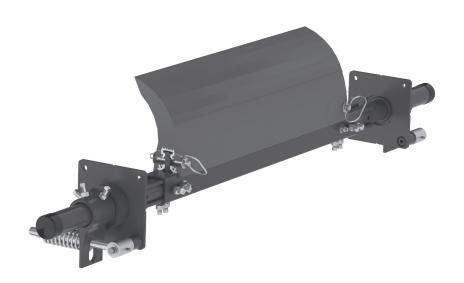
MHP Precleaner

Installation, Operation and Maintenance Manual





MHP Precleaner

Serial Number:
Purchase Date:
Purchased From:
Installation Date:

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

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

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Section 1 – Important Information

1.1 General Introduction

We at Flexco are very pleased that you have selected an MHP Precleaner for your conveyor system.

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

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

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

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

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

1.2 User Benefits

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

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

1.3 Service Option

The MHP 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 representative.

Section 2 – Safety Considerations and Precautions

Before installing and operating the MHP 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

A 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.

A 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.

A DANGER

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

A 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.

A WARNING

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



Section 3 – Pre-Installation Checks and Options

3.1 Checklist

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

Section 3 – Pre-Installation Checks and Options

3.2 Cleaner Location Adjustments

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

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

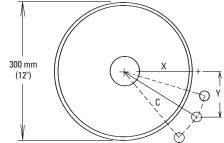
Conveyor situation:

Pulley Diameter: 300 mm (12")

X = 155 mm (6 1/8")

Y = 140 mm (5 1/2")

C = 210 mm (8 1/4'')



- 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 50 mm (2") 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 50 mm (2"), so we add 50 mm (2") to the given "Y" dimension.

$$X = ? mm (?")$$

$$Y = 140 + 50 = 190 \text{ mm} (5 1/2 + 2 = 7 1/2'')$$

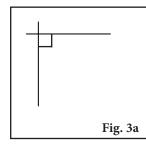
$$C = 210 \text{ mm} (8 1/4'')$$

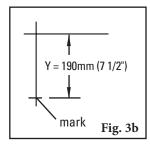
3. Determine final dimension. On a flat vertical surface, using a level, draw one horizontal line and one vertical line creating a right triangle (Fig 3a). Measure down from the intersection the determined "Y" dimension and mark (Fig 3b). With the tape measure starting at the modified "Y" mark, swing 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).

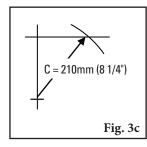
$$X = 89 \text{ mm} (3 1/2")$$

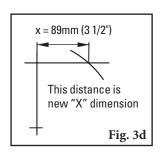
$$Y = 190 \text{ mm} (7 1/2'')$$

$$C = 210 \text{ mm} (8 1/4'')$$











Section 3 - Pre-Installation Checks and Options

3.3 Optional Installation Accessories

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

Optional Mounting Bar Kit (incl. bolts, nuts and washers)

(Item Code: 75830)

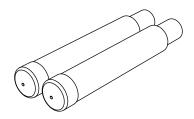
- For mounting precleaners on open head pulleys.
- Weld on both sides of pulley and bolt on steel plates.
- 38 x 405 mm (1 1/2 x 16") with (4) 16 mm (5/8") tapped holes

0			
0			
0			
0			

Mounting Plate Kit (incl. 2 plates)

(Item Code: 76537)

- For use with Mounting Bars to mount cleaners on open head pulleys.
- 400 x 800 mm (16 x 32") with (4) 16 mm (5/8") holes



Pole Extender Kit (incl. 2 pole extenders)

(Item Code: 76024)

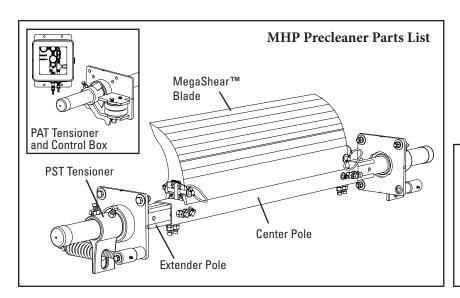
- For cleaner sizes 1800 mm (72") and larger
- Provides 750 mm (30") of extended pole length

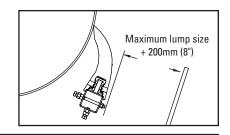
Optional Mounting Kits (includes 2 brackets/bars)

DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT KG
Optional Mounting Bar Kit *	MMBK	75830	8.8
Mounting Plate Kit (incl. 2 plates)	MMPK	76537	63.5
Pole Extender Kit	MAPEK	76024	9.9

*Hardware Included Lead time: 1 working day

4.1 MHP Precleaner





Tools Needed:

- Tape Measure
- Wrenches or Crescent Wrenches:
 (2) 19mm (3/4"), (2) 38mm (1-1/2"),
 (1) 24mm (15/16"), and (1) 16mm (5/8")
- Level
- Marking pen or soapstone
- C-clamps for AWT only

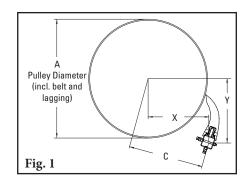
Physically lock out and tag the conveyor at the power source before you begin cleaner installation.

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

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.)



X & Y Chart for Pole Location

A & T Chart for Pole Location								
	Α		K	,	Y	(C	
mm	in	mm	in	mm	in	mm	in	
500	20	250	10	365	14 3/8	442	17 1/2	
525	21	263	10 1/2	365	14 3/8	450	17 3/4	
550	22	275	11	365	14 3/8	457	18 1/8	
575	23	288	11 1/2	365	14 3/8	465	18 3/8	
600	24	300	12	365	14 3/8	472	18 3/4	
625	25	313	12 1/2	365	14 3/8	480	19	
650	26	325	13	365	14 3/8	489	19 3/8	
675	27	338	13 1/2	365	14 3/8	497	19 3/4	
700	28	350	14	365	14 3/8	506	20 1/8	
725	29	363	14 1/2	365	14 3/8	514	20 3/8	
750	30	375	15	365	14 3/8	523	20 3/4	
775	31	388	15 1/2	365	14 3/8	532	21 1/8	
800	32	400	16	365	14 3/8	542	21 1/2	
825	33	413	16 1/2	365	14 3/8	551	21 7/8	
850	34	425	17	365	14 3/8	560	22 1/4	
875	35	438	17 1/2	365	14 3/8	570	22 5/8	
900	36	450	18	365	14 3/8	579	23	
925	37	463	18 1/2	365	14 3/8	589	23 3/8	
950	38	475	19	365	14 3/8	599	23 7/8	
975	39	488	19 1/2	365	14 3/8	609	24 1/4	
1000	40	500	20	365	14 3/8	619	24 5/8	
1025	41	513	20 1/2	365	14 3/8	629	25	
1050	42	525	21	365	14 3/8	639	25 1/2	
1075	43	538	21 1/2	365	14 3/8	650	25 7/8	
1100	44	550	22 1/4	365	14 3/8	660	26 1/2	

X & Y Chart for Pole Location

-	4)	(١	1	(2
mm	in	mm	in	mm	in	mm	in
1125	45	563	22 7/8	365	14 3/8	671	27
1150	46	575	23 1/2	365	14 3/8	681	27 1/2
1175	47	588	24	365	14 3/8	692	28
1200	48	600	24 5/8	365	14 3/8	702	28 1/2
1225	49	613	25 1/8	365	14 3/8	714	29
1250	50	628	25 3/4	365	14 3/8	727	29 1/2
1275	51	641	26 3/8	365	14 3/8	738	30
1300	52	657	26 7/8	365	14 3/8	752	30 1/2
1325	53	672	27 1/2	365	14 3/8	765	31
1350	54	685	28	365	14 3/8	776	31 1/2
1375	55	700	28 5/8	365	14 3/8	790	32
1400	56	713	29 1/8	365	14 3/8	801	32 1/2
1425	57	728	29 3/4	365	14 3/8	815	33
1450	58	741	30 1/4	365	14 3/8	826	33 1/2
1475	59	757	30 3/4	365	14 3/8	840	34
1500	60	769	31 3/8	365	14 3/8	851	34 1/2
1525	61	782	31 7/8	365	14 3/8	863	35
1550	62	797	32 1/2	365	14 3/8	877	35 1/2
1575	63	810	33	365	14 3/8	888	36
1600	64	826	33 1/2	365	14 3/8	903	36 1/2
1625	65	838	34 1/8	365	14 3/8	914	37
1650	66	850	34 5/8	365	14 3/8	925	37 1/2
1675	67	866	35 1/8	365	14 3/8	940	38
1700	68	879	35 3/4	365	14 3/8	951	38 1/2
1725	69	891	36 1/4	365	14 3/8	963	39

X & Y Chart for Pole Location

1	Α		Х		Y	(0
mm	in	mm	in	mm	in	mm	in
1750	70	906	36 3/4	365	14 3/8	977	39 1/2
1775	71	919	37 3/8	365	14 3/8	989	40
1800	72	932	37 7/8	365	14 3/8	1001	40 1/2
1825	73	947	38 3/8	365	14 3/8	1015	41
1850	74	960	38 7/8	365	14 3/8	1027	41 1/2
1875	75	972	39 1/2	365	14 3/8	1039	42
1900	76	985	40	365	14 3/8	1050	42 1/2
1925	77	1000	40 1/2	365	14 3/8	1064	43
1950	78	1013	41	365	14 3/8	1077	43 1/2
1975	79	1026	41 5/8	365	14 3/8	1089	44
2000	80	1038	42 1/8	365	14 3/8	1100	44 1/2
2025	81	1053	42 5/8	365	14 3/8	1114	45
2050	82	1066	43 1/8	365	14 3/8	1127	45 1/2
2075	83	1079	43 3/4	365	14 3/8	1139	46
2100	84	1090	44 1/4	365	14 3/8	1150	46 1/2



4.1 MHP Precleaner

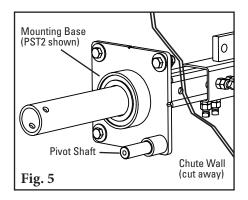
2. Lay out the dimensions on the chute wall. Measure out the X dimension horizontally from the center of the pulley shaft and mark.

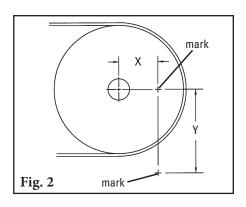
NOTE: It may be easier to put a level on top of the pulley shaft, draw a horizontal line and then measure down half the diameter of the shaft and make a line from the front of the shaft.

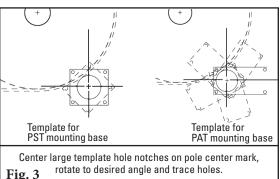
Now subtract half the pulley shaft diameter from the X coordinate and measure on the line and make a mark. Then measure down vertically the Y dimension and mark. This is the correct position for the center of the cleaner pole (Fig. 2). Lay out and mark the same dimensions on the other side.

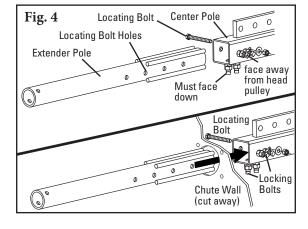
- 3. Mark and cut the mounting base holes. Using the mounting base template provided in the instruction packet, position the large pole hole of the template on the chute with the hole notches aligned with the layout lines. Trace the pole hole and mounting holes (Fig. 3). Each base can be mounted in any 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 and make sure the locating bolt holes align with the center pole holes. Position the center pole with the welded nuts and locking bolts on one side facing down and on the adjoining side facing away from the head pulley (Fig. 4). Leave the locking bolts loose.
- **5. Install the mounting bases.** Bolt the mounting bases to the chute with the bolts provided (Fig. 5). Position pivot shaft in desired orientation (see Step 9S).
- 6. Install the blade. Place the blade onto the center pole plate. Adjust the extender poles until the holes align with the holes in the center pole and lock the blade into place with the two blade pins and cotter pins (Fig. 6).

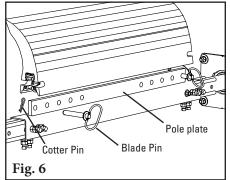
NOTE: Be sure at least 150 mm (6") of the extender pole extends out of the mounting base on each side for tensioner installation.











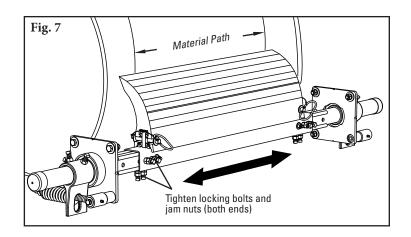
4.1 MHP Precleaner

7. Center the blade on the belt. Slide the pole until the blade is centered or cover the belt's material path (Fig. 7).

NOTE: Standard blade coverage is belt width minus 150 mm (6"). If less blade coverage is required, other material path options are available for replacement.

8. Lock the extender poles in the center pole. Tighten the two locking bolts and jam nuts on each end of the center pole (Fig. 7).

Install the tensioning system. For the PST2 Spring Tensioner go to step 9S. For the PAT Tensioner proceed to step 9A.



Precleaner Spring Tensioner (PST2)

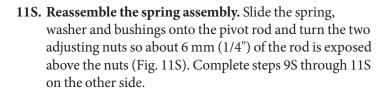
9S. Determine spring orientation.

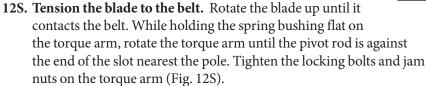
Remove the adjusting nuts and springs from the rods. Rotate mounting base until pivot rod is in desired orientation to clear structure and obstacles (Fig. 9S). Tighten all mounting bolts including pivot mounting bolt.

10S. Slide the torque arm onto the pole end.

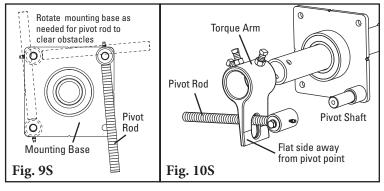
Temporarily remove torque pivot rod. Insert through torque arm slot. Flat face of the torque arm should face away from

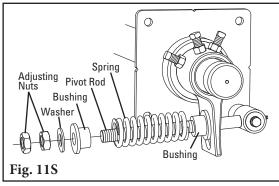
pivot point. Ensuring the correct pulling rotation, slide the torque arm onto the pole end (Fig. 10S). Slide torque pivot rod over pivot shaft and reinstall bolt.

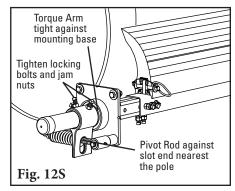




NOTE: The torque arm should be up against the mounting base.



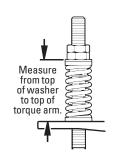






4.1 MHP Precleaner

13S. Set the correct blade tension. Refer to the chart or the decal on the mounting base for the spring length required for the belt width. Lightly pull the pivot rod toward the end of the torque arm slot nearest the pole and turn the adjusting nuts until the required spring length is achieved. Complete steps 12S and 13S on the other side. For best results, recheck the spring length on the first side to insure there has been no movement.



14S. Test run the cleaner. Run the conveyor for at least 15 minutes and inspect cleaning performance. Check the spring lengths for proper tensioning. Make adjustments as necessary.

PST Spring Length Chart

	ade dth		nite ings		ver ings		ed ings
mm	in.	mm	in.	mm	in.	mm	in.
450	18	143	5 5/8	N/A	N/A	N/A	N/A
600	24	137	5 3/8	159	6 1/4	N/A	N/A
750	30	127	5	156	6 1/8	159	6 1/4
900	36	121	4 3/4	152	6	159	6 1/4
1050	42	N/A	N/A	152	6	156	6 1/8
1200	48	N/A	N/A	149	5 7/8	156	6 1/8
1350	54	N/A	N/A	146	5 3/4	152	6
1500	60	N/A	N/A	143	5 5/8	152	6
1650	66	N/A	N/A	143	5 5/8	149	5 7/8
1800	72	N/A	N/A	140	5 1/2	149	5 7/8
1950	78	N/A	N/A	137	5 3/8	146	5 3/4
2100	84	N/A	N/A	N/A	N/A	146	5 3/4
2250	90	N/A	N/A	N/A	N/A	143	5 5/8
2400	96	N/A	N/A	N/A	N/A	143	5 5/8
2550	102	N/A	N/A	N/A	N/A	140	5 1/2
2700	108	N/A	N/A	N/A	N/A	140	5 1/2
2850	114	N/A	N/A	N/A	N/A	137	5 3/8

Shading indicates preferred spring option.

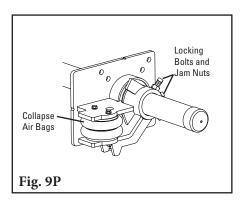
Pneumatic Air Tensioner (PAT)

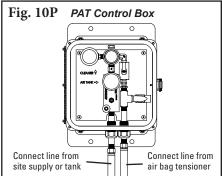
NOTE: PAT Tensioners are shipped with the air bags and torque arms attached to the mounting bases.

- **9P. Tension the blade to the belt.** Collapse both air bags (with C-clamps) and rotate the blade until it is 25 mm (1") short of contact with the belt. Tighten the torque arm locking bolts and jam nuts (Fig. 9P). Remove C-clamps.
- **10P.** 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 PAT control box (Fig. 10P).

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.

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





PAT Pressure Chart

Bla Wi	ide dth	Pres	sure
mm	in.	kPa	psi
450	18	55	8
600	24	69	10
800	32	90	13
900	36	103	15
1050	42	124	18
1200	48	138	20
1350	54	159	23
1500	60	172	25
1650	66	193	28
1800	72	214	31
1950	78	228	33
2100	84	248	36
2250	90	262	38
2400	96	283	41
2550	102	296	43
2700	108	317	46
2850	114	331	48

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.
- Re-check tension settings.

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.



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 MHP 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.

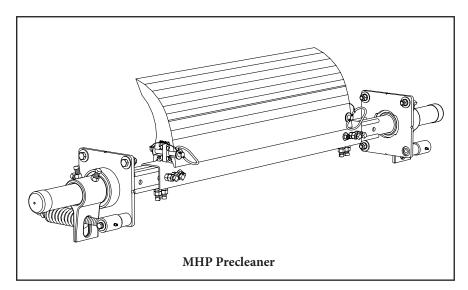
If any of the above conditions exist, a determination should be made on when the conveyor can be stopped for cleaner maintenance.

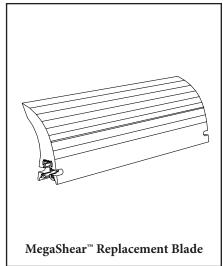
6.3 Routine Physical Inspection (every 6-8 weeks)

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.
- 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/pressure of the cleaner blade to the belt. Adjust the tension if necessary using the chart on the cleaner or the ones on Page 10.
- When maintenance tasks are completed, test run the conveyor to ensure the cleaner is performing properly.

6.4 Blade Replacement Instructions



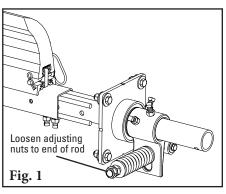


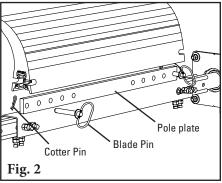
Physically lock out and tag the conveyor at the power source before you begin cleaner installation.

Tools Needed:

- Tape Measure
- Pry Bar
- Hammer
- Wire Brush (for cleaning pole)
- Screwdriver
- 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 arm (Fig. 1) or release pressure from PAT control box. This releases the tension of the blade on the belt.
- **2. Remove the worn blade.** Remove blade pin on each end of blade 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.



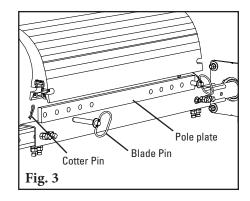




6.4 Blade Replacement Instructions

- **3. Install the new blade.** Seat the new blade onto the pole plate. Align holes on pole and blade, then install blade pins to lock in place (Fig. 3).
- 4. Reset the correct blade tension. Refer to the charts below for the spring length or PSI required for the belt width. For PST lightly pull the pivot arm toward the end of the torque arm slot nearest the pole and turn the adjusting nuts until the required spring length is achieved. Tighten jam nut.

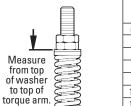
Test run the cleaner. Run the conveyor for at least 15 minutes and inspect the cleaning performance. Check the spring length for proper tensioning. Make adjustments as necessary.



PST Spring Length Chart

1	nde dth		nite ings	_	ver ings		ed ings
mm	in.	mm	in.	mm	in.	mm	in.
450	18	143	5 5/8	N/A	N/A	N/A	N/A
600	24	137	5 3/8	159	6 1/4	N/A	N/A
750	30	127	5	156	6 1/8	159	6 1/4
900	36	121	4 3/4	152	6	159	6 1/4
1050	42	N/A	N/A	152	6	156	6 1/8
1200	48	N/A	N/A	149	5 7/8	156	6 1/8
1350	54	N/A	N/A	146	5 3/4	152	6
1500	60	N/A	N/A	143	5 5/8	152	6
1650	66	N/A	N/A	143	5 5/8	149	5 7/8
1800	72	N/A	N/A	140	5 1/2	149	5 7/8
1950	78	N/A	N/A	137	5 3/8	146	5 3/4
2100	84	N/A	N/A	N/A	N/A	146	5 3/4
2250	90	N/A	N/A	N/A	N/A	143	5 5/8
2400	96	N/A	N/A	N/A	N/A	143	5 5/8
2550	102	N/A	N/A	N/A	N/A	140	5 1/2
2700	108	N/A	N/A	N/A	N/A	140	5 1/2
2850	114	N/A	N/A	N/A	N/A	137	5 3/8

Shading indicates preferred spring option.



PAT Pressure Chart

Bla Wi	ide dth	Pres	sure
mm	in.	kPa	psi
450	18	55	8
600	24	69	10
800	32	90	13
900	36	103	15
1050	42	124	18
1200	48	138	20
1350	54	159	23
1500	60	172	25
1650	66	193	28
1800	72	214	31
1950	78	228	33
2100	84	248	36
2250	90	262	38
2400	96	283	41
2550	102	296	43
2700	108	317	46
2850	114	331	48

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	r:		Date:	
Belt Cleaner: _				S	erial Number:		
Beltline Informa							
Belt □ 450mm [Width: (18")	□ 600m "24)		n □ 1050mm □ (42")	□ 1200mm □ 1350r (48") □ (54")		□ 1800mm □ 2100m (72") (84")	m
Head Pulley Dia	ameter	(Belt & Lagging):		Belt Spee	d: fpr	n Belt Thick	ness:
Belt Splice:		_ Condition of Spli	ce:	Number of Spl	ices:	□ Skived □ U	nskived
Material convey	yed:						
Days per week	run:	Но	ours per day r	un:			
Blade Life:							
Date blade insta	alled:_	Date b	olade inspecte	d:	Estimated blad	de life:	_
Is blade making	comp	ete contact with bel	:?	□ Yes □ I	No		
Distance from v	vear lir	ie: Left_		Middle _		Right	
Blade condition	1:	□ Good	☐ Grooved	☐ Smiled	□ Not c	ontacting belt	☐ Damaged
Measurement o	of sprin	g: Requii	red	_ Currently			
For PAT Tension	ner Onl	y: Air/Nit	rogen Pressur	e Required	Cui	rently	
		□ Insp	ect Air Bags	and Lines			
Was Cleaner A	djusted	l: □ Yes	□No				
Pole Condition:		□ Good	☐ Bent	□ Worn			
Lagging:		□ Side Lag □	Ceramic	□ Rubber	□ Other	□ None	
Condition of lag	ging:	□ Good	□Bad	□ Other			
Cleaner's Overa	all Peri	ormance:	(Rate the fol	lowing 1 - 5, 1= ve	ery poor - 5 = ve	ery good)	
Appearance:		Comments:					
Location:		Comments:					
Maintenance:		Comments:					
Performance:		Comments:					
Other comment	s						

Section 7 - Trouble shooting

Problem	Possible Cause	Possible Solutions			
	Cleaner under-tensioned	Adjust to correct tension – see spring length/PSI chart			
Poor cleaning	Cleaner over-tensioned	Adjust to correct tension – see spring length/PSI chart			
performance	Cleaner installed in wrong location	Verify "C" dimension, relocate to correct dimension			
	Cleaner blade worn or damaged	Replace cleaner blade			
	Tension on cleaner too high/low	Adjust to correct tension – see spring length/PSI chart			
	Cleaner not located correctly	Check cleaner location for correct dimensions			
Rapid Blade Wear	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			
	Blade wider than material path	Replace blade with width to match material path			
Center wear on blade (smile effect)	Tension on cleaner too high/low	Adjust to correct tension – see spring length/PSI chart			
	Material very thick and wet	Increase tension (consult factory)			
	Mechanical splice damaging blade	Repair, skive or replace splice			
Unusual wear or	Belt damaged or ripped	Repair or replace belt			
damage to blade	Cleaner not correctly located	Verify "C" dimension, relocate to correct dimension			
	Damage to pulley or pulley lagging	Repair or replace pulley			
	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			
Vibration or noise	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 tension not set correctly	Ensure correct tension/increase tension slightly			
Cleaner being pushed away from pulley	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			

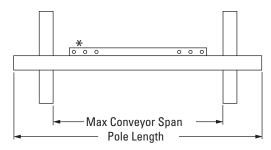


8.1 Specifications & Guidelines - MHP

Pole Length Specifications*

ore tong openine										
CLEAN	ER SIZE	MAX OVERALL POLE LENGTH			R POLE GTH	MAXIMUM CONVEYOR SPAN				
mm	in.	mm	in.	mm	in.	mm	in.			
600	24	1950	78	600	24	1650	66			
750	30	2100	84	750	30	1800	72			
900	36	2250	90	900	36	1950	78			
1050	42	2400	96	1050	42	2100	84			
1200	48	2550	102	1200	48	2250	90			
1350	54	2700	108	1350	54	2400	96			
1500	60	2850	114	1500	60	2550	102			
1800	72	3150	126	1800	72	2850	114			
2100	84	3450	138	2100	84	3150	126			
2400	96	3750	150	2400	96	3450	138			
2700	108	4050	162	2700	108	3750	150			
3000	120	4350	174	3000	120	4050	162			

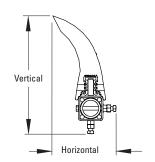
^{*} For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 750 mm (30") of extended pole length.
Pole diameter 73 mm (2-7/8")



^{*}Each pole size can be used with a blade size matched to the belt's material path (ranging from belt width -150mm (-6") to belt width -900mm (-36") in 150mm (6") increments). Available down to 600mm (24") blade width.

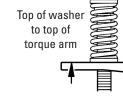
Clearance Guidelines for Installation

HORIZ CLEARANCI	ONTAL E REQUIRED	VERT CLEARANCI	
mm in.		mm	in.
200 8		488	19.5



PST Spring Length Chart

1									
	ade dth	White Springs		Silver Springs		Red Springs			
mm	in.	mm	in.	mm	in.	mm	in.		
450	18	143	5 5/8	N/A	N/A	N/A	N/A		
600	24	137	5 3/8	159	6 1/4	N/A	N/A		
750	30	127	5	156	6 1/8	159	6 1/4		
900	36	121	4 3/4	152	6	159	6 1/4		
1050	42	N/A	N/A	152	6	156	6 1/8		
1200	48	N/A	N/A	149	5 7/8	156	6 1/8		
1350	54	N/A	N/A	146	5 3/4	152			
1500	60	N/A	N/A	143	5 5/8	152	6		
1650	66	N/A	N/A	143	5 5/8	149	5 7/8		
1800	72	N/A	N/A	140	5 1/2	149	5 7/8		
1950	78	N/A	N/A	137	5 3/8	146	5 3/4		
2100	84	N/A	N/A	N/A	N/A	146	5 3/4		
2250	90	N/A	N/A	N/A	N/A	143	5 5/8		
2400	96	N/A	N/A	N/A	N/A	143	5 5/8		
2550	102	N/A	N/A	N/A	N/A	140	5 1/2		
2700	108	N/A	N/A	N/A	N/A	140	5 1/2		
2850	114	N/A	N/A	N/A	N/A	137	5 3/8		
Cl1:	. 11 .		-						



PAT Pressure Chart

Bla Wi		Pres	sure
mm	in.	kPa	psi
450	18	55	8
600	24	69	10
800	32	90	13
900	36	103	15
1050	42	124	18
1200	48	138	20
1350	54	159	23
1500	60	172	25
1650	66	193	28
1800	72	214	31
1950	78	228	33
2100	84	248	36
2250	90	262	38
2400	96	283	41
2550	102	296	43
2700	108	317	46
2850	114	331	48

Shading indicates preferred spring option.

Specifications:

•	Maximum Be	elt Speed	. 7	.5	m/s	(1	500	FPM)
---	------------	-----------	-----	----	-----	----	-----	-----	---

Temperature Rating-35 to 82°C (-30 to 180°F)

Minimum Pulley Diameter500 mm (20")

Usable Blade Wear Length200 mm (8")

[•] Blade Material......Polyurethane (proprietary blend for abrasion resistance and long wear)

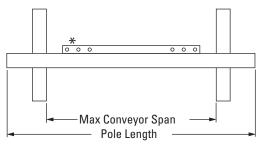
CEMA Cleaner Rating......Class 5

8.2 Specifications & Guidelines - MHP UG

Pole Length Specifications*

CLEANER SIZE		MAX OVERALL POLE LENGTH			R POLE GTH	MAXIMUM CONVEYOR SPAN		
mm	in.	mm	in.	mm	in.	mm	in.	
1200	48	3600	144	1350	54	3300	132	
1350	54	3750	150	1500	60	3450	138	
1500	60	3900	156	1650	66	3600	144	
1800	72	4200	168	1950	78	3900	156	
2100	84	4500	180	2250	90	4200	168	
2400	96	4800	192	2550	102	4500	180	
2700	108	5100	204	2850	114	4800	192	
3000	120	4350	216	3150	126	5100	204	

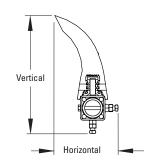
^{*} For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 750mm (30") of extended pole length.
Pole diameter 73mm (2-7/8").



*Each pole size can be used with a blade size matched to the belt's material path (ranging from belt width -150mm (-6") to belt width -750mm (-30") in 150mm (6") increments). Available down to 1200mm (48") blade width.

Clearance Guidelines for Installation

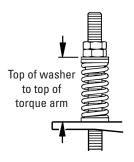
	ONTAL E REQUIRED	VERT CLEARANCI	
mm	in.	mm	in.
200	8	488	19.5



PST Spring Length Chart

	ide dth	White Springs		Silver Springs		Red Springs	
mm	in.	mm	in.	mm	in.	mm	in.
450	18	143	5 5/8	N/A	N/A	N/A	N/A
600	24	137	5 3/8	159	6 1/4	N/A	N/A
750	30	127	5	156	6 1/8	159	6 1/4
900	36	121	4 3/4	152	6	159	6 1/4
1050	42	N/A	N/A	152	6	156	6 1/8
1200	48	N/A	N/A	149	5 7/8	156	6 1/8
1350	54	N/A	N/A	146	5 3/4	152	
1500	60	N/A	N/A	143	5 5/8	152	6
1650	66	N/A	N/A	143	5 5/8	149	5 7/8
1800	72	N/A	N/A	140	5 1/2	149	5 7/8
1950	78	N/A	N/A	137	5 3/8	146	5 3/4
2100	84	N/A	N/A	N/A	N/A	146	5 3/4
2250	90	N/A	N/A	N/A	N/A	143	5 5/8
2400	96	N/A	N/A	N/A	N/A	143	5 5/8
2550	102	N/A	N/A	N/A	N/A	140	5 1/2
2700	108	N/A	N/A	N/A	N/A	140	5 1/2
2850	114	N/A	N/A	N/A N/A		137	5 3/8

 $Shading\ indicates\ preferred\ spring\ option.$



PAT Pressure Chart

Bla Wi	nde dth	Pres	sure
mm	in.	kPa	psi
450	18	55	8
600	24	69	10
800	32	90	13
900	36	103	15
1050	42	124	18
1200	48	138	20
1350	54	159	23
1500	60	172	25
1650	66	193	28
1800	72	214	31
1950	78	228	33
2100	84	248	36
2250	90	262	38
2400	96	283	41
2550	102	296	43
2700	108	317	46
2850	114	331	48

Specifications:

Minimum Pulley Diameter500 mm (20")
 Blade Height306 mm (12,25")

Usable Blade Wear Length200 mm (8")

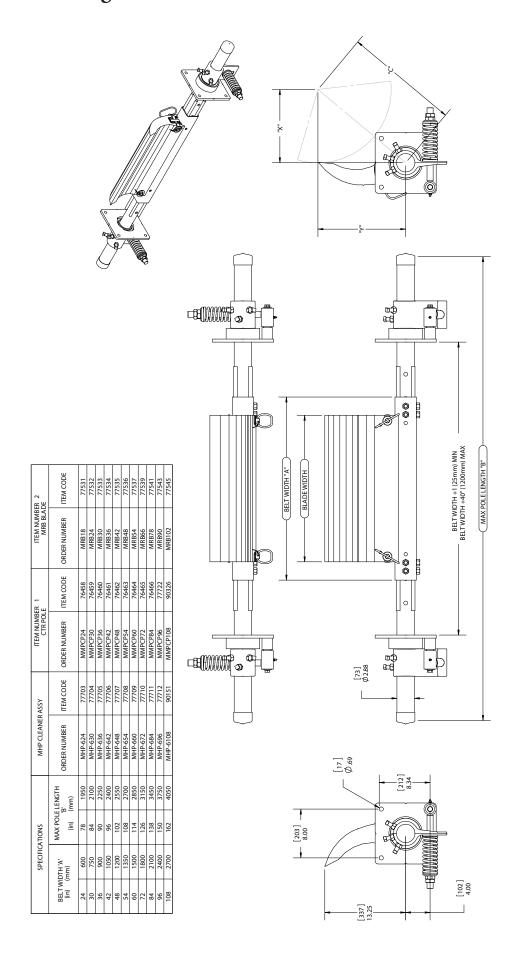
Blade Material.....Polyurethane (proprietary blend for abrasion resistance and long wear)

Available for Belt Widths......1200 to 3000mm (48 to 120"). Other sizes available upon request.

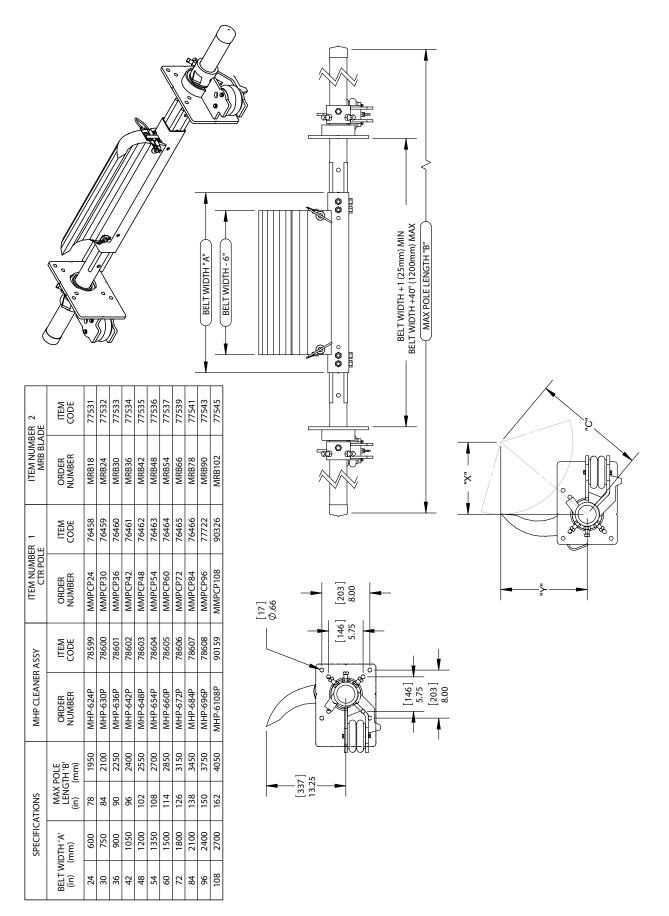
CEMA Cleaner Rating......Class 5



8.3 CAD Drawing - MHP - PST2

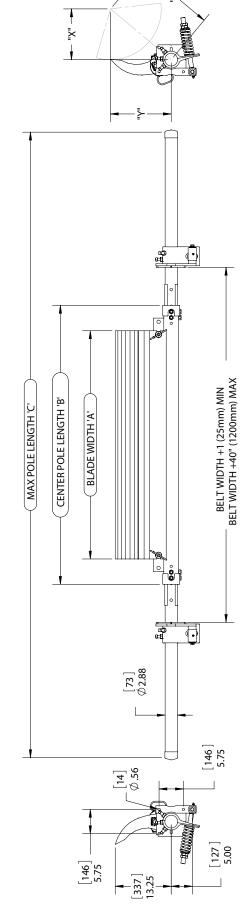


8.4 CAD Drawing - MHP - PAT



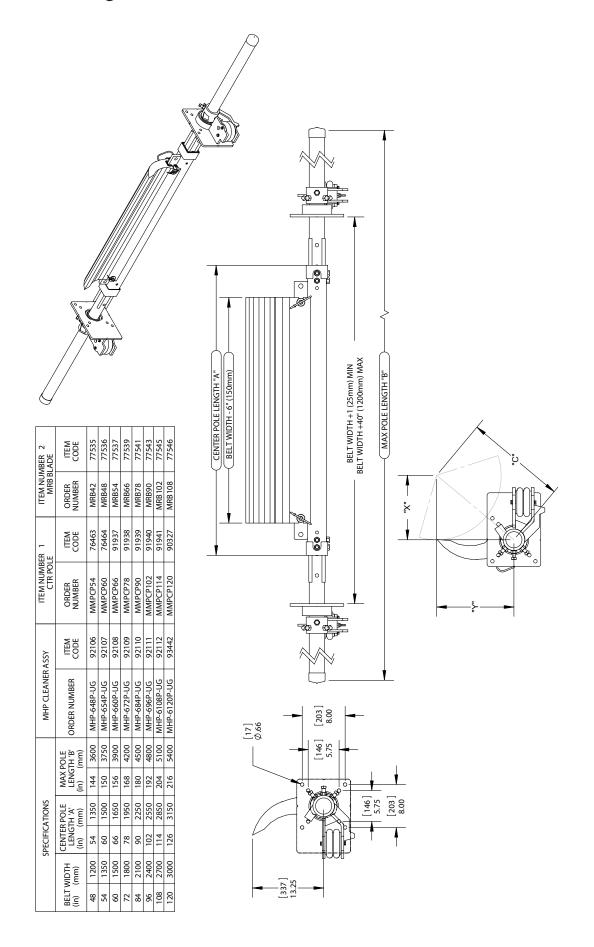
Section 8-Specs and CAD Drawings

8.5 CAD Drawing - MHP UG - PST2



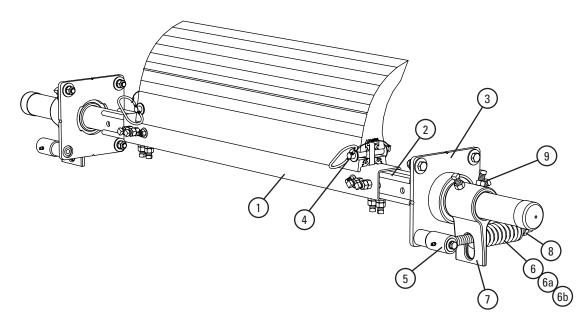
ADE	ITEM	77535	77536	77537	77539	77541	77543	77545	77547
MRB BLADE	ORDER	MRB42	MRB48	MRB54	MRB66	MRB78	MRB90	MRB102	MRB114
ITEM NUMBER 1 CTR POLE	TEM	76463	76464	91937	91938	91939	91940	91941	90327
	ORDER	MMPCP54	MMPCP60	MMPCP66	MMPCP78	MMPCP90	MMPCP102	MMPCP114	MMPCP120
ASSY	CODE	92061	92062	92063	92064	92065	95066	92067	93440
MHP CLEANER ASSY	ORDER NUMBER	MHP-648-UG	MHP-654-UG	MHP-660-UG	MHP-672-UG	MHP-684-UG	MHP-696-UG	MHP-6108-UG	MHP-6120-UG
	MAX POLE LENGTH 'C' (in) (mm)	3600	3750	3900	4200	4500	4800	5100	5400
	-	144	150	156	168	180	192	204	216
Ø	BLADE WIDTH CENTER POLE 'A' LENGTH 'B' (in) (mm) (in) (mm)	1350	1500	1650	1950	2250	2550	2850	3150
CATION	CENTE (in)	54	9	99	78	06	102	114	126
SPECIFICATIONS	LADE WIDTH 'A' (in) (mm)	1050	1200	1350	1650	1950	2250	2550	2850
	BLADE	42	48	54	99	78	06	102	114
	MIDTH (mm)	1200	1350	1500	1800	2100	2400	2700	3000
	BELT (in)	48	54	09	72	84	96	108	120

8.6 CAD Drawing - MHP UG - PAT



Section 9 – Replacement Parts

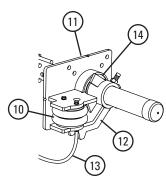
9.1 Replacement Parts List - MHP



Replacement Parts

		ORDERING	ITEM	WT.	
REF	DESCRIPTION	NUMBER	CODE	KG	
	600 mm (24") Center Pole	MMPCP24	76458	15.6	
	750 mm (30") Center Pole	MMPCP30	76459	19.5	
	900 mm (36") Center Pole	MMPCP36	76460	23.4	
	1050 mm (42") Center Pole	MMPCP42	76461	27.2	
	1200 mm (48") Center Pole	MMPCP48	76462	31.2	
1	1350 mm (54") Center Pole	MMPCP54	76463	35.1	
1	1500 mm (60") Center Pole	MMPCP60	76464	39.0	
	1800 mm (72") Center Pole	MMPCP72	76465	46.8	
	2100 mm (84") Center Pole	MMPCP84	76808	54.6	
	2400 mm (96") Center Pole	MMPCP96	77722	62.4	
	2700 mm (108") Center Pole	MMPCP108	90326	70.2	
	3000 mm (120") Center Pole	MMPCP120	90327	77.9	
2	Extender Pole Kit (2 ea.)	MHP-EP	76392	24.5	
3	Mounting Plate Kit* (2 ea.)	MHPMPK	77727	20.1	
4	Blade Pin Kit* (1 ea.)	MHPBPK	77728	0.4	
5	Torque Pivot Kit* (1 ea.)	PTPK	75897	3.2	
6	Tension Spring—White (1 ea.) for blades 450–1050mm (18–42")	PSTS-W	75898	0.8	
6a	Tension Spring—Silver (1 ea.) for blades 1200—1950mm (48—78")	PSTS-S 75899		1.4	
6b	Tension Spring—Red (1 ea.) for blades 2100—2850mm (84—114")	PSTS-R 77726		2.0	
7	Torque Arm Kit* (1 ea.)	PSTA	75896	5.2	
8	Bushing Kit (2 ea.)	QMTBK-W	76098	0.1	
9	Jam Nut Kit PST Tensioner	JNK-D 7989		0.14	
-	PST Spring Tensioner*—White (incl. 2 ea. Items 3, 5, 6, 7, & 8) for blades 450–1050mm (18–42")	PST2-W	77723	39.1	
-	PST Spring Tensioner*—Silver (incl. 2 ea. Items 3, 5, 6a, 7a, & 8) for blades 1200–1950mm (48–78")	PST2-S	77724	39.6	
-	PST Spring Tensioner*—Red (incl. 2 ea. Items 3, 5, 6b, 7b, & 8) for blades 2100–2850mm (84–114*)	PST2-R	77725	40.3	

*Hardware Included Lead Time: 1 working day



PAT Air & Nitrogen Tensioner Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. KG
10	Air/Water Bag (1 ea.)	AWTB	75905	1.7
11	Mounting Base (1 ea.)	AWTMB	75906	1.3
12	Torque Arm * (1 ea.)	AWTA	75907	0.7
13	Hose Kit (15M (50') of hose and 6 hose clamps)	AWTHK	75909	3.0
14	AWT Pole Bearing Assy (for cleaners shipped after 4/2016)	AWTPBA	90000	1.0
-	AWT Air/Water Tensioner (includes 2 each items 9, 10, 11 & 1 ea. item 12)	AWTNCB	76069	34.1

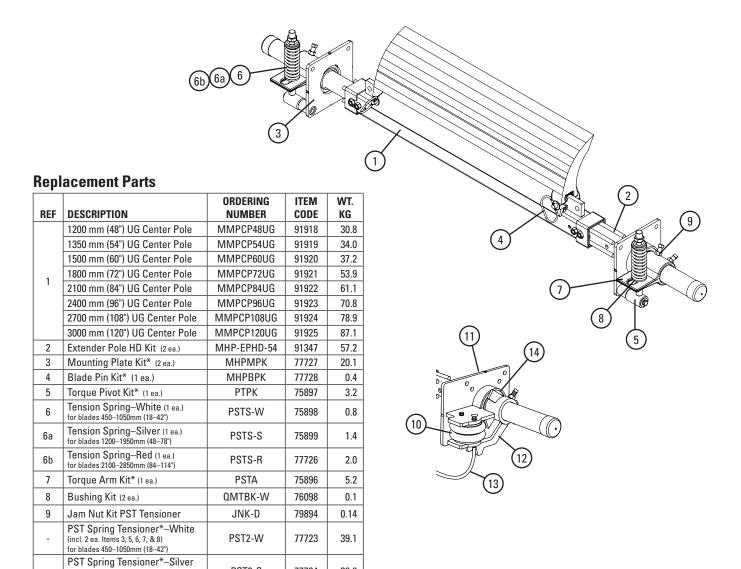
*Hardware Included Lead time: 1 working day

Spring Tensioner Selection Chart

CLEANER BLADE WIDTH	77723 PST2-W	77724 PST2-S	77725 PST2-R
MegaShear™ 450–1050mm (18–42")	Х		
MegaShear [™] 1200–1950mm (48–78")		Х	
MegaShear [™] 2100–2850mm (84–114")			Х

Section 9 – Replacement Parts

9.2 Replacement Parts List - MHP UG



*Hardware Included Lead Time: 1 working day

(incl. 2 ea. Items 3, 5, 6a, 7a, & 8)

for blades 1200–1950mm (48–78")
PST Spring Tensioner*–Red

(incl. 2 ea. Items 3, 5, 6b, 7b, & 8) for blades 2100–2850mm (84–114")

PAT Air & Nitrogen Tensioner Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. KG
10	Air/Water Bag (1 ea.)	AWTB	75905	1.7
11	Mounting Base (1 ea.)	AWTMB	75906	1.3
12	Torque Arm * (1 ea.)	AWTA	75907	0.7
13	Hose Kit (15M (50') of hose and 6 hose clamps)	AWTHK	75909	3.0
14	AWT Pole Bearing Assy (for cleaners shipped after 4/2016)	AWTPBA	90000	1.0
-	AWT Air/Water Tensioner (includes 2 each items 9, 10, 11 & 1 ea. item 12)	AWTNCB	76069	34.1

PST2-S

PST2-R

77724

77725

39.6

40.3

*Hardware Included Lead time: 1 working day

Spring Tensioner Selection Chart

CLEANER BLADE WIDTH	77723 PST2-W	77724 PST2-S	77725 PST2-R
MegaShear™ 450–1050mm (18–42")	Х		
MegaShear™ 1200–1950mm (48–78")		Х	
MegaShear™ 2100–2850mm (84–114")			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

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

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



