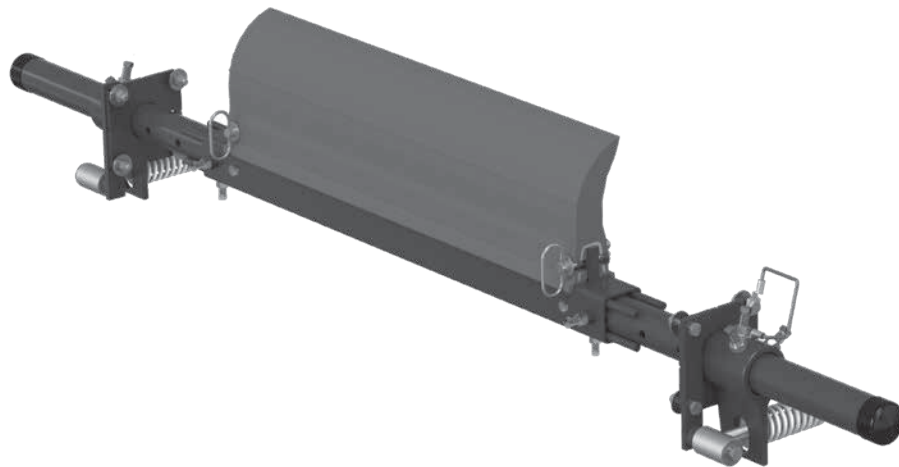


MMP Precleaner (ATEX)

Installation, Operation and Maintenance Manual



MMP 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.

Table of Contents

Section 1 - Important Information	4
1.1 General Introduction	4
1.2 User Benefits	4
1.3 Service Option	4
Section 2 - Safety Considerations and Precautions.....	5
2.1 Stationary Conveyors	5
2.2 Operating Conveyors	5
2.3 ATEX Safety Info.....	6
Section 3 - Pre-Installation Checks and Options.....	7
3.1 Checklist.....	7
3.2 Cleaner Location Adjustments	8
3.3 Optional Installation Accessories.....	9
3.4 Correct Blade Installation and Tensioning	10
Section 4 - Installation Instructions.....	11
Section 5 - Pre-Operation Checklist and Testing.....	14
5.1 Pre-Op Checklist.....	14
5.2 Test Run the Conveyor.....	14
Section 6 - Maintenance	15
6.1 New Installation Inspection.....	15
6.2 Routine Visual Inspection.....	15
6.3 Routine Physical Inspection	15
6.4 Blade Replacement Instructions.....	16
6.5 Maintenance Log.....	18
6.6 Cleaner Maintenance Checklist.....	19
Section 7 - Troubleshooting	20
Section 8 - Specs and CAD Drawings.....	21
8.1 Specs and Guidelines.....	21
8.2 CAD Drawings	22
Section 9 - Replacement Parts.....	24
Section 10 - Other Flexco Conveyor Products.....	27

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: 1-800-541-8028

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 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 MMP 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, 29 CFR 1910.147, be followed before undertaking the preceding activities. Failure to use LOTO exposes workers to uncontrolled behavior of the belt cleaner caused by movement of the conveyor belt. Severe injury or death can result.

Before working:

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

WARNING

Use Personal Protective Equipment (PPE):

- Safety eyewear
- Hardhats
- Safety footwear

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

2.2 Operating Conveyors

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

- Inspection of the cleaning performance
- Dynamic troubleshooting

DANGER

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

WARNING

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

WARNING

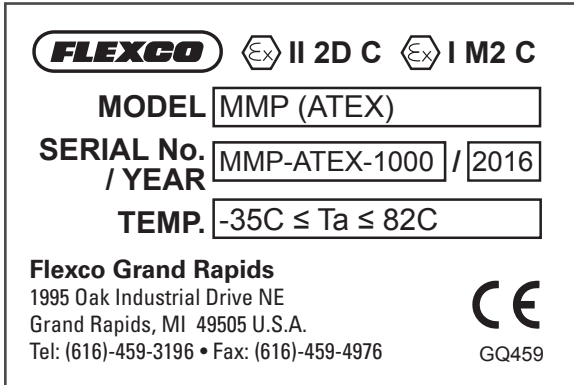
Never adjust anything on an operating cleaner. Unforeseeable belt projections and tears can catch on cleaners and cause violent movements of the cleaner structure. Flailing hardware can cause serious injury or death.

Section 2 – Safety Considerations and Precautions

2.3 ATEX Safety Info

The ATEX version of the MMP Belt Cleaner has been designed to conform to the safety standards per Directive 94/9/EC.

Marking example:



Safety Considerations:

- Welding and grinding that takes place during the installation or maintenance of the MMP should only be done when explosive atmospheres are not present. Follow mine/industrial site safety regulations when welding or grinding.
- Attach the MMP to a grounded conveyor structure. The product itself is made of conductive materials. To ensure a connection, attach grounding wire between torque arm casting and mounting plate. Use the provided lock washers to mount cleaner to the structure or weld mounting plate to structure. Testing to ensure the grounded connection is advised in applications with potential for static buildup on the cleaner.

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)

Section 3 - Pre-Installation Checks and Options (cont.)

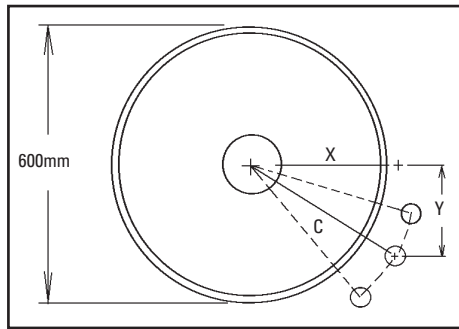
3.2 Cleaner Location Adjustments

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: 600mm
X = 320mm
Y = 305mm
C = 441mm



- 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 50mm to 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 2”, so we add 50mm to the given “Y” dimension.

$$X = ?$$

$$Y = 305 + 50 = 355\text{mm}$$

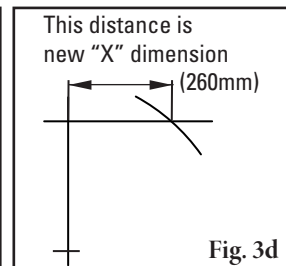
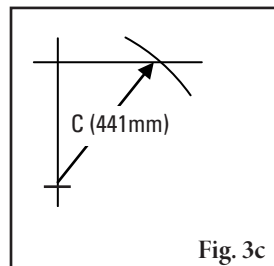
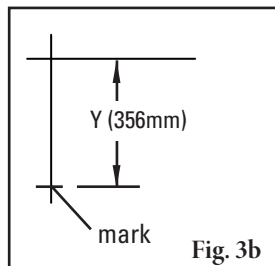
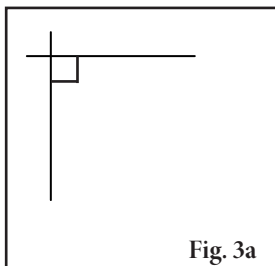
$$C = 441\text{mm}$$

- 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).

$$X = 260\text{mm}$$

$$Y = 356\text{mm}$$

$$C = 441\text{mm}$$



Section 3 - Pre-Installation Checks and Options (cont.)

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.



75830

Optional Mounting Bar Kit (with bolts, nuts and washers)

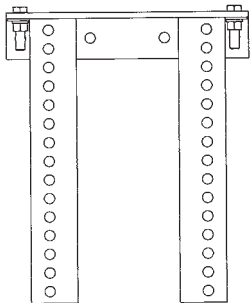
- For mounting precleaners on open head pulleys.
- Weld on both sides of pulley and bolt on steel plates.
- 38mm W x 406mm L with (4) 5/8-11 tapped holes



76537

Mounting Plate Kit (incl. 2 plates)

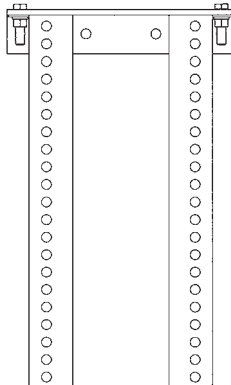
- For use with Mounting Bars to mount cleaners on open head pulleys.
- 406 x 812mm) with (4) 16mm holes



76071

Standard Mounting Bracket Kit

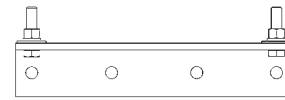
- For most secondary cleaner installs.



76072

Long Mounting Bracket Kit

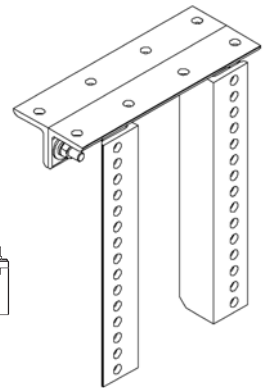
- For installations that require extra length legs.



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. Kg
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	8.9
Mounting Plate Kit (incl. 2 plates)	MMPK	76537	63.5

*Hardware Included
Lead time: 1 working day

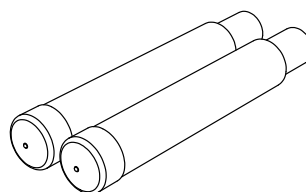
Specs and Notes:

- Standard brackets are 330mm W x 394mm L.
- Long brackets are 330mm W x 546mm L.
- Mounting bars are 38mm W x 406mm L with (4) 5/8-11 tapped holes.
- Mounting plates are 406mm W x 831mm L with (4) 16mm holes.

Pole Extender Kit (incl. 2 pole extenders)

Description	Ordering Number	Item Code	Wt. Kg
Pole Extender Kit	MAPEK	76024	9.9

Provides 750mm of extended pole length.
Lead time: 1 working day



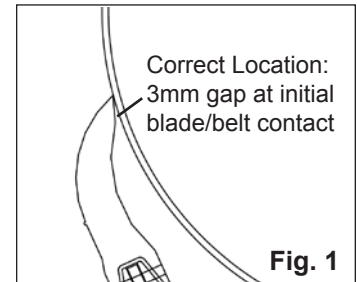
Section 3 - Pre-Installation Checks and Options (cont.)

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.

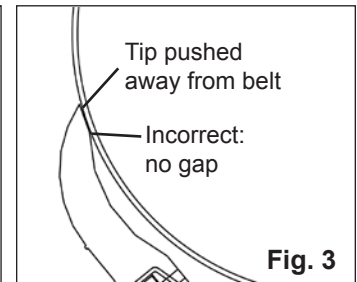
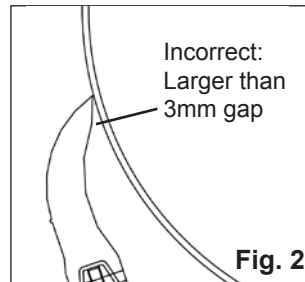
Correct Location:

When blade contact is made against the head pulley (prior to tensioning) there should be a 1.5mm-3mm gap at the bottom of the blade face (Fig. 1).



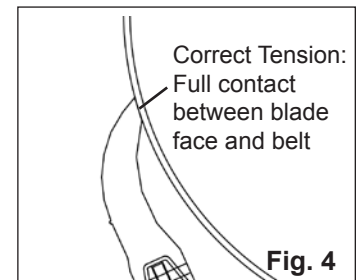
Possible Problems:

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



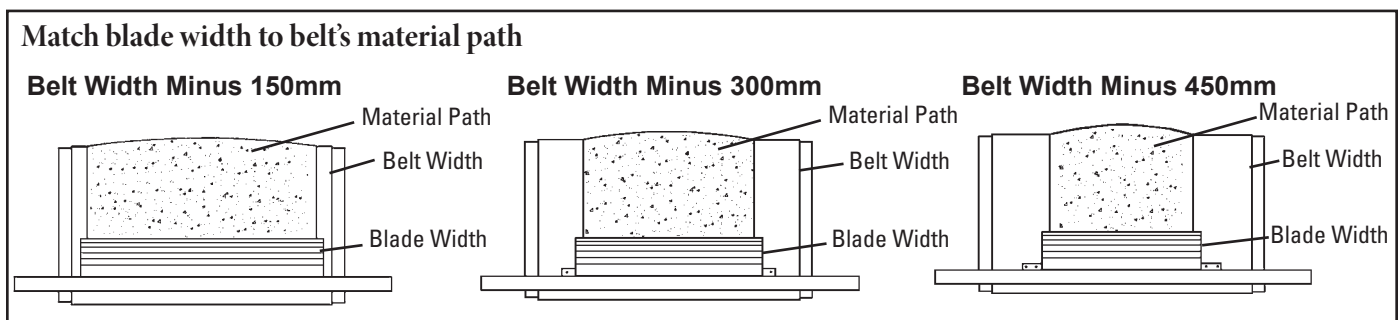
Correct Tensioning:

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

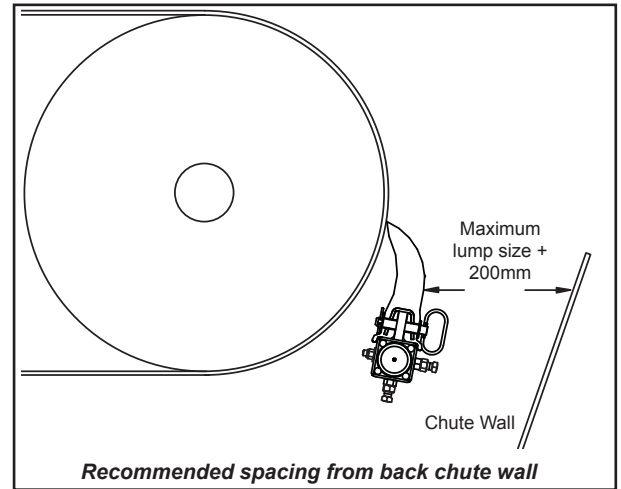
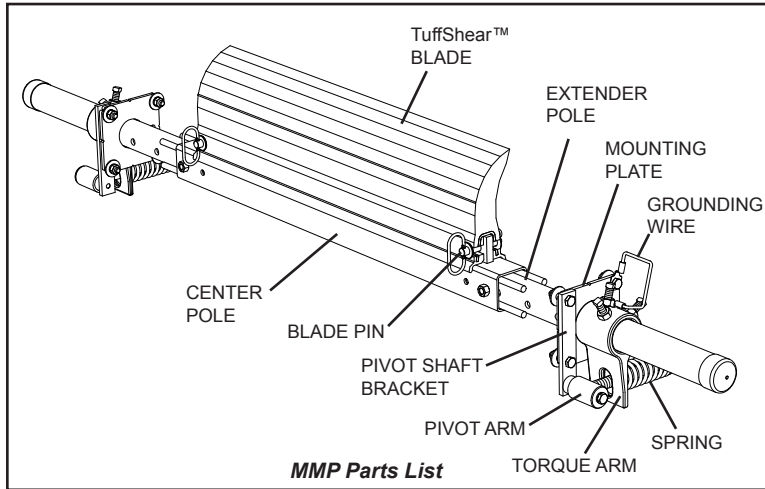


The "Material Path" Option

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 - MMP Precleaner (ATEX)

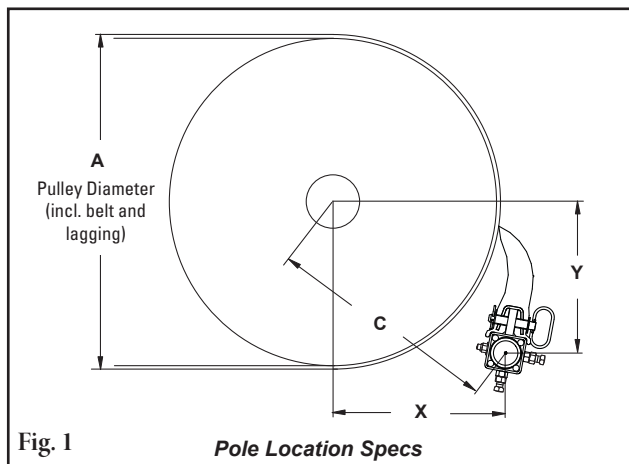


PHYSICALLY LOCK OUT AND TAG THE CONVEYOR AT THE POWER SOURCE BEFORE YOU BEGIN CLEANER INSTALLATION.

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

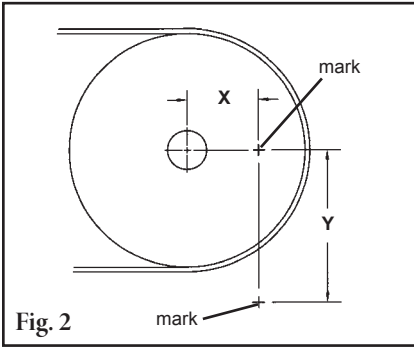
- Find the X, Y & C specifications.** Measure the pulley diameter (including the belt and the lagging) (Fig. 1).
Pulley Diameter ____"; X=____"; Y=____"; C=____".
(Adjustments can be made to the X & Y coordinates to move away from obstacles as long as the C dimension remains constant. See Section 3.2.)



Pole Location Chart

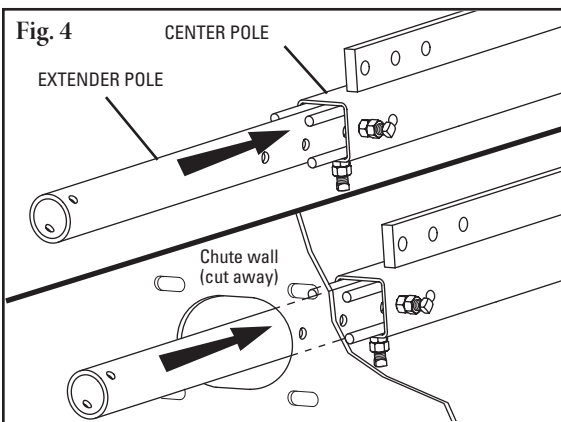
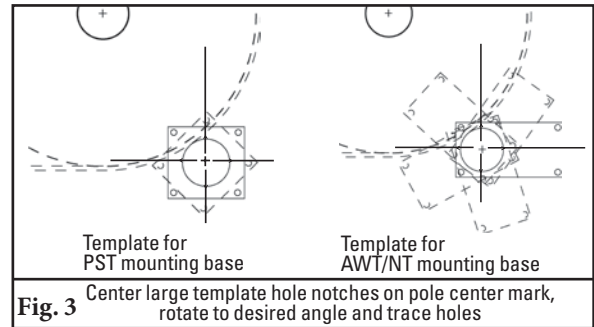
A		X		Y		C	
mm	in	mm	in	mm	in	mm	in
400	16	204	8	305	12	367	14 1/2
425	17	218	8 5/8	305	12	375	14 3/4
450	18	231	9 1/8	305	12	383	15 1/8
475	19	244	9 5/8	305	12	390	15 3/8
500	20	259	10 1/4	305	12	400	15 3/4
525	21	274	10 3/4	305	12	410	16 1/8
550	22	288	11 3/8	305	12	419	16 1/2
575	23	300	11 3/4	305	12	428	16 7/8
600	24	315	12 3/8	305	12	438	17 1/4
625	25	328	12 7/8	305	12	448	17 5/8
650	26	341	13 3/8	305	12	457	18
675	27	353	13 7/8	305	12	467	18 3/8
700	28	366	14 3/8	305	12	476	18 3/4
725	29	380	15	305	12	487	19 1/8
750	30	392	15 3/8	305	12	497	19 5/8
775	31	403	15 7/8	305	12	506	19 7/8
800	32	417	16 3/8	305	12	517	20 3/8
825	33	432	17	305	12	528	20 3/4
850	34	444	17 1/2	305	12	539	21 1/4
875	35	457	18	305	12	549	21 5/8
900	36	469	18 1/2	305	12	559	22
925	37	483	19	305	12	571	22 1/2
950	38	496	19 1/2	305	12	582	22 7/8
975	39	508	20	305	12	592	23 1/4
1000	40	521	20 1/2	305	12	604	23 3/4
1025	41	533	21	305	12	614	24 1/8
1050	42	550	21 5/8	305	12	629	24 3/4
1075	43	569	22 3/8	305	12	646	25 3/8
1100	44	584	23	305	12	659	26
1125	45	601	23 5/8	305	12	674	26 1/2
1150	46	615	24 1/4	305	12	686	27
1175	47	632	24 7/8	305	12	702	27 5/8
1200	48	645	25 3/8	305	12	714	28 1/8

Section 4 - Installation Instructions - MMP Precleaner (cont.)



2. **Lay out the dimensions on the chute wall.** Measure out the X dimension horizontally from the center 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 center of the cleaner pole (Fig. 2). Lay out and mark the same dimensions on the other side.

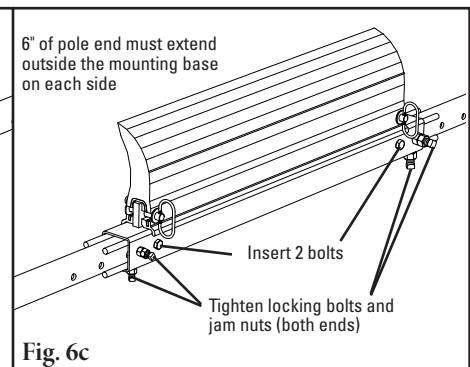
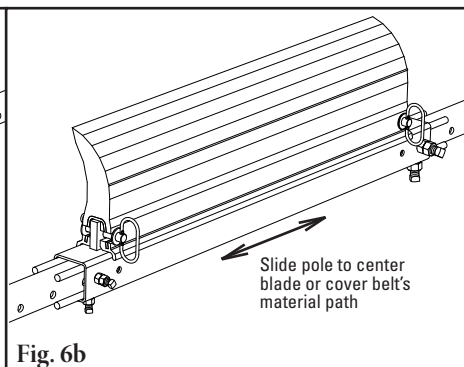
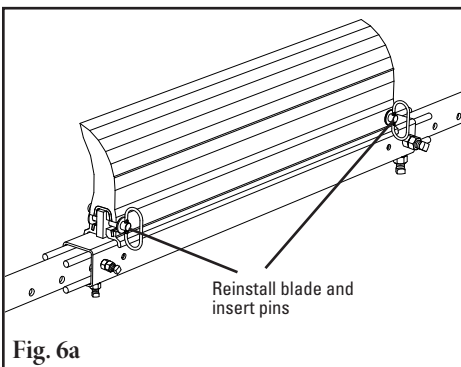
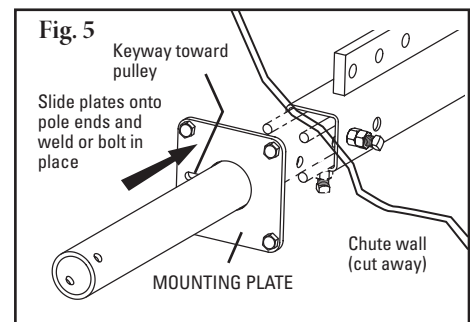
3. **Mark and cut the mounting base holes.** Using the mounting base template provided in the instruction packet, position the large pole hole of the template on the chute with the hole notches aligned with the layout lines. Trace the pole hole and mounting holes (Fig. 3). Each base can be mounted in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



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

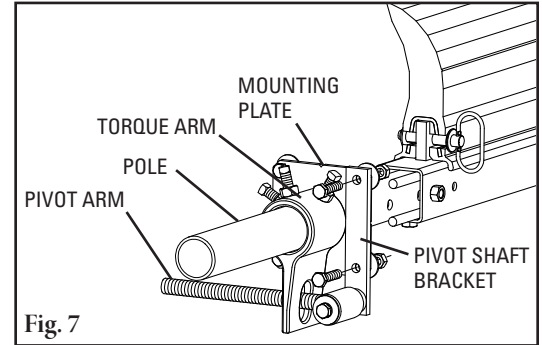
5. **Install the mounting plates.** Position both mounting plates with the keyways toward the pulley and weld or bolt the mounting plates in place using bolts provided (Fig. 5).

6. **Center the cleaner on the belt and lock in place.** Reinstall the blade (Fig 6a). Slide the pole until the blade is centered 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 300mm & 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 center pole to align with the center pole mounting holes and insert both bolts. Lock the four center pole locking bolts and tighten the locking bolt jam nuts.

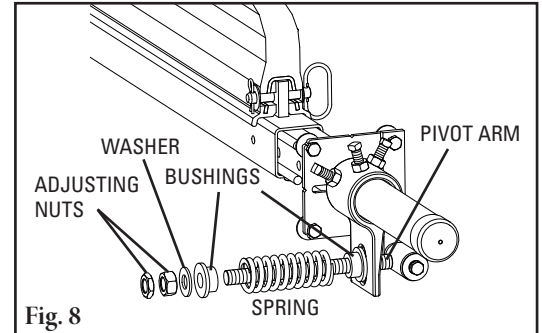


Section 4 - Installation Instructions - MMP Precleaner (cont.)

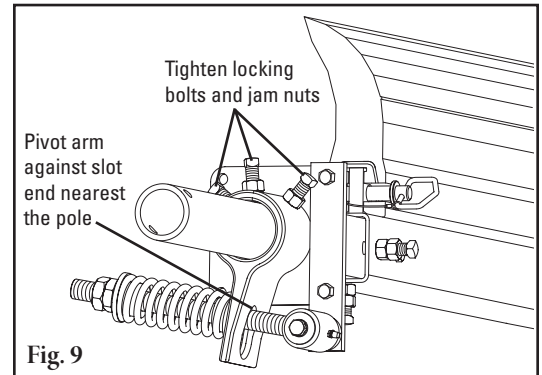
7. **Install the QMT spring tensioner.** Remove the adjusting nuts and springs from the pivot rod. Insert the pivot arm through the slot in the torque arm. Slide the torque arm onto the pole end (be sure the rotation of the arm is correct to tension the blade) and rotate it until the pivot shaft bracket 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.



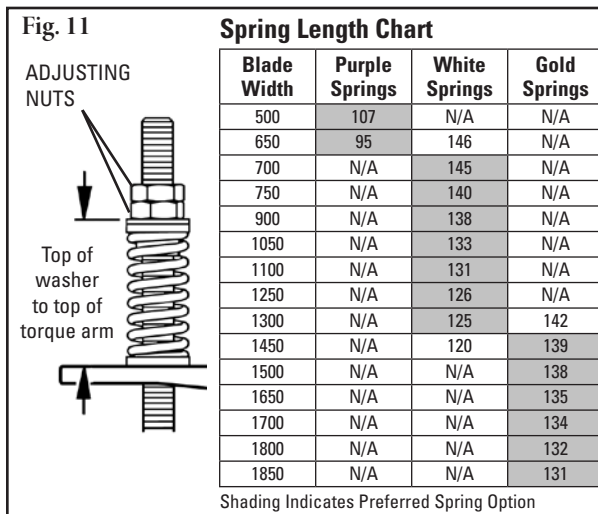
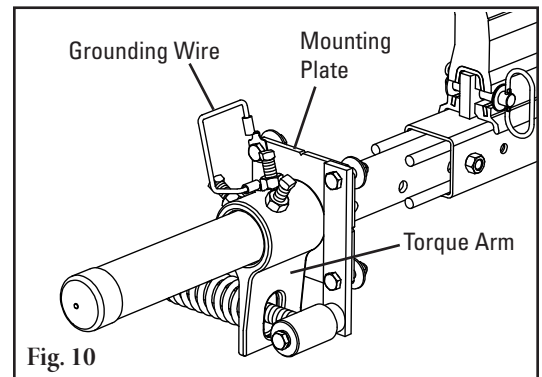
8. **Reassemble the spring assembly.** Slide the spring, washer and bushings onto the pivot arm and turn the two adjusting nuts so about 6mm of the pivot arm is exposed above the nuts (Fig. 8).



9. **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.



10. **Add grounding wire.** To ensure good ground connection, attach grounding wire between setscrew on torque arm and a bolt on mounting plate (Fig. 10).



11. **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. 11).

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 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.

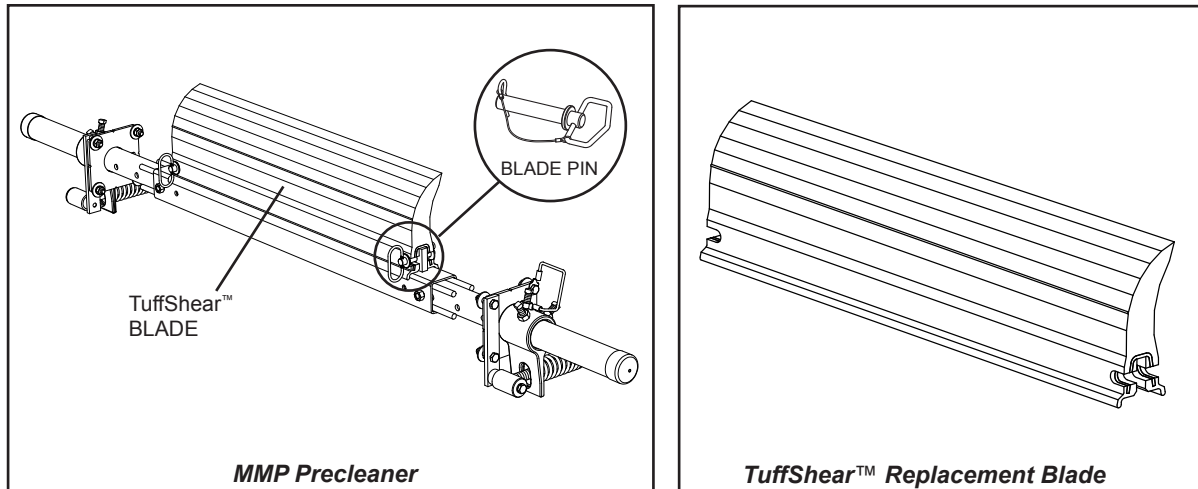
6.3 Routine Physical Inspection (every 6-8 weeks)

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 13.
- When maintenance tasks are completed, test run the conveyor to ensure the cleaner is performing properly

Section 6 - Maintenance (cont.)

6.4 Blade Replacement Instructions



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

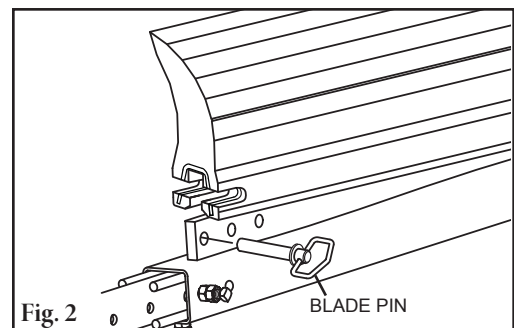
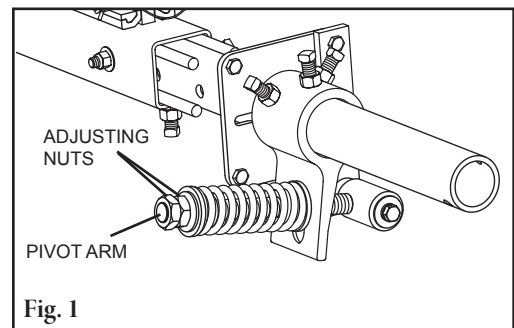
Tools Needed:

- 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.

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.

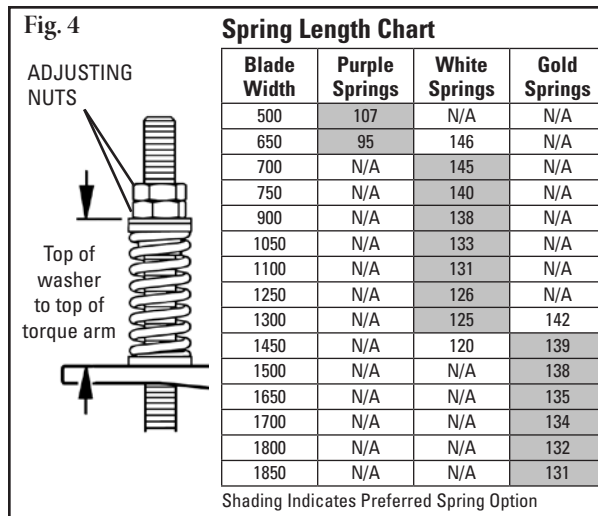
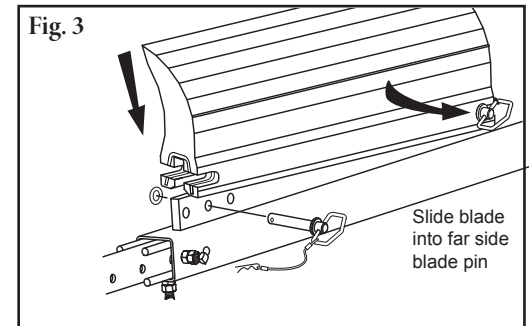
NOTE: If blade is hard to remove use a screwdriver or hammer to loosen it and then remove.



Section 6 - Maintenance (cont.)

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).
4. **Reset the correct blade tension.** Refer to the charts for the spring length or 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.



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.

Section 6 - Maintenance (cont.)

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 (cont.)

6.6 Cleaner Maintenance Checklist

Site: _____ Inspected by: _____ Date: _____

Belt Cleaner: _____ Serial Number: _____

Blade Width: Belt minus 150mm Belt minus 300mm Belt minus 450mm

Beltline Information:

Beltline Number: _____ Belt Condition: _____

Belt Width: 650mm 800mm 1000mm 1200mm 1400mm 1600mm 1800mm 2100mm

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: 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	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

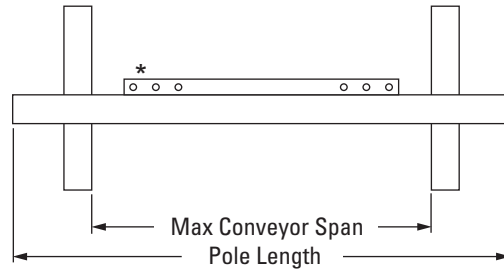
8.1 Specs and Guidelines

Pole Length Specifications

Cleaner Size		Max Overall Pole Length		Center Pole Length		Maximum Conveyor Span	
mm	in	mm	in	mm	in	mm	in
650	26	2000	80	650	26	1700	68
800	32	2150	86	800	32	1850	74
1000	40	2350	94	1000	40	2050	82
1200	48	2550	102	1200	48	2250	90
1400	56	2750	110	1400	56	2450	98
1600	64	2950	118	1600	64	2650	106
1800	72	3150	126	1800	72	2850	114
2000	80	3350	134	2000	80	3050	122
2100	84	3450	138	2100	84	3150	126

Pole Diameter - 73mm (2-7/8")

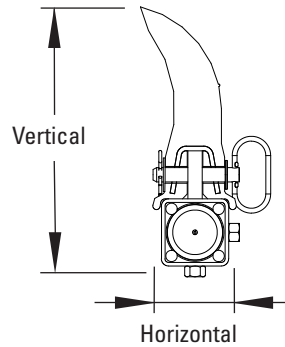
For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 750mm (30") of extended pole length.



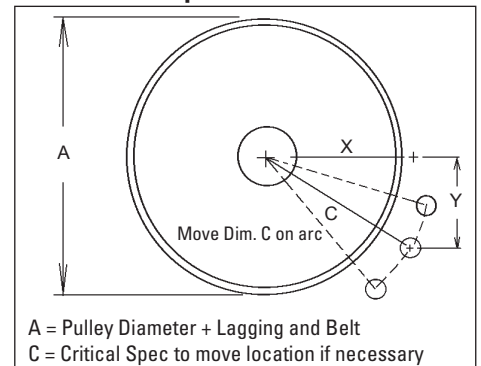
*Each pole size can be used with a blade size either belt width minus 150mm (6") or belt width minus 300mm (12").

Clearance Guidelines For Installation

Horizontal Clearance Required		Vertical Clearance Required	
mm	in	mm	in
100	4	325	12-3/8



Pole Location Specs

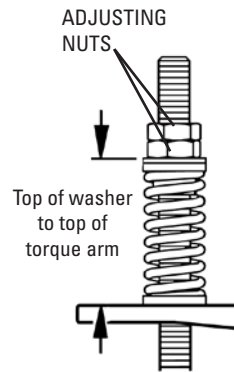


A = Pulley Diameter + Lagging and Belt
C = Critical Spec to move location if necessary

Spring Length Chart

Blade Width	Purple Springs	White Springs	Gold Springs
500	107	N/A	N/A
650	95	146	N/A
700	N/A	145	N/A
750	N/A	140	N/A
900	N/A	138	N/A
1050	N/A	133	N/A
1100	N/A	131	N/A
1250	N/A	126	N/A
1300	N/A	125	142
1450	N/A	120	139
1500	N/A	N/A	138
1650	N/A	N/A	135
1700	N/A	N/A	134
1800	N/A	N/A	132
1850	N/A	N/A	131

Shading Indicates Preferred Spring Option



Pole Location Chart

A		X		Y		C	
mm	in	mm	in	mm	in	mm	in
400	16	204	8	305	12	367	14 1/2
425	17	218	8 5/8	305	12	375	14 3/4
450	18	231	9 1/8	305	12	383	15 1/8
475	19	244	9 5/8	305	12	390	15 3/8
500	20	259	10 1/4	305	12	400	15 3/4
525	21	274	10 3/4	305	12	410	16 1/8
550	22	288	11 3/8	305	12	419	16 1/2
575	23	300	11 3/4	305	12	428	16 7/8
600	24	315	12 3/8	305	12	438	17 1/4
625	25	328	12 7/8	305	12	448	17 5/8
650	26	341	13 3/8	305	12	457	18
675	27	353	13 7/8	305	12	467	18 3/8
700	28	366	14 3/8	305	12	476	18 3/4
725	29	380	15	305	12	487	19 1/8
750	30	392	15 3/8	305	12	497	19 5/8
775	31	403	15 7/8	305	12	506	19 7/8
800	32	417	16 3/8	305	12	517	20 3/8
825	33	432	17	305	12	528	20 3/4
850	34	444	17 1/2	305	12	539	21 1/4
875	35	457	18	305	12	549	21 5/8
900	36	469	18 1/2	305	12	559	22
925	37	483	19	305	12	571	22 1/2
950	38	496	19 1/2	305	12	582	22 7/8
975	39	508	20	305	12	592	23 1/4
1000	40	521	20 1/2	305	12	604	23 3/4
1025	41	533	21	305	12	614	24 1/8
1050	42	550	21 5/8	305	12	629	24 3/4
1075	43	569	22 3/8	305	12	646	25 3/8
1100	44	584	23	305	12	659	26
1125	45	601	23 5/8	305	12	674	26 1/2
1150	46	615	24 1/4	305	12	686	27
1175	47	632	24 7/8	305	12	702	27 5/8
1200	48	645	25 3/8	305	12	714	28 1/8

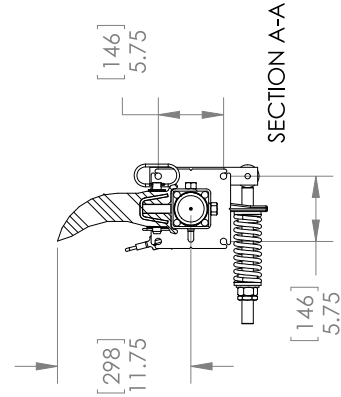
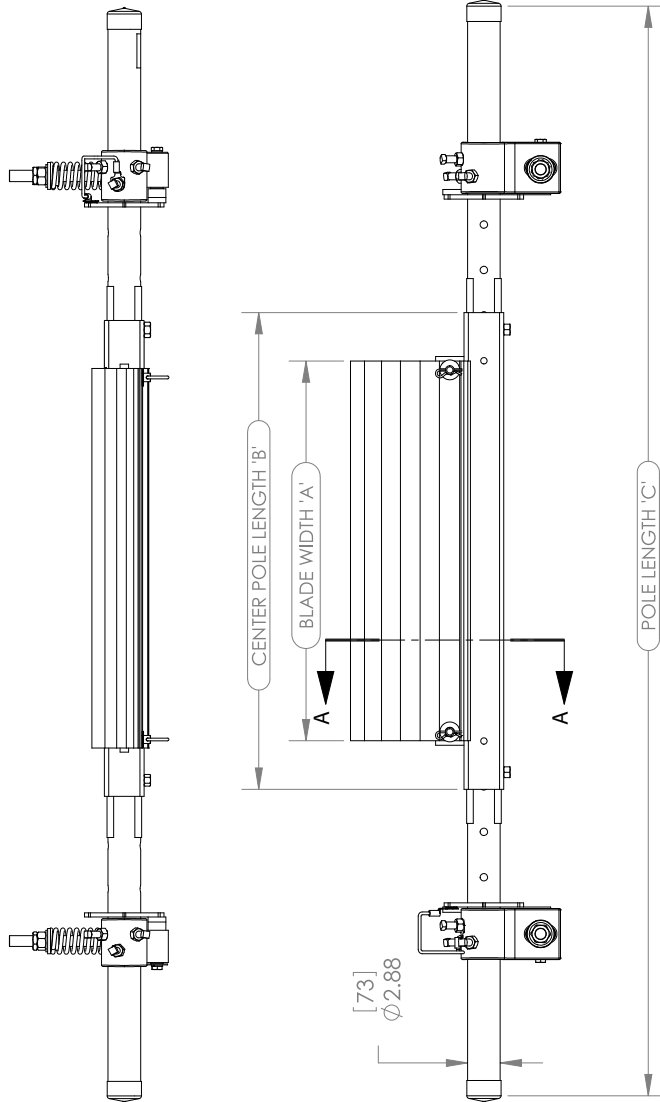
Specifications:

- Maximum Belt Speed.....3.5M/sec (700 FPM)
- Temperature Rating.....-35°C to 82°C (-30°F to 180°F)
- Minimum Pulley Diameter.....400mm (16")
- Usable Blade Wear Length.....150mm (6")
- Blade MaterialFire Resistant Anti-Static (FRAS)
Polyurethane (proprietary blend for abrasion resistance and long wear)
- Available for Belt Widths.....650 to 2100mm (26" to 64")
Other sizes available upon request.
- CEMA Cleaner RatingClass 4

Section 8 - Specs and CAD Drawing

8.2 CAD Drawing- MMP ATEX Belt Width - 150mm

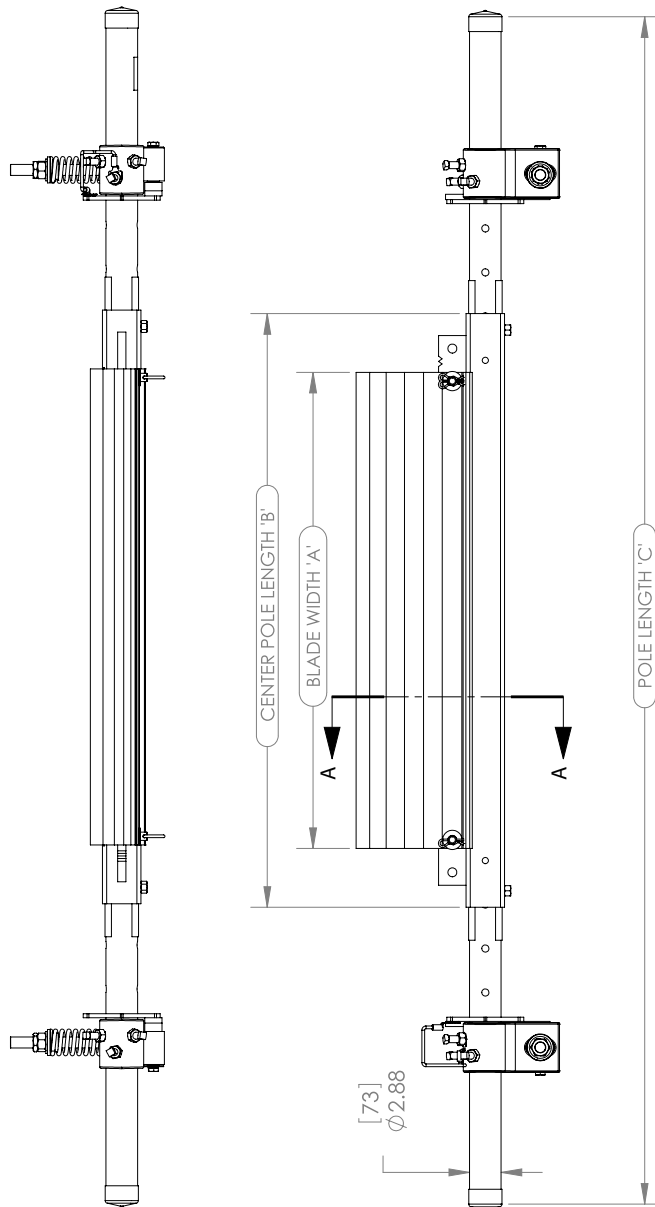
SPECIFICATIONS				MMP PRECLEANER MINUS 150mm		MMP CENTER POLE		FRAS TUFF SHEAR BLADE	
BELT WIDTH (mm)	BLADE WIDTH 'A' (mm)	CENTER POLE LENGTH 'B' (mm)	OVERALL POLE LENGTH 'C' (mm)	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE
650	25	19	610	24	1960	77	1960	77	90287
800	31	25	762	30	2110	83	2110	83	90288
1000	39	33	1067	42	2410	94	2410	94	90290
1200	47	41	1219	48	2570	101	2570	101	90292
1400	55	49	1372	54	2720	107	2720	107	90294
1600	63	57	1450	62	3020	118	3020	118	90296
1800	70	65	1650	72	1829	125	1829	125	90298
2000	78	72	1981	78	3330	131	3330	131	90318



Section 8 - Specs and CAD Drawing

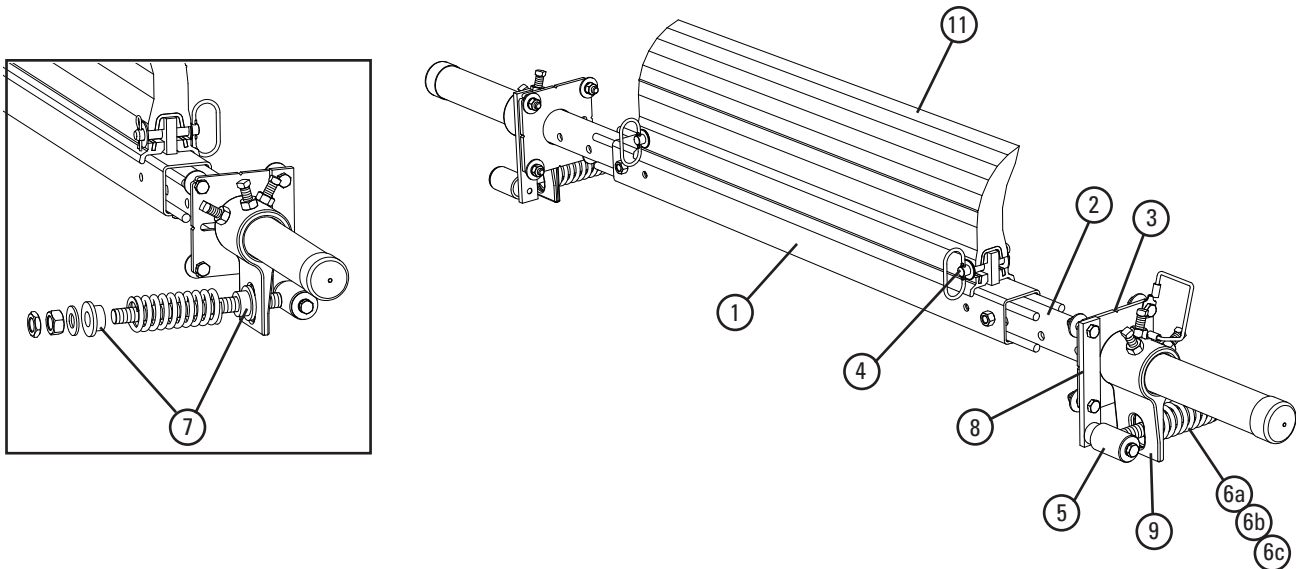
8.3 CAD Drawing- MMP ATEX Belt Width -300mm

SPECIFICATIONS				MMP PRECLEANER MINUS 300mm		MMP CENTER POLE		FRAS TLUFF SHEAR BLADE					
BELT WIDTH (mm)	BLADE WIDTH 'A' (mm)	CENTER POLE LENGTH 'B' (mm)	OVERALL POLE LENGTH 'C' (mm)	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE	ORDER NUMBER	ITEM CODE				
800	31	500	20	762	30	2100	84	MMP-800-300F	90310	MMPCP800	90422	TRB500F	90287
1000	39	700	28	1067	42	2250	90	MMP-1000-300F	90311	MMPCP1000	90423	TRB700F	90289
1200	47	800	32	1219	48	2400	96	MMP-1200-300F	90312	MMPCP1200	90424	TRB900F	90291
1400	55	1100	44	1372	54	2550	102	MMP-1400-300F	90313	MMPCP1400	90425	TRB1100F	90293
1600	63	1300	52	1676	66	2700	106	MMP-1600-300F	90314	MMPCP1600	90426	TRB1300F	90295
1800	70	1500	60	1829	72	2850	114	MMP-1800-300F	90315	MMPCP1800	90427	TRB1500F	90297
2000	78	1700	68	1981	78	3150	126	MMP-2000-300F	90316	MMPCP2000	90428	TRB1700F	90289
2100	84	1800	72	2134	84	3300	132	MMP-2100-300F	90317	MMPCP2100	90429	TRB1800F	90300



Section 9 - Replacement Parts

9.1 Replacement Parts List



Replacement Parts

Ref	Description	Ordering Number	Item Code	Wt. Kg
1	650mm Center Pole	MMPCP650	90421	16.9
	800mm Center Pole	MMPCP800	90422	20.8
	1000mm Center Pole	MMPCP1000	90423	26.0
	1200mm Center Pole	MMPCP1200	90424	31.2
	1400mm Center Pole	MMPCP1400	90425	36.4
	1600mm Center Pole	MMPCP1600	90426	41.6
	1800mm Center Pole	MMPCP1800	90427	46.8
	2000mm Center Pole	MMPCP2000	90428	52.0
	2100mm Center Pole	MMPCP2100	90429	54.6
2	Extender Pole Kit (2 ea.)	MHP-EP	76392	24.5
3	Mounting Plate Kit* (2 ea.)	MSPMPK	75811	3.8
4	Blade Pin Kit* (1 ea.)	MMPBPK	76466	0.4
5	Pivot Arm Kit* (1 ea.)	QMTPAK	76096	2.0
6a	Tension Spring - Purple (1 ea.) for blades 500 - 650mm	QMTS-P	75845	0.3
6b	Tension Spring - White (1 ea.) for blades 700 - 1300mm	PSTS-W	75898	0.8
6c	Tension Spring - Gold (1 ea.) for blades 1450 - 1850mm	QMTS-G	76484	1.1
7	QMT Bushing Kit - ATEX (2 ea.)	QMTBK-ATEX	90435	0.1
8	Pivot Shaft Bracket Kit* (1 ea.)	QMTPSBK	76099	2.0
9	Torsion Arm Kit* (1 ea.)	PSTA	75896	5.2
10	Grounding Wire Kit (1 ea.)	ATEX-GWK	90263	0.1
-	QMT Spring Tensioner* - Purple (incl. 1 ea. Items 5, 6, 7, 8, & 9) for blades 500 - 650mm	QMT-P-CN	82179	9.3
-	QMT Spring Tensioner* - White (incl. 1 ea. Items 5, 6a, 7, 8, & 9) for blades 700 - 1300mm	QMT-W-CN	82180	9.9
-	QMT Spring Tensioner* - Gold (incl. 1 ea. Items 5, 6b, 7, 8, & 9) for blades 1450 - 1850mm	QMT-G-CN	82181	10.5

*Hardware Included
Lead Time: 1 working day

Replacement TuffShear Blades

Ref	Blade Width	Ordering Number	Item Code	Wt. Kg
11	500	TRB500	90287	10.6
	650	TRB650	90288	13.8
	700	TRB700	90289	14.8
	850	TRB850	90290	18.0
	900	TRB900	90291	19.1
	1050	TRB1050	90292	22.3
	1100	TRB1100	90293	23.3
	1250	TRB1250	90294	26.5
	1300	TRB1300	90295	27.6
	1450	TRB1450	90296	30.8
	1500	TRB1500	90297	31.8
	1650	TRB1650	90298	35.0
	1700	TRB1700	90299	36.1
	1800	TRB1800	90300	38.2
	1850	TRB1850	90318	39.2

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	82179 QMT-P-CN	82180 QMT-W-CN	82181 QMT-G-CN
TuffShear 500-650mm	X		
TuffShear 700-1300mm		X	
TuffShear 1450-1850mm			X

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 Precleaner



- 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

EZS2 Secondary Cleaner



- Long-wearing tungsten carbide blades for superior cleaning efficiency
- Patented FormFlex™ cushions independently tension each blade to the belt for consistent, constant cleaning power
- Easy to install, simple to service
- Works with Flexco mechanical belt splices

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

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

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

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

The Flexco Vision

To become the leader in maximising belt conveyor productivity for our customers worldwide through superior service and innovation.



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