	62.1
1050	75.8
1200	89.6
1350	96.5
1500	110.3
1650	117.2
1800	131.0
1950	144.8
2100	151.7
2250	165.5
2400	172.4
2550	186.2
2700	193.1
2850	206.8

*kPa setting is based on the belt width.

Pole Location Chart

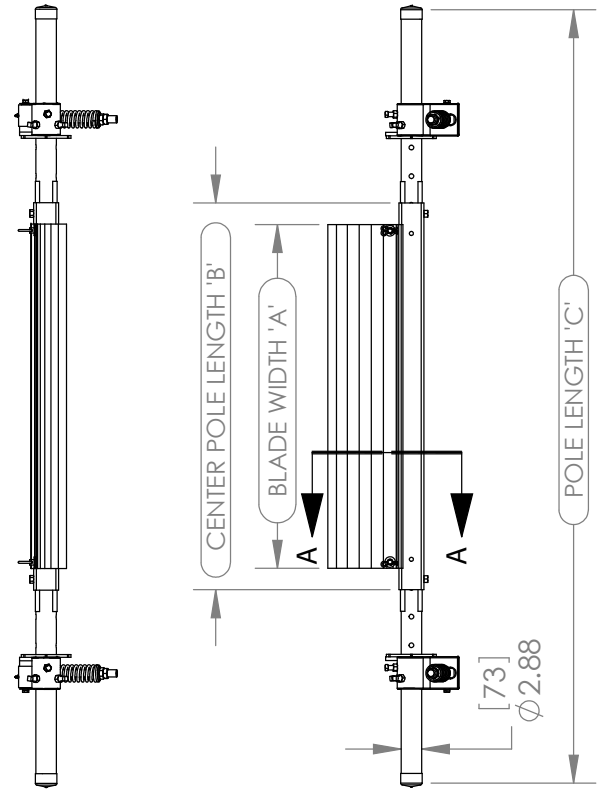
A	X	Y	C
400	204	305	367
425	218	305	375
450	231	305	383
475	244	305	390
500	259	305	400
525	274	305	410
550	288	305	419
575	300	305	428
600	315	305	438
625	328	305	448
650	341	305	457
675	353	305	467
700	366	305	476
725	380	305	487
775	392	305	497
775	403	305	506
825	417	305	517
825	432	305	528
850	444	305	539
875	457	305	549
900	469	305	559
925	483	305	571
950	496	305	582
975	508	305	592
1000	521	305	604
1025	533	305	614
1050	550	305	629
1075	569	305	646
1100	584	305	659
1125	601	305	674
1150	615	305	686
1175	632	305	702
1200	645	305	714

Specifications:

- Maximum Belt Speed 5m/s
- Temperature Rating ..... 35°C to 82°C
- Minimum Pulley Diameter 400mm
- Usable Blade Wear Length 150mm
- Blade ..... Urethane (proprietary blend for abrasion resistance and long wear)
- Available for Belt Widths ..... 1200 to 3000mm. Other sizes available upon request.
- CEMA Cleaner Rating ..... Class 4

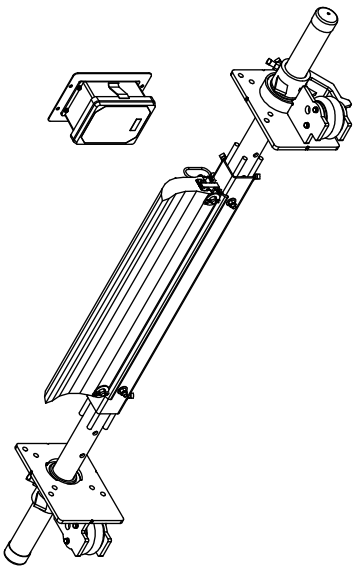
8.2 CAD Drawing - MMP with QMT

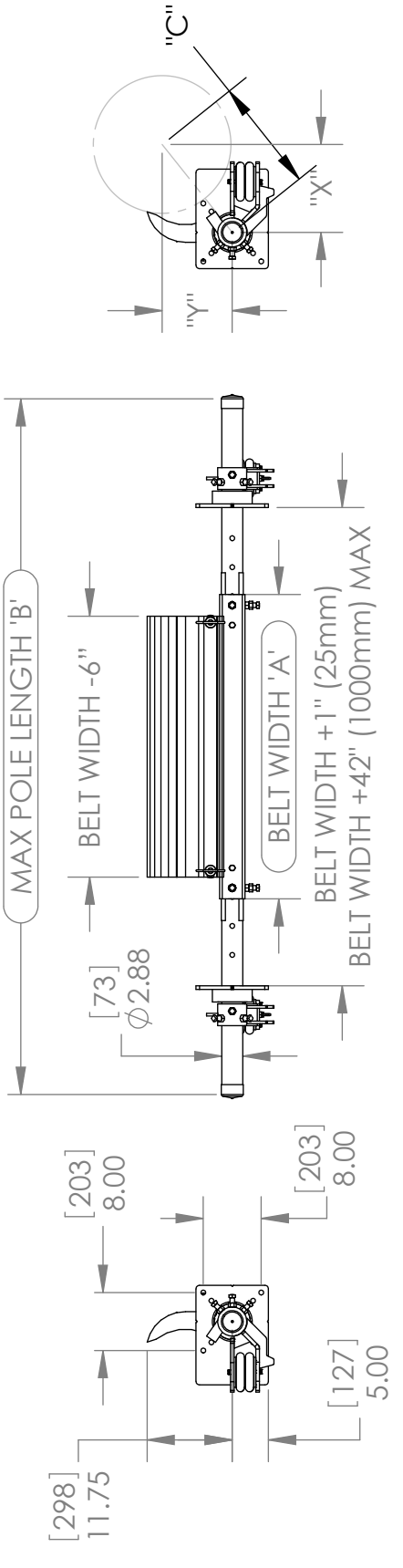
SPECIFICATIONS								MMP PRECLEANER MINUS 6" (50mm)	
BELT WIDTH		BLADE WIDTH 'A'		CENTER POLE LENGTH 'B'		OVERALL POLE LENGTH 'C'		ORDER NUMBER	ITEM CODE
(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)		
24	600	18	450	24	600	78	1950	MMP-624	76450
30	750	24	600	30	750	84	2100	MMP-630	76451
36	900	30	750	36	900	90	2250	MMP-636	76452
42	1050	36	900	42	1050	96	2400	MMP-642	76453
48	1200	42	1050	48	1200	102	2550	MMP-648	76454
54	1350	48	1200	54	1350	108	2700	MMP-654	76455
60	1500	54	1350	60	1500	114	2850	MMP-660	76456
72	1800	66	1650	72	1800	126	3150	MMP-672	76457
84	2100	78	1950	84	2100	138	3450	MMP-684	76798
96	2400	90	2250	96	2400	150	3750	MMP-696	79033



Section 8 - Specs and CAD Drawing

8.2 CAD Drawing - MMP with PAT

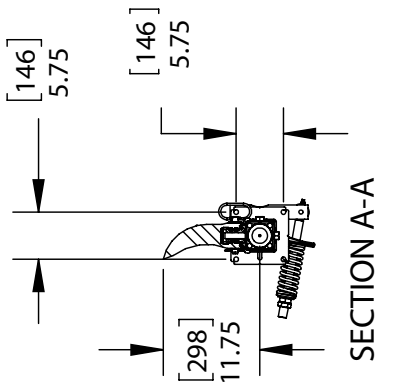


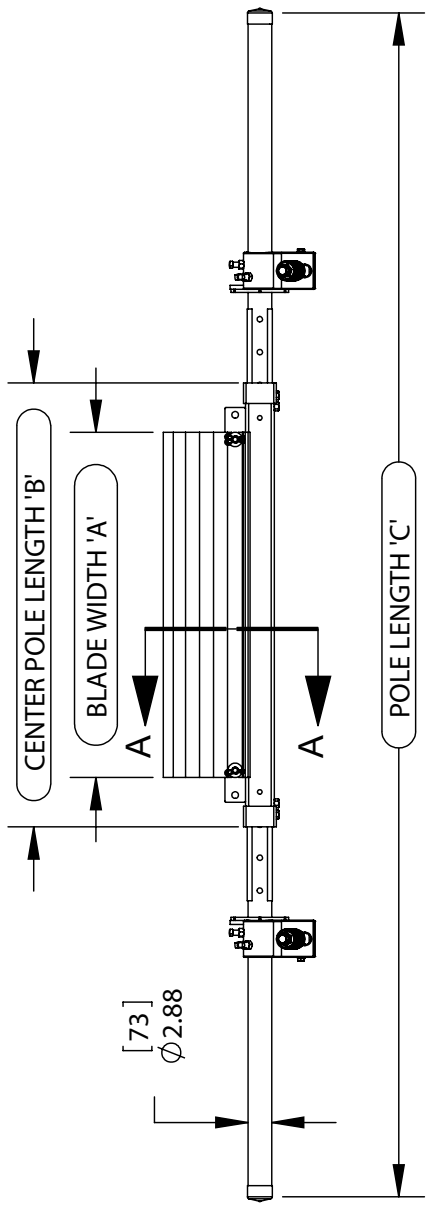


SPECIFICATION			MMP PAT PRECLEANER		ITEM NUMBER CENTER POLE		ITEM NUMBER TRB BLADE	
BELT WIDTH 'A'		MAX POLE LENGTH 'B'	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE
(in)	(mm)	(in) (mm)						
24	600	78 1950	MMP-624P	78706	MMPCP24	76458	TRB18	76485
30	750	84 2100	MMP-630P	78707	MMPCP30	76459	TRB24	76486
36	900	90 2250	MMP-636P	78708	MMPCP36	76460	TRB30	76487
42	1050	96 2400	MMP-642P	78709	MMPCP42	76461	TRB36	76488
48	1200	102 2550	MMP-648P	78710	MMPCP48	76462	TRB42	76489
54	1350	108 2700	MMP-654P	78711	MMPCP54	76463	TRB48	76490
60	1500	114 2850	MMP-660P	78712	MMPCP60	76464	TRB54	76491
72	1800	126 3150	MMP-672P	78713	MMPCP72	76465	TRB66	76493
84	2100	138 3450	MMP-684P	78714	MMPCP84	76808	TRB78	76697
96	2400	150 3750	MMP-696P	79037	MMPCP96	77722	TRB90	77048
108	2700	162 4100	MMP-6108P	90389	MMPCP108	90326	TRB102	90359
120	3000	174 4400	MMP-6120P	90390	MMPCP120	90327	TRB114	90361

Section 8 - Specs and CAD Drawing

8.2 CAD Drawing - MMP UG with QMT

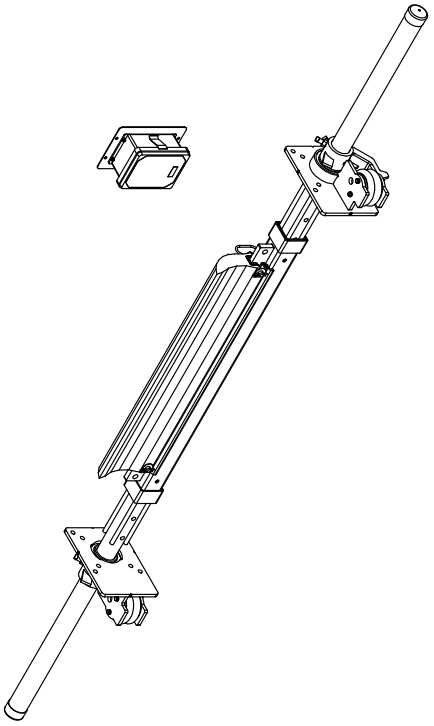




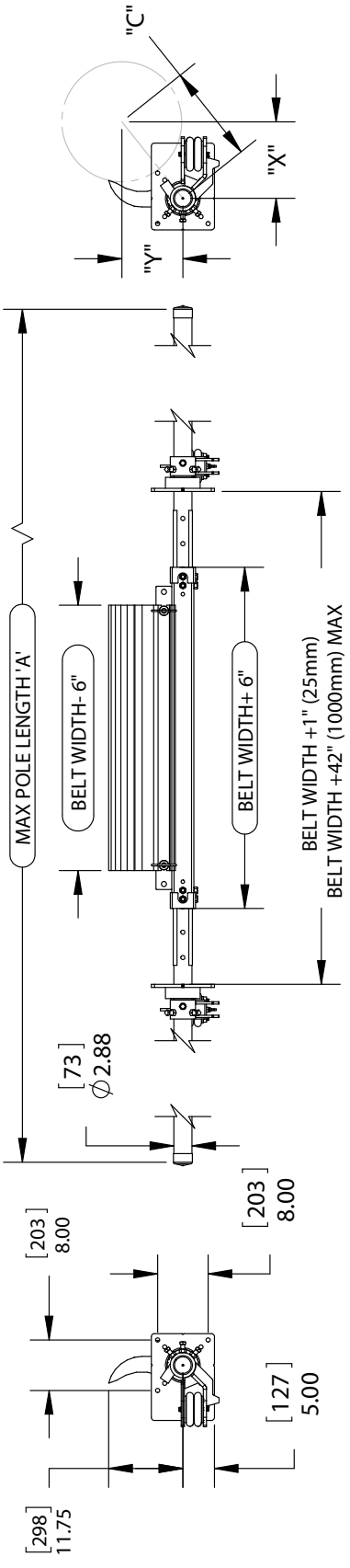
SPECIFICATIONS						MMP PRECLEANER MINUS 6" (50mm)		ITEM NUMBER 1 MMP CENTER POLE	
BELT WIDTH (in)	(mm)	BLADE WIDTH 'A' (in)	(mm)	CENTER POLE LENGTH 'B' (in)	(mm)	OVERALL POLE LENGTH 'C' (in)	(mm)	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE
48	1200	42	1050	54	1350	144	3600	MMP-648-UG	91943	MMPCP54	76463
54	1350	48	1200	60	1500	150	3750	MMP-654-UG	91944	MMPCP60	76464
60	1500	54	1350	66	1650	156	3900	MMP-660-UG	91945	MMPCP66	91937
72	1800	66	1650	78	1950	168	4200	MMP-672-UG	91946	MMPCP78	91938
84	2100	78	1950	90	2250	180	4500	MMP-684-UG	91947	MMPCP90	91939
96	2400	90	2250	102	2550	192	4800	MMP-696-UG	91948	MMPCP102	91940
108	2700	102	2550	114	2850	204	5100	MMP-6108-UG	91949	MMPCP114	91941
120	3000	114	2850	126	3150	216	5400	MMP-6120-UG	91950	MMPCP126	91942

Section 8 - Specs and CAD Drawing

8.2 CAD Drawing - MMP UG with PAT

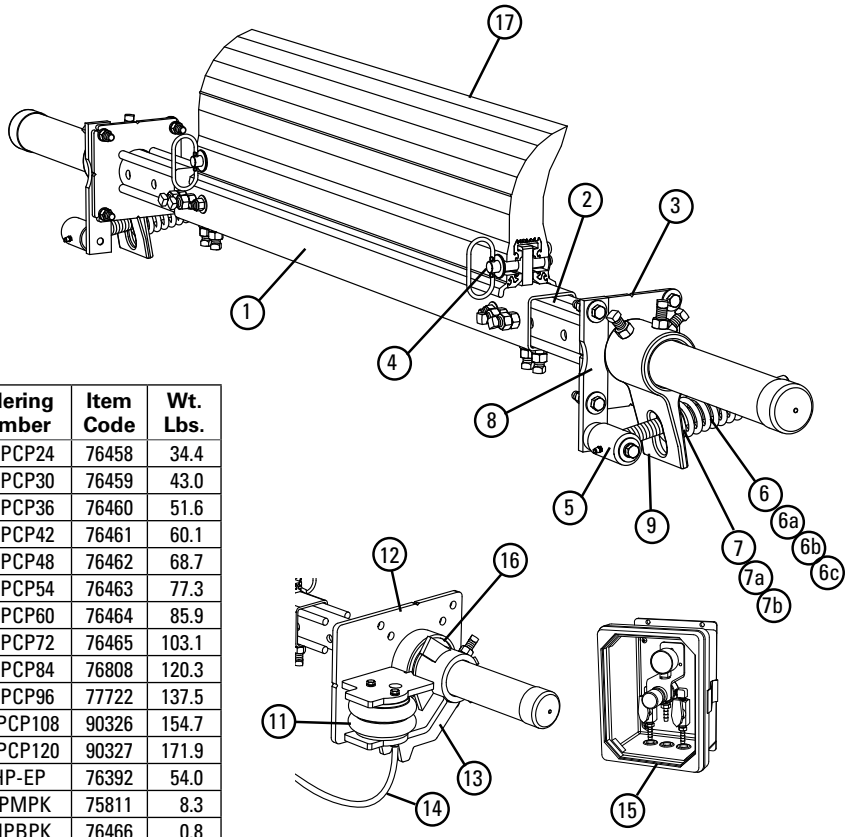


SPECIFICATION			MMP PAT PRECLEANER		ITEM NUMBER ① CENTER POLE		ITEM NUMBER ② TRB BLADE	
BELT WIDTH		MAX POLE LENGTH 'A'	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE
(in)	(mm)	(in) (mm)						
48	1200	144 3600	MMP-648P-UG	92014	MMPCP54	76463	TRB42	76489
54	1350	150 3750	MMP-654P-UG	92015	MMPCP60	76464	TRB48	76490
60	1500	156 3900	MMP-660P-UG	92016	MMPCP66	91937	TRB54	76491
72	1800	168 4200	MMP-672P-UG	92017	MMPCP78	91938	TRB66	76493
84	2100	180 4500	MMP-684P-UG	92018	MMPCP90	91939	TRB78	76697
96	2400	192 4800	MMP-696P-UG	92019	MMPCP102	91940	TRB90	77048
108	2700	204 5100	MMP-6108P-UG	92020	MMPCP114	91941	TRB102	90359
120	3000	216 5400	MMP-6120P-UG	92021	MMPCP126	91942	TRB114	90361



Section 9 - Replacement Parts

9.1 Replacement Parts List - MMP



Replacement Parts

Ref	Description	Ordering Number	Item Code	Wt. Lbs.
1	24" (600mm) Center Pole	MMPCP24	76458	34.4
	30" (750mm) Center Pole	MMPCP30	76459	43.0
	36" (900mm) Center Pole	MMPCP36	76460	51.6
	42" (1050mm) Center Pole	MMPCP42	76461	60.1
	48" (1200mm) Center Pole	MMPCP48	76462	68.7
	54" (1350mm) Center Pole	MMPCP54	76463	77.3
	60" (1500mm) Center Pole	MMPCP60	76464	85.9
	72" (1800mm) Center Pole	MMPCP72	76465	103.1
	84" (2100mm) Center Pole	MMPCP84	76808	120.3
	96" (2400mm) Center Pole	MMPCP96	77722	137.5
	108" (2700mm) Center Pole	MMPCP108	90326	154.7
	120" (3000mm) Center Pole	MMPCP120	90327	171.9
2	Extender Pole Kit (2 ea.)	MHP-EP	76392	54.0
3	Mounting Plate Kit* (2 ea.)	MSPMPK	75811	8.3
4	Blade Pin Kit* (1 ea.)	MMPBPK	76466	0.8
5	Pivot Arm Kit* (1 ea.)	QMTPAK	76096	4.3
6	Tension Spring - Purple (1 ea.) for blades 24" (600mm)	QMTS-P	75845	0.6
6a	Tension Spring - White (1 ea.) for blades 30" - 48" (750 - 1200mm)	PSTS-W	75898	1.7
6b	Tension Spring - Gold (1 ea.) for blades 54" - 78" (1350 - 1950mm)	QMTS-G	76484	2.5
6c	Tension Spring - Silver (1 ea.) for blades 84" - 114" (2100 - 2850mm)	PSTS-S	75899	3.0
7	Bushing Kit - Purple (2 ea.)	QMTBK-P	76097	0.1
7a	Bushing Kit - White & Silver (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 18" - 24" (450 - 600mm)	QMT-P	76074	20.4
-	QMT Spring Tensioner* - White (incl. 1 ea. Items 5, 6a, 7a, 8, & 9) for blades 30" - 48" (750 - 1200mm)	QMT-W	76075	21.8
-	QMT Spring Tensioner* - Gold (incl. 1 ea. Items 5, 6b, 7b, 8, & 9) for blades 54" - 78" (1350 - 1950mm)	QMT-G	76483	23.2
-	QMT Spring Tensioner* - Silver (incl. 1 ea. Items 5, 6c, 7a, 8 & 9) for blades 84" - 114" (2100 - 2850mm)	QMT-S	79039	20.3
11	Air/Water Bag (1 ea.)	AWTB	75905	3.8
12	Mounting Base (1ea.)	AWTMB	75906	22.9
13	Torque Arm* (1 ea.)	AWTA	75907	11.6
14	Hose Kit (50' of hose and 6 hose clamps)	AWTHK	75909	6.7
15	PAT Control Box 60psi	PACB60	78683	11.0
16	AWT Pole Bearing Assy (For cleaners shipped after 4/2016)	AWTPBA	90000	2.3
-	PAT Kit- AWT Tensioner w/ Control Box (includes 2 ea. Items 11,12,13,14 & 1 ea. Item 15)	PAK	78705	86.2
-	AWT Air/Water Tensioner w/o Control Box (includes 2 ea. Items 11,12, 13 & 14)	AWTNCB	76069	75.2

*Hardware Included
Lead Time: 1 working day

Replacement TuffShear Blades

Ref	Blade Width		Ordering Number	Item Code	Wt. Lbs.
	in.	mm			
17	18	450	TRB18	76485	21.0
	24	600	TRB24	76486	28.0
	30	750	TRB30	76487	35.0
	36	900	TRB36	76488	42.0
	42	1050	TRB42	76489	49.0
	48	1200	TRB48	76490	56.0
	54	1350	TRB54	76491	63.0
	60	1500	TRB60	76492	70.0
	66	1650	TRB66	76493	77.0
	72	1800	TRB72	76494	84.0
	78	1950	TRB78	76697	91.0
	84	2100	TRB84	77047	98.0
	90	2250	TRB90	77048	105.0
	96	2400	TRB96	90358	112.0
	102	2550	TRB102	90359	119.0
	108	2700	TRB108	90360	126.0
	114	2850	TRB114	90361	133.0

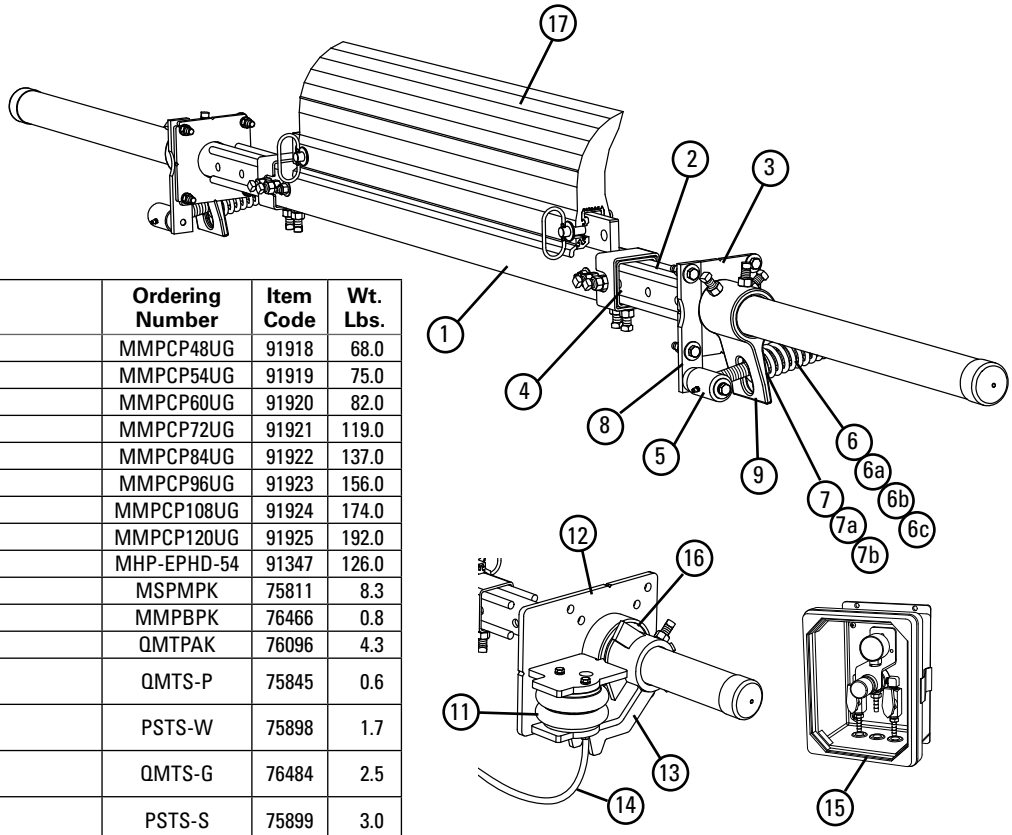
Order blade width for your belt width's material path: Belt Width Minus 6" (150mm), BW -12" (300mm), BW -18" (450mm), BW -24" (600mm), BW -30" (750mm), or BW -36" (900mm)
Lead Time: 1 working day

Spring Tensioner Selection Chart

CLEANER BLADE WIDTH	76074 QMT-P	76075 QMT-W	76483 QMT-G	79039 QMT-S
TuffShear 18" - 24" (450—600mm)	X			
TuffShear 30" - 48" (750—1200mm)		X		
TuffShear 54" - 78" (1350—1950mm)			X	
TuffShear 84" - 114" (2100—2850mm)				X

Section 9 - Replacement Parts

9.2 Replacement Parts List - MMP UG



Replacement Parts

Ref	Description	Ordering Number	Item Code	Wt. Lbs.
1	48" (1200mm) Center Pole	MMPCP48UG	91918	68.0
	54" (1350mm) Center Pole	MMPCP54UG	91919	75.0
	60" (1500mm) Center Pole	MMPCP60UG	91920	82.0
	72" (1800mm) Center Pole	MMPCP72UG	91921	119.0
	84" (2100mm) Center Pole	MMPCP84UG	91922	137.0
	96" (2400mm) Center Pole	MMPCP96UG	91923	156.0
	108" (2700mm) Center Pole	MMPCP108UG	91924	174.0
	120" (3000mm) Center Pole	MMPCP120UG	91925	192.0
2	Extender Pole HD Kit (2 ea.)	MHP-EPHD-54	91347	126.0
3	Mounting Plate Kit* (2 ea.)	MSPMPK	75811	8.3
4	Blade Pin Kit* (1 ea.)	MMPBPK	76466	0.8
5	Pivot Arm Kit* (1 ea.)	QMTPAK	76096	4.3
6	Tension Spring - Purple (1 ea.) for blades 24" (600mm)	QMTS-P	75845	0.6
6a	Tension Spring - White (1 ea.) for blades 30" - 48" (750 - 1200mm)	PSTS-W	75898	1.7
6b	Tension Spring - Gold (1 ea.) for blades 54" - 78" (1350 - 1950mm)	QMTS-G	76484	2.5
6c	Tension Spring - Silver (1 ea.) for blades 84" - 114" (2100 - 2850mm)	PSTS-S	75899	3.0
7	Bushing Kit - Purple (2 ea.)	QMTBK-P	76097	0.1
7a	Bushing Kit - White & Silver (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 18" - 24" (450 - 600mm)	QMT-P	76074	20.4
-	QMT Spring Tensioner* - White (incl. 1 ea. Items 5, 6a, 7a, 8, & 9) for blades 30" - 48" (750 - 1200mm)	QMT-W	76075	21.8
-	QMT Spring Tensioner* - Gold (incl. 1 ea. Items 5, 6b, 7b, 8, & 9) for blades 54" - 78" (1350 - 1950mm)	QMT-G	76483	23.2
-	QMT Spring Tensioner* - Silver (incl. 1 ea. Items 5, 6c, 7a, 8 & 9) for blades 84" - 114" (2100 - 2850mm)	QMT-S	79039	20.3
11	Air/Water Bag (1 ea.)	AWTB	75905	3.8
12	Mounting Base (1ea.)	AWTMB	75906	22.9
13	Torque Arm* (1 ea.)	AWTA	75907	11.6
14	Hose Kit (50' of hose and 6 hose clamps)	AWTHK	75909	6.7
15	PAT Control Box 60psi	PACB60	78683	11.0
16	AWT Pole Bearing Assy (For cleaners shipped after 4/2016)	AWTPBA	90000	2.3
-	PAT Kit- AWT Tensioner w/ Control Box (includes 2 ea. Items 11,12,13,14 & 1 ea. Item 15)	PAK	78705	86.2
-	AWT Air/Water Tensioner w/o Control Box (includes 2 ea. Items 11,12, 13 & 14)	AWTNCB	76069	75.2

*Hardware Included
Lead Time: 1 working day

Replacement TuffShear Blades

Ref	Blade Width		Ordering Number	Item Code	Wt. Lbs.
	in.	mm			
17	18	450	TRB18	76485	21.0
	24	600	TRB24	76486	28.0
	30	750	TRB30	76487	35.0
	36	900	TRB36	76488	42.0
	42	1050	TRB42	76489	49.0
	48	1200	TRB48	76490	56.0
	54	1350	TRB54	76491	63.0
	60	1500	TRB60	76492	70.0
	66	1650	TRB66	76493	77.0
	72	1800	TRB72	76494	84.0
	78	1950	TRB78	76697	91.0
	84	2100	TRB84	77047	98.0
	90	2250	TRB90	77048	105.0
	96	2400	TRB96	90358	112.0
	102	2550	TRB102	90359	119.0
	108	2700	TRB108	90360	126.0
	114	2850	TRB114	90361	133.0

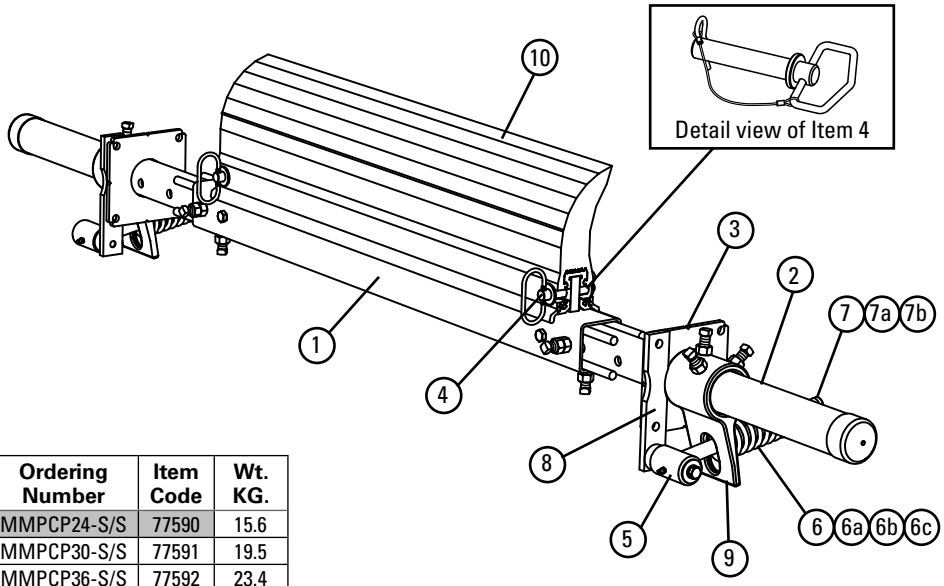
Order blade width for your belt width's material path: Belt Width Minus 6" (150mm), BW -12" (300mm), BW -18" (450mm), BW -24" (600mm), BW -30" (750mm), or BW -36" (900mm)
Lead Time: 1 working day

Spring Tensioner Selection Chart

CLEANER BLADE WIDTH	76074 QMT-P	76075 QMT-W	76483 QMT-G	79039 QMT-S
TuffShear 18" - 24" (450—600mm)	X			
TuffShear 30" - 48" (750—1200mm)		X		
TuffShear 54" - 78" (1350—1950mm)			X	
TuffShear 84" - 114" (2100—2850mm)				X

Section 9 - Replacement Parts (cont.)

9.3 Replacement Parts List - Stainless Steel



Replacement Parts

Ref	Description	Ordering Number	Item Code	Wt. KG.
1	600mm SS Center Pole	MMPCP24-S/S	77590	15.6
	750mm SS Center Pole	MMPCP30-S/S	77591	19.5
	900mm SS Center Pole	MMPCP36-S/S	77592	23.4
	1050mm SS Center Pole	MMPCP42-S/S	77593	27.3
	1200mm SS Center Pole	MMPCP48-S/S	77594	31.2
	1350mm SS Center Pole	MMPCP54-S/S	77595	35.1
	1500mm SS Center Pole	MMPCP60-S/S	77596	39.0
	1800mm SS Center Pole	MMPCP72-S/S	77597	46.8
	2100mm SS Center Pole	MMPCP84-S/S	77598	54.6
	2400mm SS Center Pole	MMPCP96-S/S	78686	62.4
2	SS Extender Pole Kit (2 ea.)	MHP-EP-S/S	77599	24.5
3	SS Mounting Plate Kit* (2 ea.)	MSPMPK-S/S	77582	3.8
4	SS Blade Pin Kit* (1 ea.)	MMPBPK-S/S	77600	.4
5	SS Pivot Arm Kit* (1 ea.)	QMTPAK-S/S	77587	2.0
6	SS Tension Spring - Purple (1 ea.) for blades 600mm	QMTS-P-S/S	77450	.3
6a	SS Tension Spring - White (1 ea.) for blades 750 - 1200mm	QMTS-W-S/S	77451	.8
6b	SS Tension Spring - Gold (1 ea.) for blades 1350 - 1950mm	QMTS-G-S/S	77452	1.1
6c	SS Tension Spring - Silver (1 ea.) for blades 2100 - 2250mm	QMTS-S-S/S	79056	1.4
7	Bushing Kit - Purple (2 ea.)	QMTBK-P	76097	.05
7a	Bushing Kit - White and Silver (2 ea.)	QMTBK-W	76098	.09
7b	Bushing Kit - Gold (2 ea.)	QMTBK-G	76540	0.1
8	SS Pivot Shaft Bracket Kit* (1 ea.)	QMTPSBK-S/S	77588	2.0
9	SS Torsion Arm Kit* (1 ea.)	PSTA-S/S	77442	5.2
-	SS QMT Spring Tensioner* - Purple (incl. 1 ea. Items 5, 6, 7, 8, & 9) for blades 450 - 600mm	QMT-P-S/S	77584	9.3
-	SS QMT Spring Tensioner* - White (incl. 1 ea. Items 5, 6a, 7a, 8, & 9) for blades 750 - 1200mm	QMT-W-S/S	77585	9.9
-	SS QMT Spring Tensioner* - Gold (incl. 1 ea. Items 5, 6b, 7b, 8, & 9) for blades 1350 - 1950mm	QMT-G-S/S	77586	10.5
-	SS QMT Spring Tensioner* - Silver (incl. 1 ea. Items 5, 6c, 7a, 8 & 9) for blades 2100 - 2250mm	QMT-S-S/S	79059	11.2

*Hardware Included
Lead Time: 1 working day

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

Replacement TuffShear Blades

Ref	Blade Width mm	Ordering Number	Item Code	Wt. Kg.
16	450	TRB18	76485	9.5
	600	TRB24	76486	12.7
	750	TRB30	76487	15.9
	900	TRB36	76488	19.1
	1050	TRB42	76489	22.2
	1200	TRB48	76490	25.4
	1350	TRB54	76491	28.6
	1500	TRB60	76492	31.8
	1650	TRB66	76493	34.9
	1800	TRB72	76494	38.1
	1950	TRB78	76697	41.3
	2100	TRB84	77047	44.5
	2250	TRB90	77048	47.6

Order blade width for your belt width's material path: Belt Width Minus 150mm, Belt Width Minus 300mm or Belt Width Minus 450mm.
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	79059 QMT-S-S/S
TuffShear 450 - 600mm	X			
TuffShear 750 - 1200mm		X		
TuffShear 1350 - 1950mm			X	
TuffShear 2100-2350mm				X

For best results use Flexco® Genuine Replacement Blades and Parts.

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:

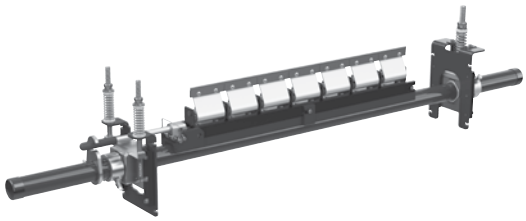
EZP1 Primary Cleaner

- Patented ConShear™ blade renews its cleaning edge as it wears
- Visual Tension Check™ for optimal blade tensioning and simple retensioning
- Quick and easy one-pin blade replacement Material Path Option™ for optimal cleaning and reduced maintenance

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

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
- Compatible with Flexco mechanical splices

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 or seize 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

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