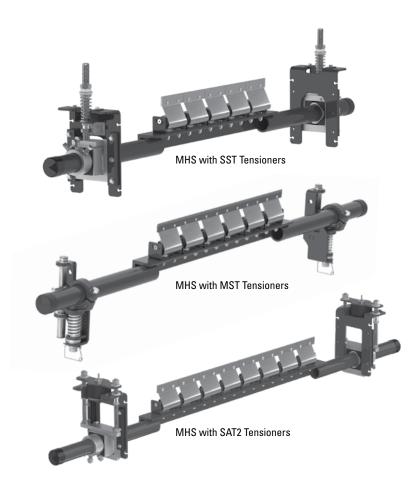
MHS HD Secondary Belt Cleaner

Installation, Operation and Maintenance Manual





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.

Section 1 - Important Information	4
1.1 General Introduction	
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
Section 3 - Pre-Installation Checks and Options	
3.1 Checklist	
3.2 Optional Installation Accessories	7
Section 4 - Installation Instructions	
4.1 Installation Instructions - MHS with SST Tensioner	
4.2 Push-up Tensioning Instructions (SST)	
4.3 Installation Instructions - MHS with MST Tensioner	
4.4 Installation Instructions - MHS with SAT2 Tensioner	
4.5 Push-up Tensioning Instructions for SAT2	17
Section 5 - Pre-Operation Checklist and Testing	10
5.1 Pre-Op Checklist	
5.2 Test Run the Conveyor	
5.2 Test Run the Conveyor	10
Section 6 - Maintenance	19
6.1 New Installation Inspection	19
6.2 Routine Visual Inspection	
6.3 Routine Physical Inspection	
6.4 Maintenance Log	
6.5 Cleaner Maintenance Checklist	21
Section 7 - Troubleshooting	22
Section 8 - Specs and CAD Drawings	
8.1 Specs and Guidelines	
8.2 CAD Drawing - MHS Cleaners with SST Tensioners	
8.3 CAD Drawing - MHS Cleaners with MST Tensioners	
8.4 CAD Drawing - MHS Cleaners with SAT2 Tensioners	26
Section 9 - Replacement Parts	27
9.1 Replacement Parts - MHS	
9.2 Replacement Parts - Optional MST and SAT2 Tensioners	
9.3 Replacement Parts - MHS Stainless Steel	
Section 10 - Other Flexco Conveyor Products	31



1.1 General Introduction

We at Flexco are very pleased that you have selected an MHS HD Secondary Cleaner for your conveyor system.

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

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

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

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 MHS HD Secondary Cleaner is designed to be easily installed and serviced by your on-site personnel. However, if you would prefer complete turn-key factory service, please contact your local Flexco Field Representative. Before installing and operating the MHS HD Secondary Cleaner, it is important to review and understand the following safety information.

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

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.



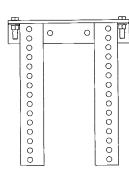
Section 3 - Pre-installation Checks and Options

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
 - Is the install on an open head pulley requiring mounting structure (see 3.2 - Optional Installation Accessories)

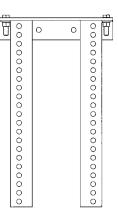
3.2 Optional Installation Accessories

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



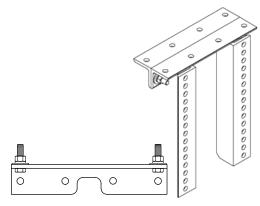
76071 SST Standard Mounting Bracket Kit (for SST Tensioner) • For most secondary cleaner installs. • 13" W x 15 1/2" L

(325mm W x 388mm L)



76072 SST Long Mounting Bracket Kit (for SST Tensioner)

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



76073 SST Optional Top Angle Kit

(for SST Tensioner)

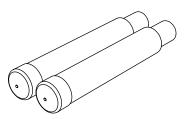
• Used with both standard and long mounting bracket kits for additional mounting options.

• 13" (325mm) L

76024

Pole Extender Kit (includes 2 pole extenders)

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



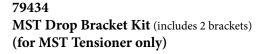
Optional Mounting Kits (includes 2 brackets/bars)

Description	Ordering Number	ltem Code	Wt. Lbs.						
Standard Mounting Bracket Kit*	SSTSMB	76071	34.3						
Long Mounting Bracket Kit*	SSTLMB	76072	43.5						
Optional Top Angle Kit*	SSTOTA	76073	10.5						
Pole Extender Kit	MAPEK	76024	21.9						
MST Drop Bracket Kit	MSTDB	79434	27.7						

*Hardware Included

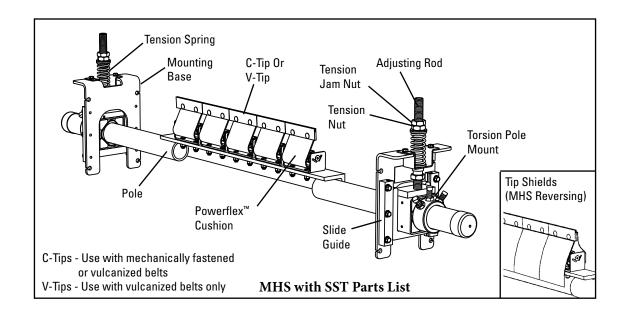
Lead time: 1 working day







MHS HD with SST Standard & Reversing Secondary Cleaners

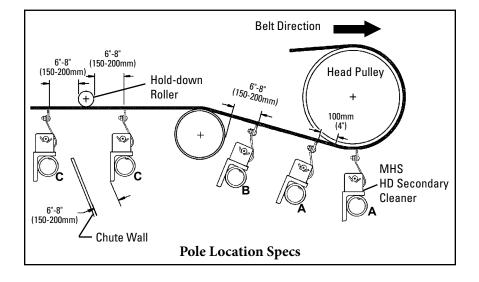


Physically lock out and tag the conveyor at the power source before you begin cleaner installation.

Tools Needed:

OR

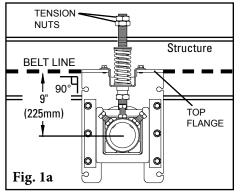
- 14mm (9/16") Wrench
- 19mm (3/4") Wrench
- 22mm (7/8") Wrench
- 35mm (1-3/8") Wrench
- OR
- Large Adjustable/Crescent Wrenches (x2)
- Clamps (x2)
- Torch (as needed)
- Welder (as needed)
- Tape Measure
- Level
- Marking Pen or Soapstone

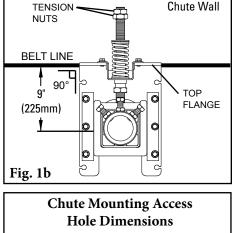


8

MHS HD with SST Standard & Reversing Secondary Cleaners

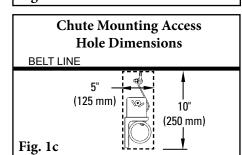
1. Install the spring tensioner mounting bases. (For push-up tensioning refer to additional instructions on Page 10.) Clamp the mounting base into position so the top flange of the base is aligned with the belt (Fig. 1a). Bolt or weld the mounting base in place. Locate and install the mounting base on the opposite side. Adjust the tension nuts on each side



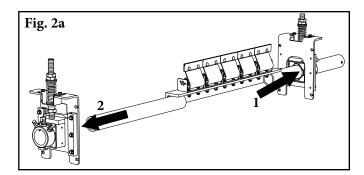


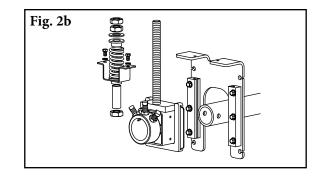
so the center of the torsion pole mount is 225mm (9") below the belt line.

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



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



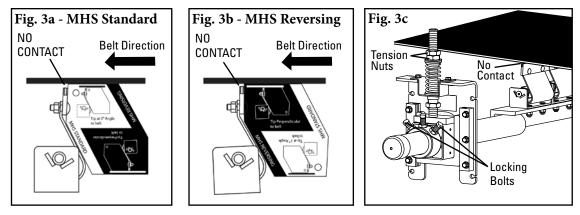




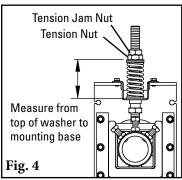
Section 4.1 - Installation Instructions

MHS HD with SST Standard & Reversing Secondary Cleaners

3. Set the blade angle. Center the pole/blades on the belt. For MHS Standard: Rotate the pole until the tips align with the white "MHS Standard" side of the tip setup gauge provided (Fig. 3a). For MHS Reversing: Rotate the pole until the tips are perpendicular to the belt, using the black "MHS Reversing" side of the tip setup gauge provided (Fig. 3b). Tighten the three locking bolts on each torsion pole mount to lock the pole in place (Fig. 3c). Best practice is to first tighten the middle bolt before tightening the outer bolts to ensure everything is secure. There should be no blade-to-belt contact while locking the pole in the correct position. If contact occurs, double check the dimension from Step 1.



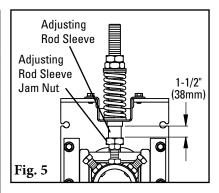
4. Set the blade tension. Loosen the top tension jam nuts on both sides. Turn the tension nuts until the correct spring compression is reached (Fig. 4). Spring compression is determined by spring length. See the chart at right for the correct spring length for your belt width.



Shading indicates preferred spring option. Measure from the top of the flat washer to the mounting base to determine spring length.

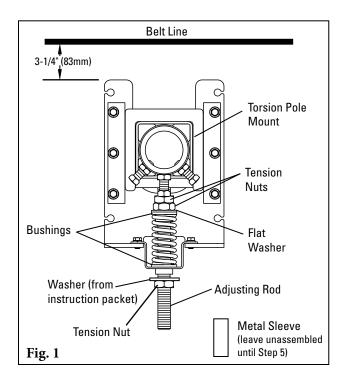
SST Tensioner Spring Length Chart

	Blade Width		ite ing		ver 'ing	Bla Spr	ack 'ing	Go Spr	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
18	450	3 3/8	86	4	102	N/A	N/A	N/A	N/A
24	600	3 1/8	79	3 7/8	98	N/A	N/A	N/A	N/A
30	750	2 7/8	73	3 3/4	95	N/A	N/A	N/A	N/A
36	900	N/A	N/A	3 3/4	95	3 7/8	98	N/A	N/A
42	1050	N/A	N/A	3 5/8	92	3 3/4	95	N/A	N/A
48	1200	N/A	N/A	3 1/2	89	3 5/8	92	N/A	N/A
54	1350	N/A	N/A	3 3/8	86	3 5/8	92	3 3/4	95
60	1500	N/A	N/A	3 1/4	83	3 1/2	89	3 3/4	95
72	1800	N/A	N/A	N/A	N/A	3 3/8	86	3 5/8	92
84	2100	N/A	N/A	N/A	N/A	3 1/8	79	3 1/2	89
96	2400	N/A	N/A	N/A	N/A	N/A	N/A	3 1/2	89
108	2700	N/A	N/A	N/A	N/A	N/A	N/A	3 3/8	86
120	3000	N/A	N/A	N/A	N/A	N/A	N/A	3 3/8	86

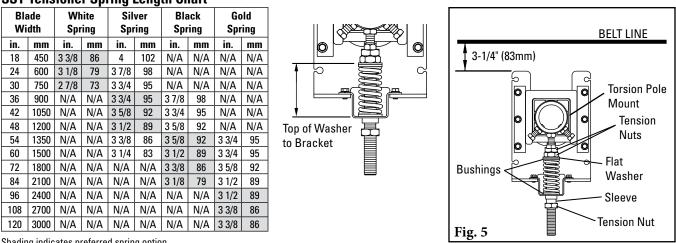


- **5.** Set adjusting rod sleeve. After setting the blade tension, screw the adjusting rod sleeve into the UHMW bushing until 1-1/2" (38mm) is showing (Fig. 5). Tighten the adjusting rod sleeve jam nut.
- **6.** Test run the cleaner and inspect the cleaning performance. If vibration occurs or more cleaning efficiency is desired, increase the blade tension by making 1/8" (3 mm) compression adjustments on the tension springs.

MHS HD Secondary Cleaner



- 1. Reconfigure the standard pull-up tensioner to the push-up style. Remove the 3 tension nuts, the flat washer, 2 bushings, the spring, the sleeve and the hat bracket; reassemble (Fig. 1) with 2 tension nuts, the flat washer, 2 bushings, the spring and the hat bracket on the upper end of the adjusting rod. Add washer (from instruction packet) and 3rd tension nut to bottom of adjusting rod.
- 2. Install the tensioner mounting bases. Mount the bases to the structure or chute so that the tops of the base legs are 3-1/4" (83mm) below the belt (Fig. 1).
- 3. Install the cleaner pole and set the blade angle. Follow the installation steps from the cleaner instructions on Page 8. Note: be sure the lock bolts on the torsion pole mount have been securely tightened to lock the pole in place before moving to Step 4. Best practice is to first tighten the middle bolt before tightening the outer bolts to ensure everything is secure.
- **4.** Set the blade tension. Remove the bottom tension nut and washer from the adjusting rod. Turn the 2 upper tension nuts until the spring is compressed to the length shown on the Spring Length Chart below. Tighten the two tension nuts together to prevent loosening.



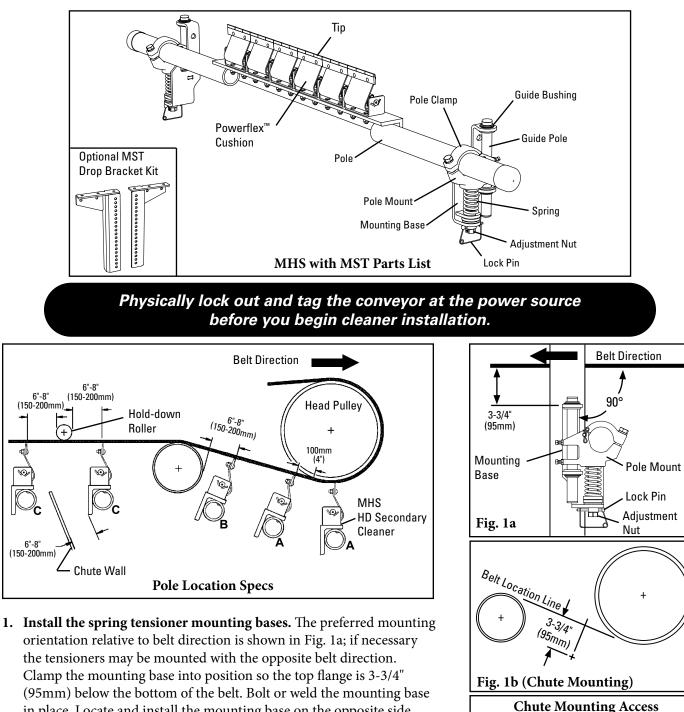
SST Tens	sioner S	pring	Length	Chart
----------	----------	-------	--------	-------

Shading indicates preferred spring option. NOTE: Measure from the top of the flat washer to the mounting base to determine spring length.

5. Replace the sleeve. Position the sleeve over the adjusting rod and turn it until it is in the middle of the bushing. Replace the bottom tension nut and tighten until it locks the sleeve in place (Fig. 5).



MHS HD with MST Standard & Reversing Secondary Cleaners for belts 18" - 72" (450-1800mm)



Hole Dimensions

10

(250mm)

BELT LINE

Fig. 1c

5" (125mm)

(95mm) below the bottom of the belt. Bolt or weld the mounting base in place. Locate and install the mounting base on the opposite side. Remove the tensioner lock pins and turn the adjustment nuts to fully lower the pole mount.

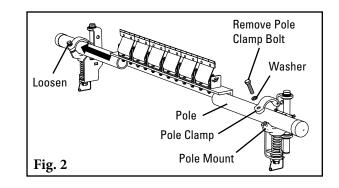
Note: For chute mounting, a belt location line must be drawn on the chute wall so the mounting base can be aligned 3-3/4" (95mm) below the belt (Fig. 1b). Cut access holes as needed.

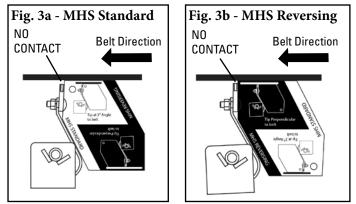
Ø

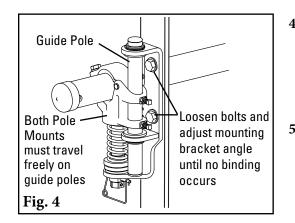
Section 4.3 - Installation Instructions

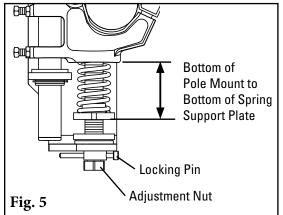
MHS HD with MST Standard & Reversing Secondary Cleaners

- 2. Install the pole. Remove pole clamp bolt and lift or remove top half of pole clamp from the tensioner on the near side of the conveyor, and loosen pole clamp bolt on the opposite side. Slide the pole across the conveyor and through the loosened pole clamp, then place the near end of pole in remaining pole clamp (Fig. 2). Replace top half of pole clamp, reinstall the bolt and tighten both bolts finger tight.
- 3. Set the blade angle. Center the pole/blades on the belt. For MHS Standard: Rotate the pole until the tips align with the white "MHS Standard" side of the tip setup gauge provided (Fig. 3a). For MHS Reversing: Rotate the pole until the tips are perpendicular to the belt, using the black "MHS Reversing" side of the tip setup gauge provided (Fig. 3b). Tighten the pole clamp bolt on each pole mount to lock the pole in place. There should be no blade-to-belt contact while locking the pole in the correct position. If contact occurs, double check the dimension from Step 1.









- 4. Ensure the tensioner travels freely. Pull up and push down on each pole end to ensure the pole mount travels freely on the guide pole. If there is any sign of binding, loosen the bolts on the mounting base and pivot until the tensioner moves freely (Fig. 4). Retighten bolts.
- 5. Set the blade tension. Turn the adjustment nuts until the correct spring compression is reached (Fig. 5). Spring compression is determined by the spring length. See the chart below for the correct spring length for your belt width. Replace locking pins.

MST Tensioner Spring Length Chart

Blade Width		2 White Springs		2 Si Spri	lver ings	2 Black Springs			
in.	mm	in.	mm	in.	mm	in.	mm		
18	450	2 7/8	73	3 3/8	86	3 1/2	89		
24	600	2 5/8	67	3 3/8	86	3 3/8	86		
30	750	2 3/8	60	3 1/4	83	3 3/8	86		
36	900	2 1/8	54	3 1/8	79	3 1/4	83		
42	1050	1 7/8	48	3	76	3 1/8	79		
48	1200	N/A	N/A	2 7/8	73	3 1/8	79		
54	1350	N/A	N/A	2 7/8	73	3	76		
60	1500	N/A	N/A	2 3/4	70	2 7/8	73		
72	1800	N/A	N/A	2 1/2	64	2 3/4	70		

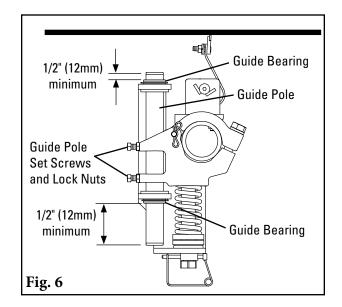
Shading indicates preferred spring option.



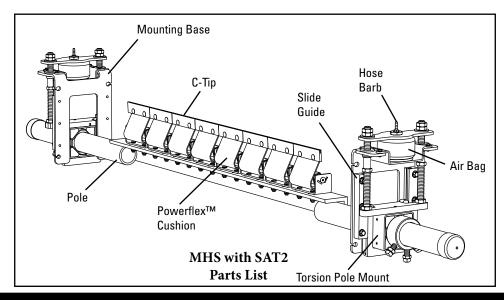
Section 4.3 - Installation Instructions

MHS HD with MST Standard & Reversing Secondary Cleaners

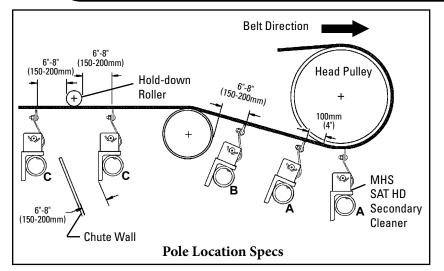
- 6. Secure guide poles. Ensure the ends of the guide pole extend at least 1/2" (12mm) outside top and bottom guide bearings. If adjustment is necessary, loosen guide pole set screws and lock nuts, then tap guide pole up or down. Tighten guide pole set screws and lock nuts (Fig. 6).
- 7. Check movement of each tensioner to ensure they do not bind up. If there are binding concerns, refer to Step 4.
- 8. Test run the cleaner and inspect the cleaning performance. If vibration occurs or more cleaning efficiency is desired, increase the blade tension by making 1/8" (3mm) compression adjustments on the tension springs.



MHS with SAT2 Tensioner



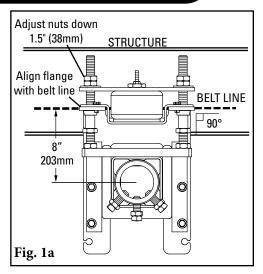
Physically lock out and tag the conveyor at the power source before you begin cleaner installation.

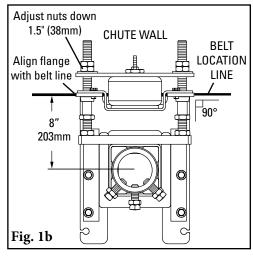


1. Install the air/water tensioner mounting bases. Clamp the mounting base into position so the flange is even with the belt (Fig. 1a). Bolt the mounting base in place and adjust threaded rod nuts 1-1/2" (38mm) down from the top of the threaded rod. Locate and install the mounting base on the opposite side and adjust the threaded rod nuts down on that side as well.

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

NOTE: If push-up tensioning is needed because of space restriction or obstruction, follow steps on Page 16 to reconfigure the tensioners.



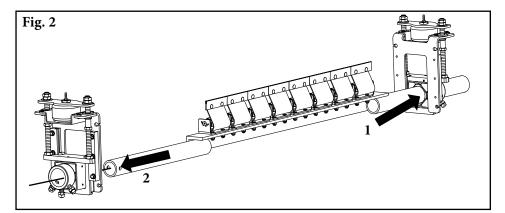


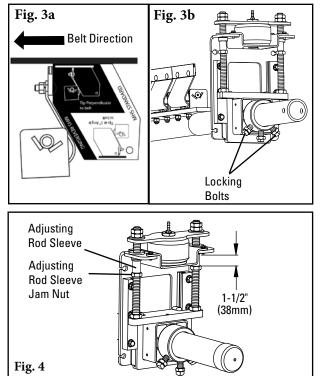


15

MHS with SAT2 Tensioner

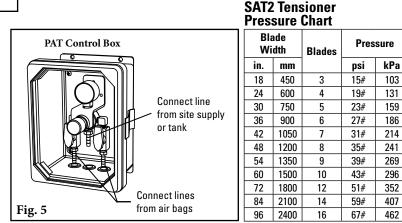
2. Install the pole. Slide the pole into one torsion pole mount as far as needed and locate the other end into the opposite mount (Fig. 2). If there is not enough space, remove one of the mounting bases, slide the pole through the torsion pole mount, and remount the base.





5. Connect the supply lines and set tension pressure. With the parts supplied, attach a line to each air bag and run the lines to the outlet side of the control box (Fig. 4). NOTE: Be sure lines are safely away from the belt. Connect the 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 below. Pressure may be reduced to suit application.

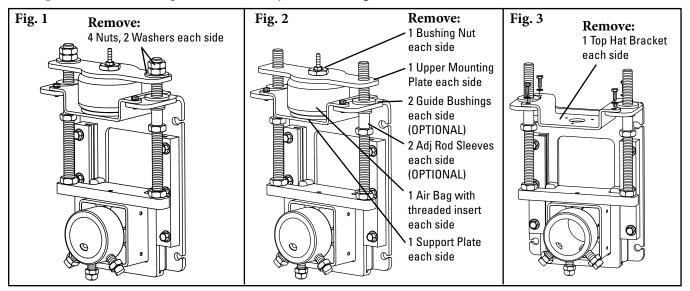
- 3. Set the blade angle. Center the pole/blades on the belt. For MHS Standard: Rotate the pole until the tips align with the white "MHS Standard" side of the tip setup gauge provided. For MHS Reversing: Rotate the pole until the tips are perpendicular to the belt, using the black "MHS Reversing" side of the tip setup gauge provided (Fig. 3a). Tighten the three locking bolts on each torsion pole mount to lock the pole in place (Fig. 3b). Best practice is to first tighten the middle bolt before tightening the outer bolts to ensure everything is secure. There should be no blade-tobelt contact while locking the pole in the correct position. If contact occurs, double check the dimension from Step 1.
- **4.** Set adjusting rod sleeve. After setting the blade tension, screw the adjusting rod sleeve into the UHMW bushing until 1-1/2" (38mm) is showing (Fig. 4). Tighten the adjusting rod sleeve jam nut.



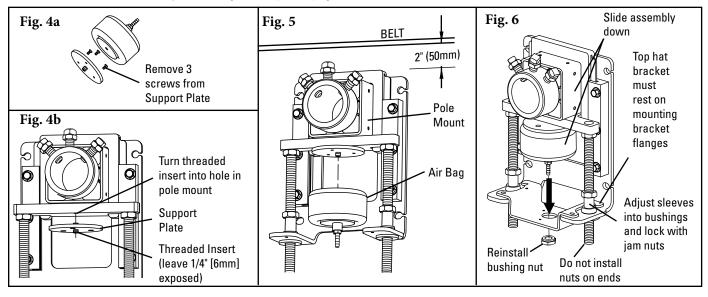
6. Test run the cleaner and inspect the cleaning performance. If vibration occurs, increase tip layback by a small amount (approx. 3 degrees).

MHS with SAT2 Tensioner

- 1. Disassemble guide kit. Remove nuts and washers from both sides of tensioner (Fig. 1).
- 2. Disassemble upper mounting plate and air bag. Remove and save bushing nut. Remove and discard upper mounting plate. Remove (unscrew) and save air bag, threaded insert and support plate (Fig. 2). Optional: Remove guide bushings. It will not affect the tensioner if these are left in place.
- 3. Remove and save top hat bracket and its hardware (Fig. 3).
- 4. Flip over PAT mounting bracket assembly. The two flanges are now at the bottom.



- Reassemble the SAT2 Tensioner. Remove three screws from air bag support plate (Fig. 4a). Turn the threaded insert into the support plate. Also turn part of the threaded insert into the hole on pole mount. (Fig. 4b). Ensure 1/4" (6mm) of threaded insert is still exposed, then turn the air bag onto the threaded insert and tighten (Fig. 5).
- 6. Reassemble top hat bracket. Ensure bracket is resting on flanges of mounting bracket (Fig. 6).
- 7. Slide pole mount/threaded rods/air bag assembly down with hose barb through hole in top hat bracket and reinstall bushing nut (Fig. 6).
- 8. Complete installation by following the steps on page 15.





17

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.

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 MHS Belt Cleaner operates at the discharge end of the conveyor and is in direct contact with the moving belt. Only visual observations can be made while the belt is running. Service tasks can be done only with the conveyor stopped and by observing the correct lockout/tagout procedures.

6.1 New Installation Inspection

After the new cleaner has run for a few days a visual inspection should be made to ensure the cleaner is performing properly. Make adjustments as needed.

6.2 Routine Visual Inspection (every 2-4 weeks)

A visual inspection of the cleaner and belt should look for:

- If spring length is the correct length for optimal tensioning
- If belt looks clean or if there are areas that are dirty
- If blade is worn out and needs to be replaced
- If there is damage to the blade or other cleaner components
- If fugitive material is built up on cleaner or in the transfer area
- If there is cover damage to the belt
- If there is vibration or bouncing of the cleaner on the belt
- If a snub pulley is used, a check should be made for material buildup on the pulley
- Significant signs of carryback

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

6.3 Routine Physical Inspection (every 6-8 weeks)

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

- Clean material buildup off of the cleaner blade and pole.
- Closely inspect the blade for wear and any damage. Replace if needed.
- Ensure full blade to belt contact.
- Inspect the cleaner pole for damage.
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Replace any worn or damaged components.
- Check the tension of the cleaner blade to the belt. Adjust the tension if necessary using the chart on the cleaner or the one on Page 10 (SST spring tensioner), Page 13 (MST spring tensioner or Page 16 (SAT2 air tensioner).
- When maintenance tasks are completed, test run the conveyor to ensure the cleaner is performing properly.



Section 6 - Maintenance

6.4 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:		
	Work done by:	Service Quote #:
Activity:		
Date:	Work done by:	Service Quote #:
Date:	Work done by:	Service Quote #:
Date:	Work done by:	Service Quote #:
Activity:		

Section 6 - Maintenance

6.5 Cleaner Maintenance Checklist

Site:				li	Inspected by: Date:					ate:		
Belt Cleane	r:						Serial I	Number:				
Beltline Info Beltline Nur					Belt Condi	tion:						
Belt Width:	□ 18" (450mm)	□ 2 (600m		□ 30" 750mm)	□ 36" (900mm)	□ 42" (1050mm)	□ 48" (1200mm)	□ 54" (1350mm)	□ 60" (1500mm)	□ 72" (1800mm)	□ 84" (2100mm)	□ 96" (2400mm)
Belt Speed:		fpm	Be	lt Thickn	ess:							
Belt Splice:		Cor	ndition	of Splice	:	_ Number	of Splices:_	[□ Skived 🛛	Unskived		
Material co	nveyed:											
Days per we	eek run:			Hou	rs per day r	un:						
Blade Life: Date blade i	installed:_			Dat	te blade ins	pected:		Estimat	ed blade life:			
ls blade mal	king comp	lete con	tact w	ith belt?		□ Yes	□ No					
Blade wear:	:	Left _			Mic	ldle		Right				
Blade condi	ition:	[⊐ Goo	d [⊐ Grooved	□ Sr	niled	□ Not cont	acting belt	🗆 Dam	naged	
Measureme	ent of sprir	ıg:		Required	1	_	Currently_					
For SAT2 Te Inspect SAT		•		Air/Nitro	ogen Pressi	ure Requirec	l		Currently			
Was Cleane	er Adjuste	d:		□ Yes	□ No							
Pole Condit	ion:		l Good	C] Bent	□ Worn						
Lagging:	I	□ Side L	ag	□ Ce	eramic	🗆 Rubbe	r 🗆 ()ther	□ None			
Condition of	f lagging:			Good	🗆 Bad	□ 0t	her					
Cleaner's O	verall Per	formanc	e:	(Rate the fo	llowing 1 - 5,	, 1= very poc	or - 5 = very (good)			
Appearance	e: [□:	Comm	ents:								
Location::	I	□:	Comm	ents:								
Maintenanc	e:: I	□:	Comm	ents:								
Performanc	e:: [□:	Comm	ents:								
Other comm	nents:											



Section 7 - Troubleshooting

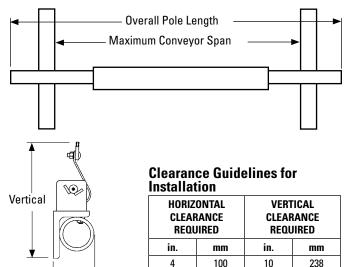
Problem	Possible Cause	Possible Solutions				
	Cleaner secure bolts not set	Ensure all locking nuts are tight (Loctite)				
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge) MHS Standard 1°-3° into belt; MHS Reversing and SAT2 perpendicular				
Vibration	Belt tension too high	Ensure cleaner can conform to belt, or replace with alternate Flexco secondary cleaner				
	Belt flap	Introduce hold-down roller to flatten belt				
	Cleaner over-tensioned	Ensure cleaner is correctly tensioned				
	Cleaner under-tensioned	Ensure cleaner is correctly tensioned				
	Nylon bearing worn out or missing	Replace nylon bearing				
	Cleaner not set up correctly	Ensure cleaner set up properly (1°-3° into belt)				
N (11 11 1	Buildup on chute	Ensure cleaner is not located too close to back of chute, allowing buildup				
Material buildup on cleaner	Cleaner being overburdened	Introduce Flexco precleaner				
	Excessive sticky material	Frequently clean unit of buildup				
	Cleaner over-tensioned	Ensure cleaner is correctly tensioned				
	Cleaner blade damage	Check blade for wear, damage and chips, replace where necessary				
Damaged belt cover	Attack angle not correct	Ensure cleaner set up properly (check tip angle with gauge) MHS Standard 1°-3° into belt; MHS Reversing and SAT2 perpendicular				
	Material buildup in chute	Frequently clean unit of buildup				
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge) MHS Standard 1°-3° into belt; MHS Reversing and SAT2 perpendicular				
Cleaner not conforming	Belt tension too high	Ensure cleaner can conform to belt (introduce hold-down roller), or replace with alternate Flexco secondary cleaner				
to belt	Belt flap	Introduce hold-down roller to flatten belt				
	Cleaner cannot conform	Ensure cleaner can conform to belt (introduce hold-down roller), or replace with alternate Flexco secondary cleaner				
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge) MHS Standard 1°-3° into belt; MHS Reversing and SAT2 perpendicular				
	Cleaner tension too low	Ensure cleaner is correctly tensioned				
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary				
Material passing cleaner	Cleaner being overburdened	Introduce Flexco precleaner				
Material passing cleaner	Belt flap	Introduce hold-down roller to flatten belt				
	Belt worn or grooved	Introduce water spray pole				
	Cleaner cannot conform	Ensure cleaner can conform to belt (introduce hold-down roller), or replace with alternate Flexco secondary cleaner				
	Blade in backwards	Install blade correctly and set correct tension				
D (1) 1	Incorrect cleaner blade selection	Change blade type to accomodate fastener style (UC or UF)				
Damage to mechanical fastener	Belt not skived correctly	Spot and redo splice correctly, lowering the profile flush or below belt surface				
nuscener	Blade angle incorrect	Reset with gauge				
Missing material in belt	Cupped Belt	Install hold-down roller and reset blade angle with gauge				
center only	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary				
Missing material on outer	Cupped Belt	Install hold-down roller and reset blade angle with gauge				
edges only	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary				
MCT Tanaian and Lindin	Tensioners not aligned properly	Adjust mounting bases until tensioners travel without binding				
MST Tensioners binding	Material buildup on tensioner guide pole	e Clean off guide pole				

8.1 Specs and Guidelines

Pole Length Specifications*

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

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



Horizontal

MST Tensioner Spring Length Chart

2 Silver

Springs

in.

3 3/8

mm

86

86

83 3 3/8

79 3 1/4

73 3 1/8 79

73

70

64 2 3/4

2 Black

Springs

in.

3 1/2 89

3 3/8

3 76

2 7/8

76 3 1/8

mm

86

86

83

79

73

70

2 White

Springs

67 3 3/8

60 3 1/4

54 3 1/8

N/A N/A 2 3/4

N/A | N/A | 2 1/2 |

Shading indicates preferred spring option. Measure

N/A 2 7/8

N/A 27/8

in. mm

2 3/8

N/A

N/A

Blade

Width

450 27/8 73

600 2 5/8

750

900 2 1/8

1050 1 7/8 48 3

1500

spring as shown below.

in. mm

18

24

30

36

42

48 1200

54 1350

60

72 1800

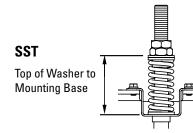
SAT2 Tensioner Proceuro Chart

Pressure Gliari										
	ade idth	Blades	Pressure							
in.	mm		psi	kPa						
18	450	3	15#	103						
24	600	4	19#	131						
30	750	5	23#	159						
36	900	6	27#	186						
42	1050	7	31#	214						
48	1206	8	35#	241						
54	1350	9	39#	269						
60	1500	10	43#	296						
72	1800	12	51#	352						
84	2100	14	59#	407						
96	2400	16	67#	462						

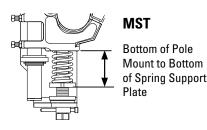
SST Tensioner Spring Length Chart

Bla	nde	White		Sil	Silver		Black		old
Wi	dth	Spr	Spring		ing	Spring		Spr	ing
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
18	450	3 3/8	86	4	102	N/A	N/A	N/A	N/A
24	600	3 1/8	79	3 7/8	98	N/A	N/A	N/A	N/A
30	750	2 7/8	73	3 3/4	95	N/A	N/A	N/A	N/A
36	900	N/A	N/A	3 3/4	95	3 7/8	98	N/A	N/A
42	1050	N/A	N/A	3 5/8	92	3 3/4	95	N/A	N/A
48	1200	N/A	N/A	3 1/2	89	3 5/8	92	N/A	N/A
54	1350	N/A	N/A	3 3/8	86	3 5/8	92	3 3/4	95
60	1500	N/A	N/A	3 1/4	83	3 1/2	89	3 3/4	95
72	1800	N/A	N/A	N/A	N/A	3 3/8	86	3 5/8	92
84	2100	N/A	N/A	N/A	N/A	3 1/8	79	3 1/2	89
96	2400	N/A	N/A	N/A	N/A	N/A	N/A	3 1/2	89
108	2700	N/A	N/A	N/A	N/A	N/A	N/A	3 3/8	86
120	3000	N/A	N/A	N/A	N/A	N/A	N/A	3 3/8	86

Shading indicates preferred spring option. Measure spring as shown below.



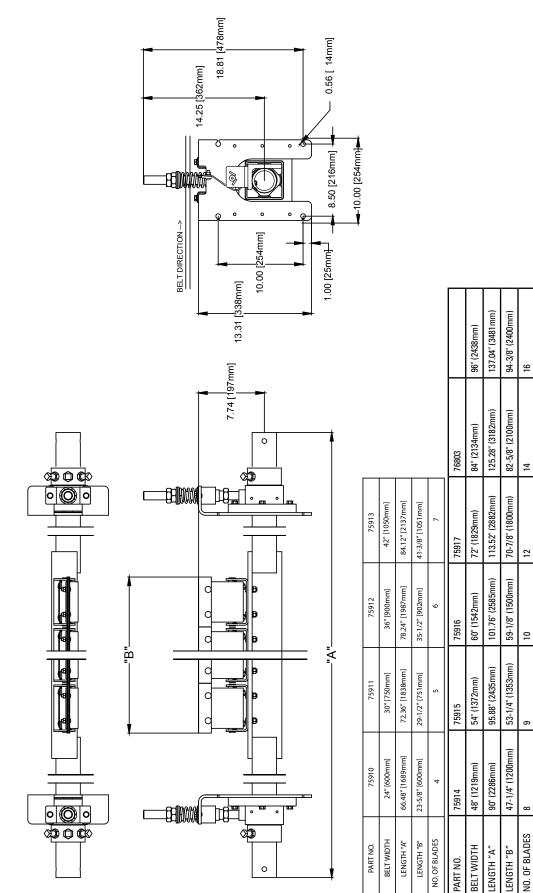
- CEMA Cleaner Rating Class 5



Maximum Belt Speed SST/SAT2 Tensioner - 1200 FPM (6 m/s) MST Tensioner - 1000 FPM (5 m/s) Temperature Rating -30°F to 180°F (-35°C to 82°C) V-Tip: Long Life Tungsten Carbide (for vulcanized belts only) MST Tensioners - 18" to 72" (450 to 1800mm). Other sizes available upon request.

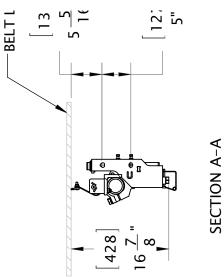
→ ` (⊢

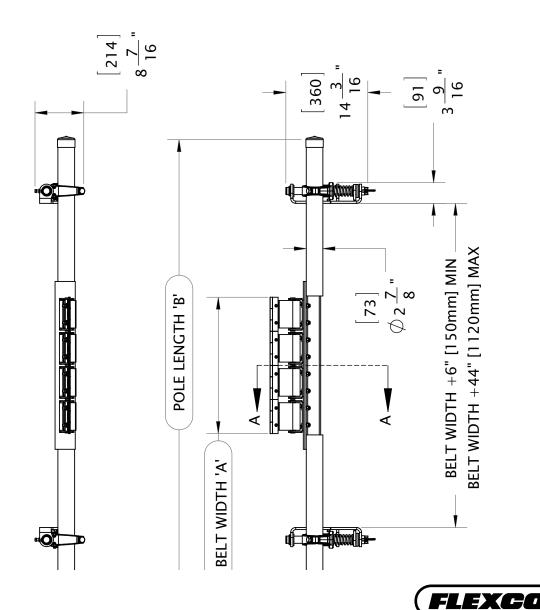
8.2 CAD Drawing - MHS with SST Tensioners



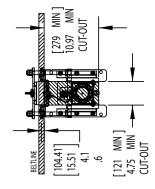
Section 8 - Specs and CAD Drawings

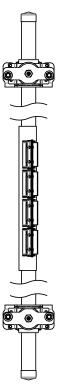
8.3 CAD Drawing - MHS with MST Tensioners

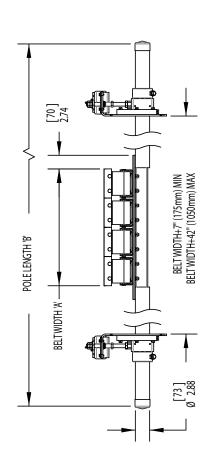


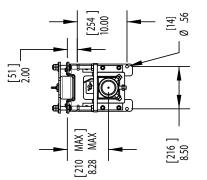


8.4 CAD Drawing - MHS with SAT2 Tensioners





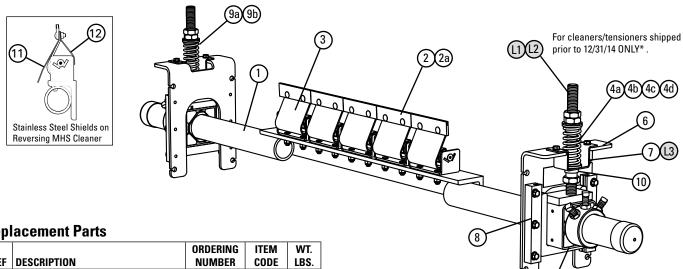




MHS SEC Cleaner W/PAT	ltem Code		78736	<i>18131</i>	78738	68739	78740	18741	78742	78743	78744	79047
MHS SEI W/	Order Number		MHS-24P	MHS-30P	A9E-SHM	MHS-42P	MHS-48P	MHS-54P	MHS-60P	MHS-72P	MHS-84P	MHS-96P
	Pole Length "B"	шш	1980	2133	2286	2438	2590	2743	2895	3200	3505	3750
Specifications	Pole I "	in.	78	84	90	96	102	108	114	126	138	150
Specifi	Belt Width "A"	шш	600	750	006	1050	1200	1350	1500	1800	2100	2400
	Belt	in.	24	30	36	42	48	54	09	72	84	96

26

9.1 Replacement Parts List - MHS HD Secondary Cleaners (SST Tensioners)



Replacement Parts

		ORDERING	ITEM	WT.
REF	DESCRIPTION	NUMBER	CODE	LBS.
	18" (450mm) Pole	MHSP-18	76178	46.2
	24" (600mm) Pole	MHSP-24	75918	51.7
	30" (750mm) Pole	MHSP-30	75919	57.2
	36" (900mm) Pole	MHSP-36	75920	62.8
	42" (1050mm) Pole	MHSP-42	75921	68.3
1	48" (1200mm) Pole	MHSP-48	75922	73.9
	54" (1350mm) Pole	MHSP-54	75923	79.4
	60" (1500mm) Pole	MHSP-60	75924	85.0
	72" (1800mm) Pole	MHSP-72	75925	96.1
	84" (2100mm) Pole	MHSP-84	76814	112.1
	96" (2400mm) Pole	MHSP-96	79052	128.1
2	C-Tip*	ICT6	74535	0.7
2a	V-Tip* (for vulcanized belts only)	RSA150	73628	1.3
3	PowerFlex [™] Cushion* (complete)	PFC	75927	4.2
3a	PowerFlex Cushion* SS (complete)	PFC-SS	76560	4.2
4a	Tension Spring - White (1 ea.) for belts 18" - 30" (450-750mm)	STS-W	75846	0.5
4b	Tension Spring - Silver (1 ea.) for belts 36" - 48" (900-1200mm)	STS-S	75843	0.8
4c	Tension Spring - Black (1 ea.) for belts 54" - 84" (1350-2100mm	STS-B	75844	1.0
4d	Tension Spring - Gold (1 ea.) for belts 96" (2400mm)	STS-G	78142	1.3
5	HD Torsion Pole Mount* (1 ea.) (includes HD adjusting rod, nuts & sleeve) (See 9 & 9a for bushings)	SSTHDPM	77868	15.0
6	HD Mounting Base Kit* (includes 1 mounting base, 2 slide guides, top hat bracket & bottom bushing)	SSTHDMK	77870	10.2
7	SST Hat Bracket (pair)	SSTHB	79582	3.0
8	Slide Guide Kit* (incl. 2 slide guides)	STGK2	77867	1.1
9a	SST Bushing Kit - White/Silver (includes 2 bushings)	SSTBK-W	76636	0.1
9b	SST Bushing Kit - Black/Gold (includes 2 bushings)	SSTBK-B	76637	0.1
10	SST Lower Bushing Kit (pair)	SSTLBK	79493	.2
11	P Stainless Steel Shield	PSSS	74773	0.5
12	PowerFlex [™] Reverse Shield	PFRS	76622	0.4
-	HD Spring Tensioner* - White includes 2 each items 4, 5, 6, & 9) for belts 18" - 30" (450-750mm)	SST2HD-W	77879	60.6
-	HD Spring Tensioner* - Silver (includes 2 each items 4a, 5, 6, & 9) for belts 36" - 48" (900-1200mm)	SST2HD-S	77880	61.4
-	HD Spring Tensioner* - Black (includes 2 each items 4b, 5, 6, & 9a) for belts 54" - 84" (1350-2100mm	SST2HD-B	77881	62.0
-	HD Spring Tensioner* - Gold (includes 2 each items 4c, 5, 6, & 9a) for belts 96" (2400mm)	SST2HD-G	79041	62.6

Lead time: 1 working day

Legacy Replacement Parts for Tensioners shipped prior to Dec. 31, 2014*

L1	Adjusting Rod Kit (includes 1 rod, 2 nuts, 1 bushing, 1 washer) for belts 24" - 60" (600-1500mm)	STAK	75847	2.9
L2	HD Adjusting Rod Kit (includes 1 rod, 2 nuts, 1 HD bushing, 1 washer) for belts 72"-84" (1800-2100mm)	STAKHD	75892	3.0
L3	Legacy SST Hat Channel Kit	SSTHK	79070	1.5
L4	SAT2 Adjusting Rod Kit (2 ea.)	SAT2AK	78733	5.0
-	SST Tensioner Bushing Update Kit (includes 2 lower bushings, 2 sleeves, 2 nuts)	SST-BUK	76943	0.3

*Verify if legacy parts are needed by looking at threaded rod. If it has standard threads, use legacy parts. If it has flat/acme threads, choose from regular replacement parts.

$\sim \sim $	
Standard	Acme/trapezoidal
thread profile	thread profile

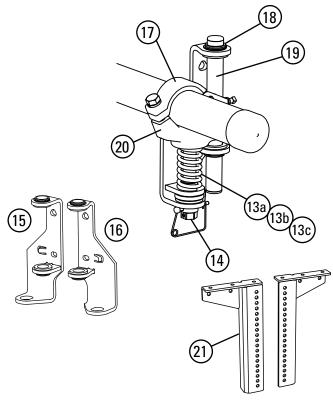
Spring Tensioner Selection Chart

CLEANER SIZE	77879 SST2HD-W	77880 SST2HD-S	77881 SST2HD-B	79041 SST2HD-G
MHS 18" - 30" (450 - 750mm)	х			
MHS 36" - 48" (900 - 1200mm)		Х		
MHS 54" - 84" (1350 - 2100mm)			Х	
MHS 96" (2400mm)				Х



Section 9 - Replacement Parts

9.2 Replacement Parts List - MST and SAT2 Tensioners





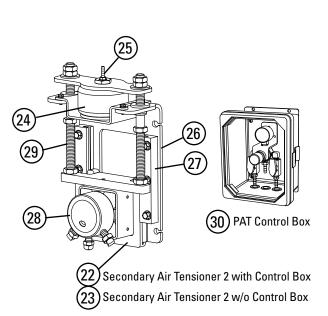
REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
13a	Tension Spring - White (1 ea.) for belts 18" - 30" (450-750mm)	STS-W	75846	0.5
13b	Tension Spring - Silver (1 ea.) for belts 36" - 54" (900-1350mm)	STS-S	75843	0.8
13c	Tension Spring - Black (1 ea.) 60" - 72" (1500-1800mm)	STS-B	75844	1.0
14	MST Adjusting Mechanism	MSTAM	79435	2.8
15	MST Mounting Bracket LH (incl. bushings)	MST-MBL	79436	5.7
16	MST Mounting Bracket RH (incl. bushings)	MST-MBR	79437	5.7
17	MST HD Clamp*	MSTCHD	79439	2.5
18	MST Bushing Kit (incl. 4 bushings)	MSTBK	79440	.2
19	MST Guide Pole	MSTGT	79441	1.5
20	MST HD Pole Mount*	MSTPMHD	79451	7.3
21	MST Drop Brackets (2)	MSTDB	79434	27.7
-	MST HD Tensioner w/White Spring (incl. 1 ea. items 15, 16; 2 ea. items 13a, 14, 17, 19, 20	MSTHD-W	79431	36.8
-	MST HD Tensioner w/Silver Spring (incl. 1 ea. items 15, 16; 2 ea. items 13b, 14, 17, 19, 20	MSTHD-S	79432	37.5
-	MST HD Tensioner w/Black Spring (incl. 1 ea. items 15, 16; 2 ea. items 13c, 14, 17, 19, 20	MSTHD-B	79433	38.1

*Hardware included

Lead time: 1 working day

MST Spring Tensioner Selection Chart

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

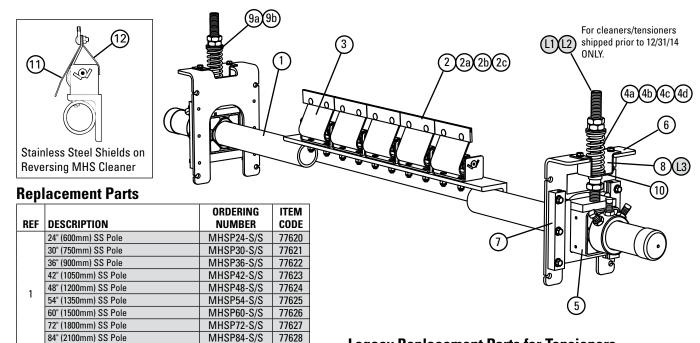


SAT2 (Secondary Air Tensioner 2) Replacement Parts

		ORDERING	ITEM	WT.
REF	DESCRIPTION	NUMBER	CODE	LBS.
22	SAT2 w/PAT Control Box	SAT2PAT	78735	43.5
23	SAT2 w/o Control Box	SAT2NCB	78703	41.0
24	SAT Air/Water Bag Kit	SATB	76083	5.1
25	SAT 1/8" Hose Barb Kit	SATHB	76084	0.1
26	SAT2 Mounting Base Kit	SAT2MK	78704	11.6
27	ST Slide Guide Kit	STGK2	77867	1.1
28	SAT2 Torsion Pole Mount	SAT2PM	78732	11.1
29	SAT2 Adjusting Rod Kit	SAT2AK	78733	5.0
30	PAT Control Box 100psi	PACB100	78683	11.0
1	inna 1			

Lead time: 1 working day

9.3 Replacement Parts List - Stainless Steel MHS Cleaners



77628

79053

74535

78700

73628

MHSP96-S/S

ICT6

ICT6-S/S

RSA150

Legacy Replacement Parts for Tensioners shipped prior to changeover Dec. 31, 2014*

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE
L1	Adjusting Rod Kit* (includes 1 rod, 2 nuts, 1 bushing, 1 washer) for belts 18" - 60" (450-1500mm)	STAK	75847
L2	HD Adjusting Rod Kit* (includes 1 rod, 2 nuts, 1 HD bushing, 1 washer) for belts 72" - 96" (1800-2400mm)	STAKHD	75892
L3	SST Hat Channel Kit S/S	SSTHK-S/S	79071
_	SS Bushing Update Kit (includes 2 ea. lower bushings, sleeves, nuts)	SST-BUK-S/S	77636

*Verify if legacy parts are needed by looking at threaded rod. If it has standard threads, use legacy parts. If it has flat/ acme threads, choose from regular replacement parts.

 \sim Standard

thread profile

Acme/trapezoidal thread profile

 $\overline{}$

Spring Tensioner Selection Chart

CLEANER SIZE	77637 SSTHD- W-S/S	77638 SSTHD- S-S/S	77639 SSTHD- B-S/S	79042 SST2HD- G-S/S
MHS S/S 18" - 30" (450 - 750mm)	x			
MHS S/S 36" - 48"		х		
(900 - 1200mm) MHS S/S 54" - 84"			х	
(1350 - 2100mm)			^	
MHS S/S 96" (2400mm)				Х

2c S/S V-Tip* (for vulcanized belts only) RVT6-S/S 76205 3 PowerFlex Cushion* (complete) PFC-SS 76560 Tension Spring - White (1 ea.) 4a STS-W-S/S 77630 for belts 18" - 30" (450-750mm Tension Spring - Silver (1 ea.) STS-S-S/S 77631 4b for belts 36" - 48" (900-1200mm) Tension Spring - Black (1 ea.) for belts 54" - 84" (1350-2100mm) 77632 STS-B-S/S 4c Tension Spring - Gold (1 ea.) 4d STS-G-S/S 79057 for belts 96" (2400) SS HD Torsion Mounting Kit* (1 ea.) 5 STHDPM2-S/S 77633 (includes adjusting rod, 3 nuts & sleeve) (See 9 & 9a for bushings) SS Mounting Base Kit* 6 STHDMK2-S/S 77634 (includes 1 mounting base, 2 slide guides, top hat bracket & bottom bushing SS Base Mounting Kit* 7 STGK2-S/S 77635 (includes 2 slide guides SSTHB-S/S 79586 8 SST Hat Bracket S/S (pair) SST Bushing Kit - White/Silver 9a SSTBK-W 76636 (includes 2 bushings) SST Bushing Kit - Black/Gold 9b SSTBK-B 76637 (includes 2 bushings) SSTLBK 79493 10 SST Lower Bushing Kit (pair) 11 P Stainless Steel Shield PSSS 74773 12 PowerFlex[™] Reverse Shield PFRS 76622 SS Spring Tensioner* - White SST2HD-W-S/S 77637 (includes 2 each items 4, 5, 6 & 9) for belts 18" - 30" (450-750mm) SS Spring Tensioner* - Silver SST2HD-S-S/S 77638 (includes 2 each items 4a, 5, 6 & 9) for belts 36" - 48" (900-1200mm) SS Spring Tensioner* - Black SST2HD-B-S/S 77639 (includes 2 each items 4b, 5, 6 & 9a) for belts 54" - 84" (1350-2100mm) SS Spring Tensioner* - Gold SST2HD-G-S/S 79042 (includes 2 each items 4c, 5, 6 & 9a) for belts 96" (2400) *Hardware Included

Lead time: 1 working day

84" (2100mm) SS Pole

96" (2400mm) SS Pole

2b V-Tip* (for vulcanized belts only)

2

2a

C-Tip*

SS C-Tip

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



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

MMP Precleaner



- Extra cleaning power right on the head pulley
- A 250mm (10") TuffShear[™] blade provides increased blade tension on the belt to peel off abrasive materials
- The unique Visual Tension Check[™] ensures optimal blade tensioning and quick, accurate retensioning
- · Easy to install and simple to service

MDWS DryWipe Secondary Cleaner

DRX Impact Beds



- Exclusive Velocity Reduction Technology[™] in order to better protect the belt
- Slide-Out Service[™] gives direct access to all impact bars for change-out
- Impact bar supports for longer bar life
- 4 models to custom fit to the application

PT Max[™] Belt Trainer



- Patented "pivot & tilt" design for superior training action
- Dual sensor rollers on each side to minimize belt damage
- Pivot point guaranteed not to freeze up
- Available for topside and return side belts



- Wipes the belt dry as final cleaner in system
- Automatic blade tensioning to the belt
- Easy, visual blade tension check
- Simple, one-pin blade replacement

Flexco Specialty Belt Cleaners



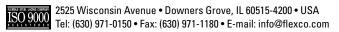
- "Limited space" cleaners for tight conveyor applications
- High Temp cleaners for severe, high heat applications
- A rubber fingered cleaner for chevron and raised rib belts
- Multiple cleaner styles in stainless steel for corrosive applications

Belt Plows



- A belt cleaner for the tail pulley
- Exclusive blade design quickly spirals debris off the belt
- Economical and easy to service
- Available in vee or diagonal models





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

©2021 Flexible Steel Lacing Company. 11/09/21. For reorder: X2582

