

# H-Type<sup>®</sup> Precleaner with V-Tips

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## Installation, Operation and Maintenance Manual

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# H-Type® Precleaner with V-Tips

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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

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## 1.1 General Introduction

We at Flexco® are very pleased that you have selected an H-Type® Precleaner with V-Tips for your conveyor system.

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

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

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

**Customer Service: +27-11-608-4180**

**Visit [www.flexco.com](http://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 H-Type Precleaner with V-Tips 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

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Before installing and operating the H-Type® Precleaner with V-Tips, 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.

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## 2.1 Stationary Conveyors

The following activities are performed on stationary conveyors:

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

### **DANGER**

It is imperative that OSHA/MSHA Lockout/Tagout (LOTO) regulations, 29 CFR 1910.147, be followed before undertaking the preceding activities. Failure to use LOTO exposes workers to uncontrolled behavior of the belt cleaner caused by movement of the conveyor belt. Severe injury or death can result.

**Before working:**

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

### **WARNING**

**Use Personal Protective Equipment (PPE):**

- Safety eyewear
- Hardhats
- Safety footwear

Close quarters, springs and heavy components create a worksite that compromises a worker's eyes, feet and skull.

PPE must be worn to control the foreseeable hazards associated with conveyor belt cleaners. Serious injuries can be avoided.

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## 2.2 Operating Conveyors

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

- Inspection of the cleaning performance
- Dynamic troubleshooting

### **DANGER**

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

### **WARNING**

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

### **WARNING**

Never adjust anything on an operating cleaner. 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

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### 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
  - Are there obstructions that may require cleaner location adjustments

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

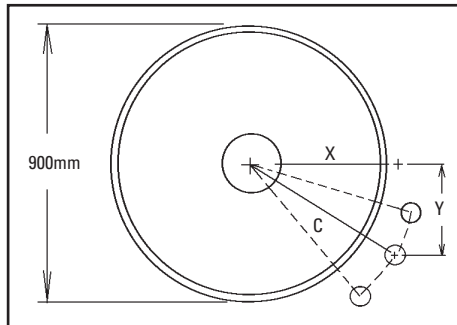
### 3.2 Cleaner Location Adjustments

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

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

Conveyor situation:

Pulley Diameter: 900mm  
 $X = 301\text{mm}$   
 $Y = 478\text{mm}$   
 $C = 565\text{mm}$



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

$$X = ?$$

$$Y = 478 + 50 = 528\text{mm}$$

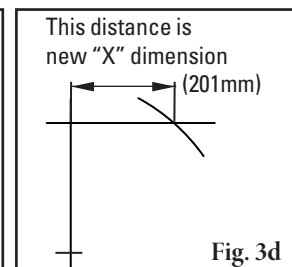
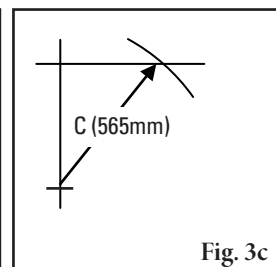
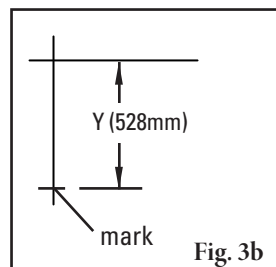
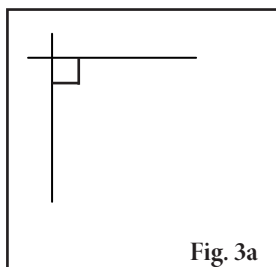
$$C = 565\text{mm}$$

- 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).

$$X = 201\text{mm}$$

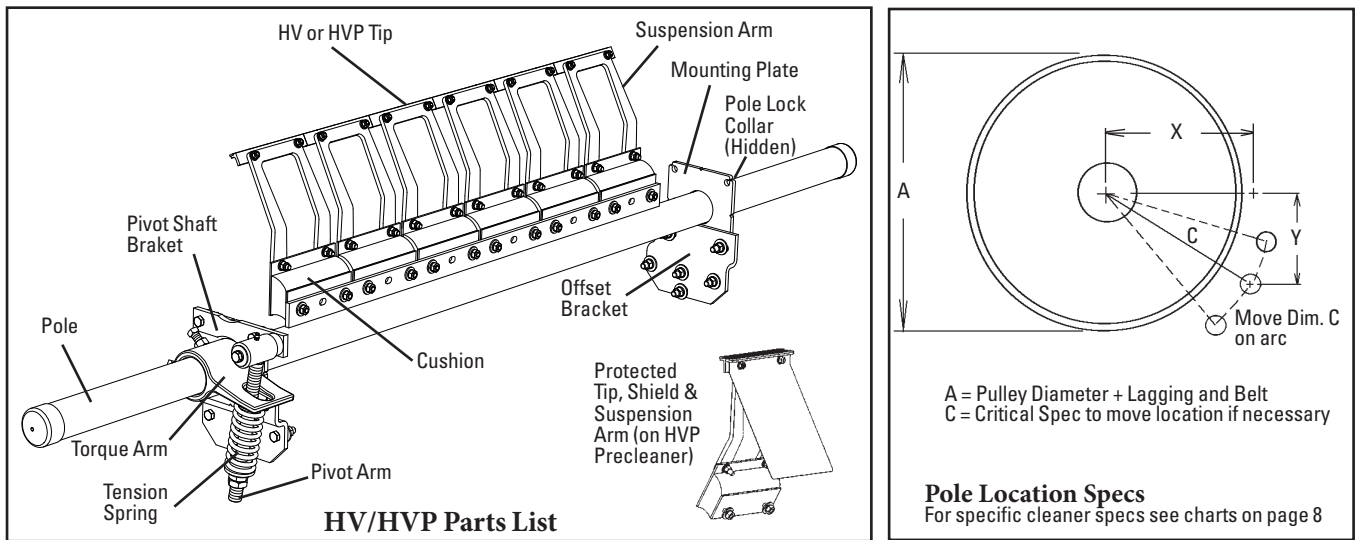
$$Y = 528\text{mm}$$

$$C = 565\text{mm}$$

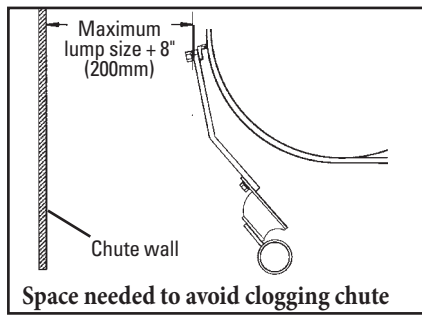


# Section 4 – Installation Instructions

## 4.1 H-Type® Precleaner with V-Tips or Protected V-Tips



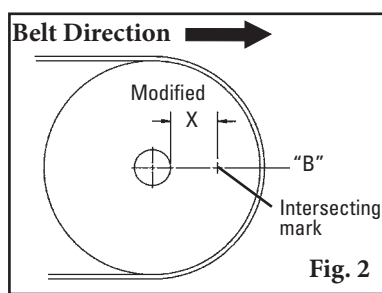
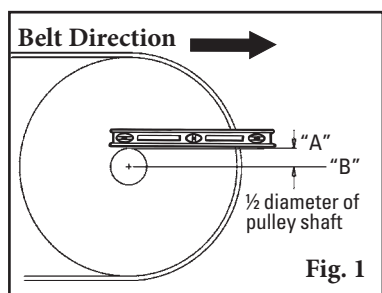
**Physically lock out and tag the conveyor at the power source before you begin cleaner installation.**



HV/HVP Suspension Arm Size	Pulley Diameter + Belt And Lagging
SS	250-475mm (10" - 19")
S	500-775mm (20" - 31")
M	800-975mm (32" - 39")
L	1000-1175mm (40" - 47")
LL	1200-1675mm (48" - 67")

- Tools Needed:**
- Tape Measure
  - Level
  - Wrenches or Crescent Wrenches:
    - (1) M10 (17mm)
    - (2) M12 (19mm)
    - (1) M16 (24mm)
    - (2) M24 (36mm)

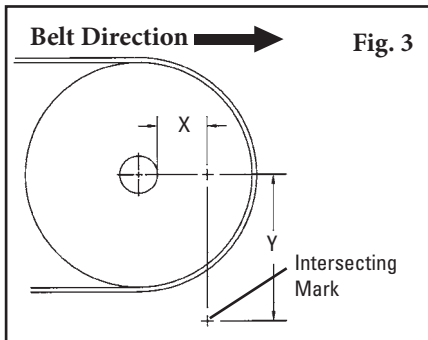
- Find X, Y & C measurements.** Find the X and Y measurement specifications for the pulley diameter. See charts on page 8. The pulley diameter measurement should include lagging and belt.  
Pulley Diameter \_\_\_\_\_; X= \_\_\_\_\_; Y= \_\_\_\_\_" C= \_\_\_\_\_  
Using the correct X and Y coordinates will position the cleaner blades at 15° below the horizontal plane on the head pulley.
- Measure head pulley shaft.** Determine the diameter of the pulley shaft and divide by 2. \_\_\_\_\_"
- Locate horizontal line from center of pulley shaft.** Put a level on top of the pulley shaft and draw a horizontal line A. Measure down from Line A half the diameter of the pulley shaft and draw Line B parallel from the pulley shaft (Fig. 1).
- Mark X dimension.** Subtract the above dimension (Step 2) from the selected X dimension to establish the modified X dimension. With this new X dimension measure horizontally from the front of the pulley shaft forward on Line B and mark on the chute (Fig. 2).





## Section 4 – Installation Instructions

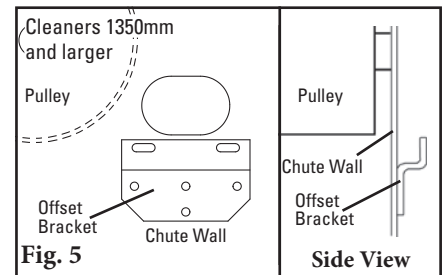
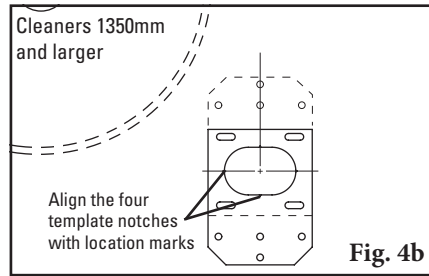
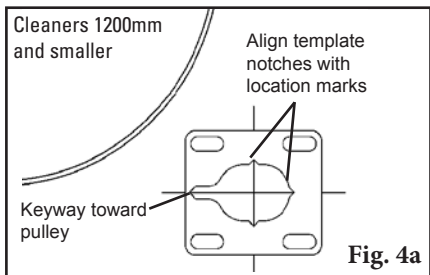
### 4.1 H-Type® Precleaner with V-Tips or Protected V-Tips (cont.)



5. **Determine Y dimension.** From the X mark, draw a line vertically down to the selected Y dimension and make a mark (Fig. 3). This is the correct position for the center of the pole.

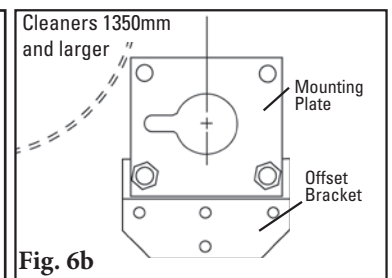
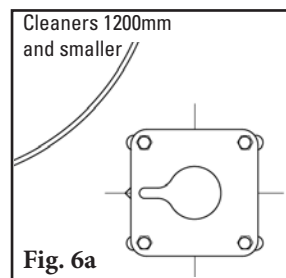
6. **Mark and cut the mounting plate holes.** Using the mounting plate template provided in the instruction packet, position the large pole access hole on the chute, aligning the hole notches with the layout lines. For cleaners 1200mm and smaller, position the template keyway toward the pulley (Fig. 4a). For cleaners 1350mm and larger, the template can be used with the offset bracket holes either below or above the Y mark (Fig. 4b). Trace the pole cutout and mounting holes. Cut the holes on both sides of the chute.

7. **Install offset brackets (cleaners 1350mm and up).** Locate the offset brackets over the holes cut in the chute wall and bolt or weld in place (Fig. 5).

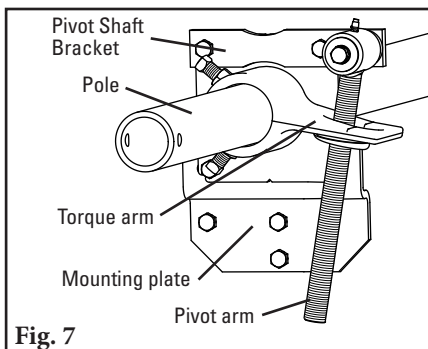


8. **Install the pole.** Slide the pole across the pulley and through the chute openings. Allow the blades to hang down.

9. **Install mounting plates.** On one side, slide mounting plate onto pole and with the key slot positioned horizontally and toward the pulley. For cleaners 1200mm and smaller, bolt the mounting plates to the chute with bolts provided. Center plates on the slotted holes and tighten bolts (Fig. 6a). For cleaners 1350mm and larger, bolt mounting plate to the offset bracket, center in slots and tighten (Fig. 6b). On opposite side repeat the process, but do not tighten.



10. **Position the pole.** Rotate the pole upward until the tips touch the belt. Center the tips across the belt. While applying light pressure on the center tip, shift the loosened mounting plate until tips are contacting the belt evenly across the full width. Lock cleaner into this position by tightening mounting plate bolts.



11. **Center the cleaner on the belt and lock in place.** Center the tips on the belt and install a pole lock collar on one end of the pole. Slide the collar snugly up to the mounting plate and tighten.

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

## Section 4 – Installation Instructions

### 4.1 H-Type® Precleaner with V-Tips or Protected V-Tips (cont.)

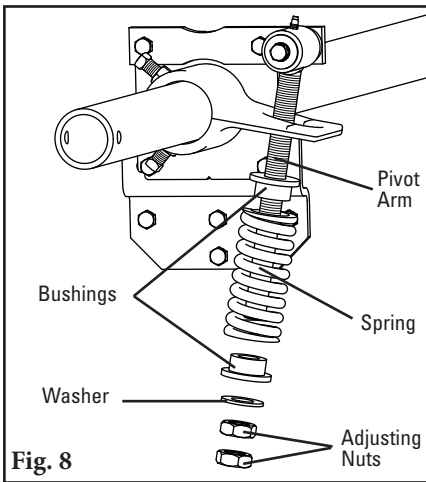


Fig. 8

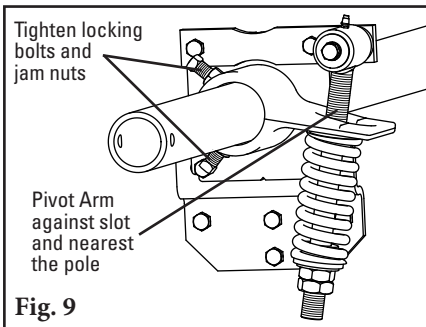


Fig. 9

13. **Reassemble the spring assembly.** Slide the spring, washer and bushings onto the pivot arm and turn the two adjusting nuts so about 1/4" of the pivot arm is exposed above the nuts (Fig. 8).

14. **Tension the blades to the belt.** Rotate the blades until they contact the belt. While holding the spring bushing flat on the torque arm, rotate the torque arm until the pivot arm is against the end of the slot nearest the pole. Tighten the locking bolts and jam nuts on the torque arm (Fig. 9). **NOTE:** The torque arm should be up against the mounting plate.

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

16. **Verify the "C" dimension** to ensure the pole is in the correct position.

**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.

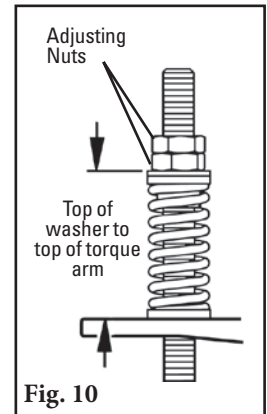


Fig. 10

#### HV/HVP Spring Length Chart

(for optimal blade tensioning)

Belt Width			Spring Length									
			SS		S		M		L		LL	
mm	in.	Tips	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
450	18"	2	132	5 1/4"	125	4 7/8"	119	4 3/4"	115	4 1/2"	N/A	N/A
600	24"	3	114	4 1/2"	103	4 1/8"	147	5 3/4"	145	5 3/4"	N/A	N/A
750	30"	3	114	4 1/2"	103	4 1/8"	147	5 3/4"	145	5 3/4"	N/A	N/A
900	36"	4	148	5 3/4"	143	5 5/8"	140	5 1/2"	138	5 3/8"	N/A	N/A
1050	42"	5	142	5 5/8"	137	5 3/8"	133	5 1/4"	130	5 1/8"	120	4 3/4"
1200	48"	5	142	5 5/8"	137	5 3/8"	133	5 1/4"	130	5 1/8"	120	4 3/4"
1350	54"	6	N/A	N/A	131	5 1/8"	126	5	122	4 7/8"	152	6"
1500	60"	7	N/A	N/A	125	4 7/8"	154	6 1/8"	153	6"	149	5 7/8"
1800	72"	8	N/A	N/A	154	6"	152	6"	151	5 7/8"	146	5 3/4"

Purple Spring
  Silver Spring
  White Spring

# Section 4 – Installation Instructions

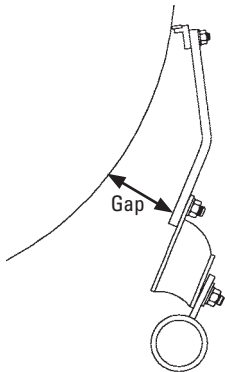
## 4.2 Pole Location Charts

**Extra Small (SS) V-Tips**  
for Head Pulley Diameters  
Up to 499mm

Diameter (Over Belt)	X	Y	C	Gap*
250	28	292	294	56
275	40	295	298	51
300	52	299	303	46
325	64	302	309	43
350	76	305	315	39
375	88	308	321	36
400	100	312	327	33
425	113	315	334	30
450	125	318	342	28
475	137	321	349	25
500	149	325	357	23
525	161	328	365	22
550	173	331	373	20
575	185	334	382	18

Recommended range for tip size  
 Optional extended range

\* See figure below for location of gap



**Small (S) V-Tips**  
for Head Pulley Diameters  
500 to 799mm

Diameter (Over Belt)	X	Y	C	Gap*
350	50	361	365	78
375	62	365	370	73
400	74	368	375	68
425	86	371	381	64
450	98	374	387	60
475	110	377	393	56
500	122	381	400	52
525	134	384	407	49
550	146	387	414	46
575	158	390	421	43
600	171	394	429	40
625	183	397	437	38
650	195	400	445	36
675	207	403	453	33
700	219	407	462	31
725	231	410	470	29
750	243	413	479	27
775	255	416	488	26
800	267	420	497	24
825	279	423	507	23
850	291	426	516	21
875	303	429	526	20
900	315	432	535	18

**Medium (M) V-Tips**  
for Head Pulley Diameters  
800 to 999mm

Diameter (Over Belt)	X	Y	C	Gap*
650	180	445	480	63
675	192	449	488	60
700	204	452	496	57
725	216	455	504	54
750	228	458	512	54
775	240	462	520	50
800	252	465	529	47
825	264	468	538	45
850	277	471	546	43
875	289	475	555	41
900	301	478	565	39
925	313	481	574	37
950	325	484	583	36
975	337	487	593	34
1000	349	491	602	32
1025	361	494	612	31
1050	373	497	622	29
1075	385	500	632	28
1100	397	504	641	27
1125	409	507	652	26

**Large (L) V-Tips**  
for Head Pulley Diameters  
1000 to 1199mm

Diameter (Over Belt)	X	Y	C	Gap*
850	253	494	556	46
875	265	498	564	43
900	278	501	573	41
925	290	504	581	39
950	302	507	590	37
975	314	511	599	35
1000	326	514	608	33
1025	338	517	618	31
1050	350	520	627	29
1075	362	524	637	27
1100	374	527	646	26
1125	386	530	656	24
1150	398	533	666	22
1175	410	537	675	21
1200	422	540	685	20

**Extra Large (LL) V-Tips**  
for Head Pulley Diameters  
1200 to 1700mm

Diameter (Over Belt)	X	Y	Z	Gap*
1200	414	650	771	79
1225	426	653	780	76
1250	438	657	789	74
1275	450	660	799	72
1300	462	663	808	70
1325	474	666	818	68
1350	486	670	827	66
1375	498	673	837	64
1400	510	676	847	62
1425	522	679	857	60
1450	534	683	867	59
1475	546	686	877	57
1500	558	689	887	55
1525	570	692	897	54
1550	583	695	907	52
1575	595	699	917	51
1600	607	702	928	49
1625	619	705	938	48
1650	631	708	949	47
1675	643	712	959	45

Recommended range for tip size  
 Optional extended range

## Section 4 – Installation Instructions

### 4.3 Shimming Instructions

#### Tools Needed:

- (1) 17mm (11/16") wrench or crescent wrenches
- (1) 36mm/19mm (1-7/16" HY/3/4" SD) wrenches or crescent wrenches
- Shim Kit (provided)

**NOTE:** If all cleaner tips do not make even contact across the width of the belt, the tips will require shimming (Fig. A and Fig. B).

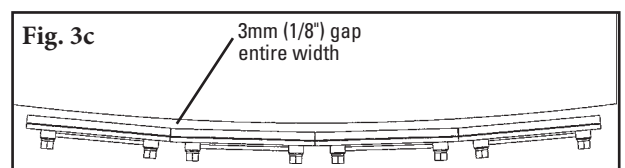
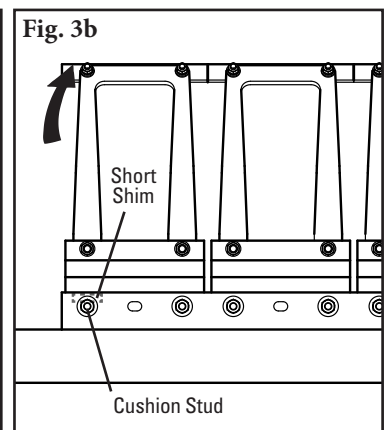
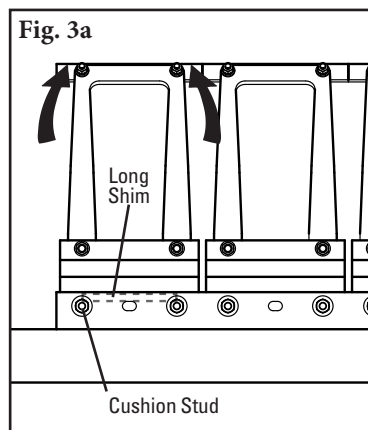
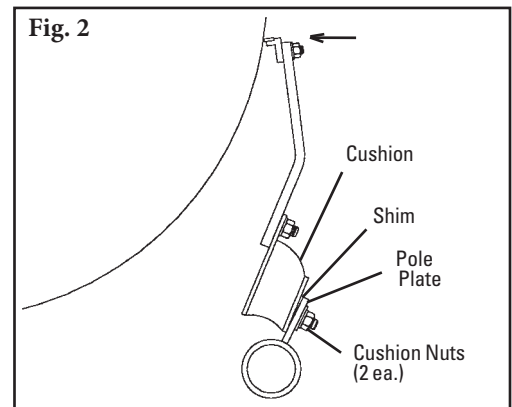
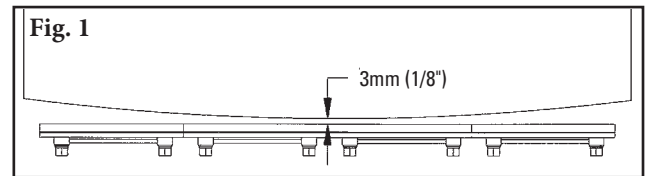
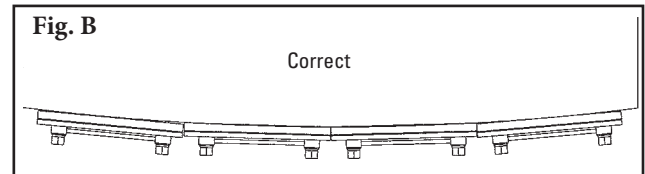
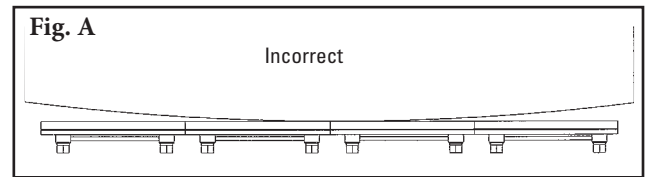
All shimming is done between the cushion and the pole plate (Fig. 2).

1. **Remove tension.** Turn adjusting bolt down until a 3mm (1/8") gap is gained at the tightest point between the tip and the belt (Fig. 1).

2. **Loosen both cushion nuts on tip to be shimmed.** Push the tip against the head pulley to move the cushion away from the pole plate (Fig. 2).

3. **Determine where to place the shim** (use plastic shims provided).
  - a. To move tip in equally at both ends, place long shim above the cushion studs, centered on the cushion (Fig. 3a).
  - b. To move tip in at one end only, place a short shim above the cushion stud on the side that must be pulled in (Fig. 3b).
  - c. Shim tips until 3mm (1/8") gap is obtained across the entire cleaner width (Fig. 3c).

4. **Reset tip tension.**



## Section 5 – Pre-Operation Checklist and Testing

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### 5.1 Pre-Op Checklist

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

### 5.2 Test Run the Conveyor

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

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

## Section 6 – Maintenance

---

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

All safety procedures for inspection of equipment (stationary or operating) must be observed. The H-Type® Precleaner operates at the discharge end of the conveyor and is in direct contact with the moving belt. Only visual observations can be made while the belt is running. Service tasks can be done only with the conveyor stopped and by observing the correct lockout/tagout procedures.

### 6.1 New Installation Inspection

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

### 6.2 Routine Visual Inspection (every 2-4 weeks)

A visual inspection of the cleaner and belt can determine:

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

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

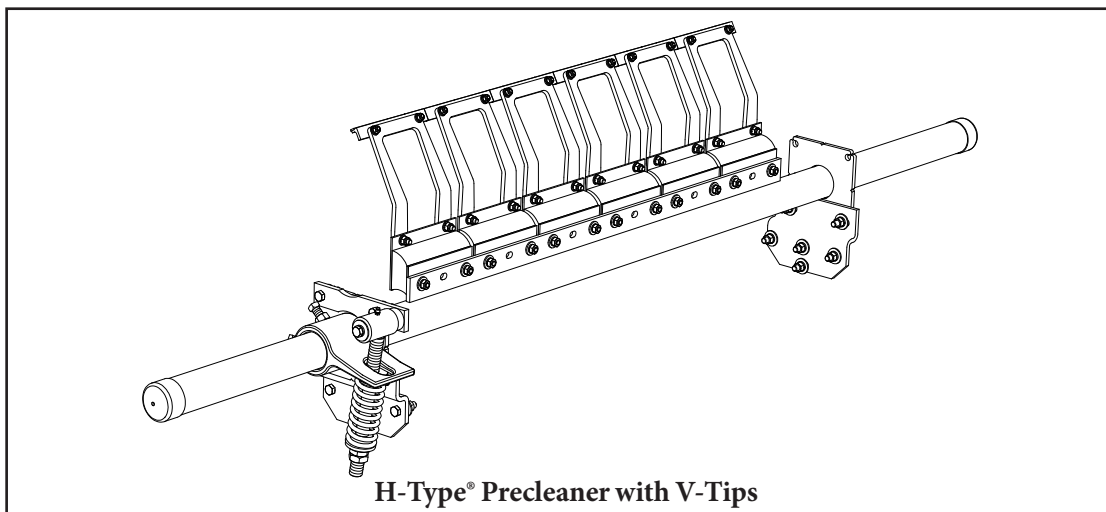
### 6.3 Routine Physical Inspection (every 6-8 weeks)

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

- Clean material buildup off of the cleaner blade and pole.
- Closely inspect the blade for wear and any damage. Replace if needed.
- Check both blade pins for proper installation and condition. Replace if needed.
- Ensure full blade to belt contact.
- Inspect the cleaner pole for damage.
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Replace any worn or damaged components.
- Check the tension of the cleaner blade to the belt. Adjust the tension if necessary using the chart on the cleaner or the one on page 10.
- When maintenance tasks are completed, test run the conveyor to ensure the cleaner is performing properly.

## Section 6 – Maintenance

### 6.4 Blade Replacement Instructions

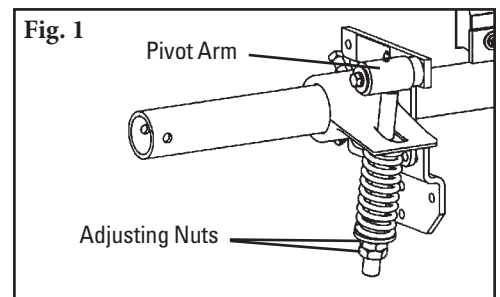


***Physically lock out and tag the conveyor at the power source before you begin cleaner installation.***

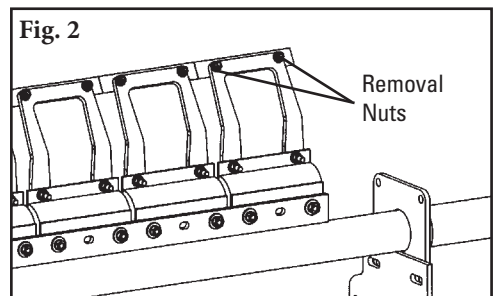
#### Tools Needed:

- Tape measure
- (2) M24 (36mm) wrenches or crescent wrenches
- (1) M10 (17mm) wrench or crescent wrench
- Wire brush (for cleaning pole)
- Small putty knife (for cleaning pole)

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



2. **Remove the worn tips.** Remove the nuts on each tip and remove the tips from the suspension arm (Fig. 2). Clean all fugitive material from the pole.

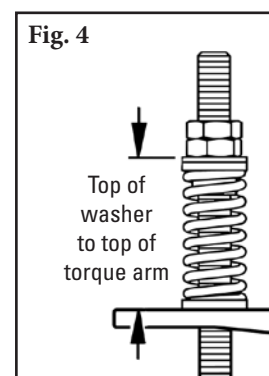
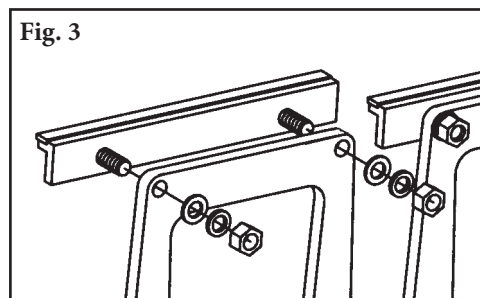


**NOTE:** If tips are hard to remove use a screwdriver or hammer to loosen it and then remove.

## Section 6 – Maintenance

### 6.4 Blade Replacement Instructions (cont.)

- 3. Install the new tips.** Locate each tip onto each suspension arm, then install the hardware to fasten the tip to the cushion (Fig. 3).
- 4. Reset the correct blade tension.** Refer to the chart for the spring length required for the belt width. Lightly pull the pivot arm toward the end of the torque arm slot nearest the pole and turn the adjusting nuts until the required spring length is achieved (Fig. 4). Tighten jam nut.



**HV/HVP Spring Length Chart**  
(for optimal blade tensioning)

Belt Width		Tips	Spring Length									
			SS		S		M		L		LL	
mm	in.		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
450	18"	2	132	5 1/4"	125	4 7/8"	119	4 3/4"	115	4 1/2"	N/A	N/A
600	24"	3	114	4 1/2"	103	4 1/8"	147	5 3/4"	145	5 3/4"	N/A	N/A
750	30"	3	114	4 1/2"	103	4 1/8"	147	5 3/4"	145	5 3/4"	N/A	N/A
900	36"	4	148	5 3/4"	143	5 5/8"	140	5 1/2"	138	5 3/8"	N/A	N/A
1050	42"	5	142	5 5/8"	137	5 3/8"	133	5 1/4"	130	5 1/8"	120	4 3/4"
1200	48"	5	142	5 5/8"	137	5 3/8"	133	5 1/4"	130	5 1/8"	120	4 3/4"
1350	54"	6	N/A	N/A	131	5 1/8"	126	5	122	4 7/8"	152	6"
1500	60"	7	N/A	N/A	125	4 7/8"	154	6 1/8"	153	6"	149	5 7/8"
1800	72"	8	N/A	N/A	154	6"	152	6"	151	5 7/8"	146	5 3/4"

Purple Spring
  Silver Spring
  White Spring

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

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



# Section 6 – Maintenance

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## 6.5 Maintenance Log

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---



# Section 6 – Maintenance

## 6.6 Cleaner Maintenance Checklist

Site: \_\_\_\_\_ Inspected by: \_\_\_\_\_ Date: \_\_\_\_\_

Belt Cleaner: \_\_\_\_\_ Serial Number: \_\_\_\_\_

### Beltline Information:

Beltline Number: \_\_\_\_\_ Belt Condition: \_\_\_\_\_

Belt Width:  450mm (18")  600mm (24")  750mm (30")  900mm (36")  1050mm (42")  1200mm (48")  1350mm (54")  1500mm (60")  1800mm (72")

Head Pulley Diameter (Belt & Lagging): \_\_\_\_\_ Belt Speed: \_\_\_\_\_ fpm Belt Thickness: \_\_\_\_\_

Belt Splice: \_\_\_\_\_ Condition of Splice: \_\_\_\_\_ Number of Splices: \_\_\_\_\_  Skived  Unskived

Material conveyed: \_\_\_\_\_

Days per week run: \_\_\_\_\_ Hours per day run: \_\_\_\_\_

### Blade Life:

Date blade installed: \_\_\_\_\_ Date blade inspected: \_\_\_\_\_ Estimated blade life: \_\_\_\_\_

Is blade making complete contact with belt?  Yes  No

Blade wear: Left \_\_\_\_\_ Middle \_\_\_\_\_ Right \_\_\_\_\_

Blade condition:  Good  Grooved  Smiled  Not contacting belt  Damaged

Measurement of spring: Required \_\_\_\_\_ Currently \_\_\_\_\_

Was Cleaner Adjusted:  Yes  No

Pole Condition:  Good  Bent  Worn

Lagging:  Side Lag  Ceramic  Rubber  Other  None

Condition of lagging:  Good  Bad  Other \_\_\_\_\_

Cleaner's Overall Performance: (Rate the following 1 - 5, 1= very poor - 5 = very good)

Appearance:  Comments: \_\_\_\_\_

Location:  Comments: \_\_\_\_\_

Maintenance:  Comments: \_\_\_\_\_

Performance:  Comments: \_\_\_\_\_

Other comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Section 7 – Troubleshooting

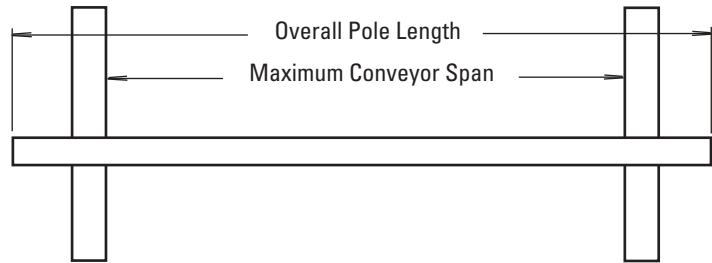
Problem	Possible Cause	Possible Solutions
Poor cleaning performance	Cleaner under-tensioned	Adjust to correct tension – see spring length chart
	Cleaner over-tensioned	Adjust to correct tension – see spring length chart
	Cleaner installed in wrong location	Verify "C" dimension, relocate to correct dimension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

# Section 8 – Specs and CAD Drawings

## 8.1 Specifications and Guidelines

### Pole Length Specifications\*

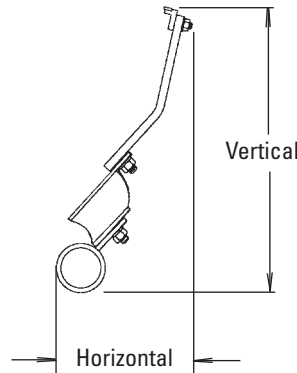
Cleaner Size		Pole Length		Maximum Conveyor Span	
mm	in.	mm	in.	mm	in.
450	18	1200	48	950	38
600	24	1350	54	1100	44
750	30	1500	60	1250	50
900	36	1650	66	1400	56
1050	42	1800	72	1550	62
1200	48	1950	78	1700	68
1350	54	2200	88	1950	78
1500	60	2350	94	2100	84
1600	64	2450	98	2200	88
1800	72	2650	106	2400	96
2100	84	2950	118	2700	108



\*For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 750mm of extended pole length.  
 Pole Diameter (1200mm and smaller): 60mm  
 Pole Diameter (1350mm and larger): 73mm

### Clearance Guidelines for Installation

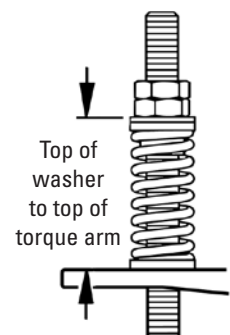
Suspension Arm Size	Horizontal Clearance Required		Vertical Clearance Required	
	mm	in.	mm	in.
SS	175	7	325	13
S	175	7	375	15
M	175	7	413	16 1/2
L	175	7	463	18 1/2
LL	175	7	550	22



### HV/HVP Spring Length Chart (for optimal blade tensioning)

Belt Width		Tips	Spring Length									
			SS		S		M		L		LL	
mm	in.		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
450	18"	2	132	5 1/4"	125	4 7/8"	119	4 3/4"	115	4 1/2"	N/A	N/A
600	24"	3	114	4 1/2"	103	4 1/8"	147	5 3/4"	145	5 3/4"	N/A	N/A
750	30"	3	114	4 1/2"	103	4 1/8"	147	5 3/4"	145	5 3/4"	N/A	N/A
900	36"	4	148	5 3/4"	143	5 5/8"	140	5 1/2"	138	5 3/8"	N/A	N/A
1050	42"	5	142	5 5/8"	137	5 3/8"	133	5 1/4"	130	5 1/8"	120	4 3/4"
1200	48"	5	142	5 5/8"	137	5 3/8"	133	5 1/4"	130	5 1/8"	120	4 3/4"
1350	54"	6	N/A	N/A	131	5 1/8"	126	5	122	4 7/8"	152	6"
1500	60"	7	N/A	N/A	125	4 7/8"	154	6 1/8"	153	6"	149	5 7/8"
1800	72"	8	N/A	N/A	154	6"	152	6"	151	5 7/8"	146	5 3/4"

Purple Spring  
  Silver Spring  
  White Spring



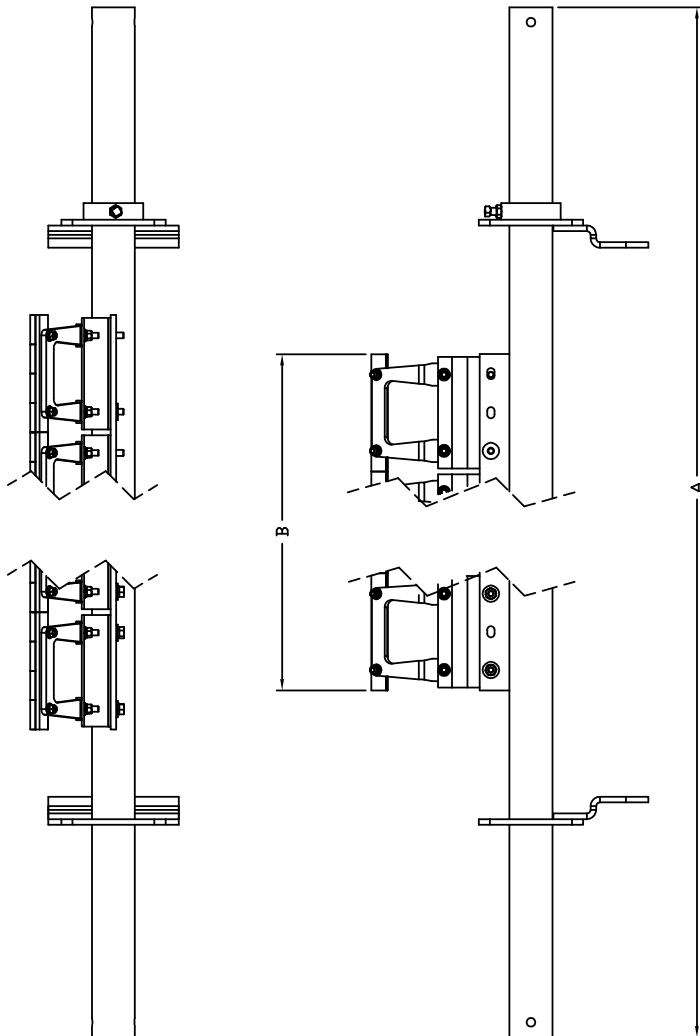
### Specifications:

- Maximum Belt Speed.....5 m/s (1000 FPM)
- Temperature Rating.....-35°C to 82°C (-30°F to 180°F)
- Usable Blade Wear Length.....9mm (3/8")
- Blade Material .....Long Life Tungsten Carbide (for vulcanized belts only)
- Available for Belt Widths.....450mm to 1800mm (18" to 72")

Other sizes available upon request.

# Section 8 – Specs and CAD Drawings

## 8.2 CAD Drawings - H-Type Precleaner with V-Tips - SS



POLE POSITION CHART				
DIAMETER (OVER BELT)	X	Y	C	GAP
10	1-1/8	11-1/2	11-5/8	2-1/8
11	1-5/8	11-5/8	11-3/4	2
12	2-1/8	11-3/4	12	1-3/4
13	2-5/8	11-7/8	12-1/4	1-5/8
14	3-1/8	12	12-1/2	1-1/2
15	3-5/8	12-1/8	12-3/4	1-3/8
16	4-1/8	12-1/4	13	1-1/4
17	4-1/2	12-3/8	13-1/4	1-1/8
18	5	12-1/2	13-1/2	1-1/8
19	5-1/2	12-3/4	13-7/8	1
*20	6	12-7/8	14-1/8	7/8
*21	6-1/2	13	14-1/2	7/8
*22	7	13-1/8	14-7/8	3/4
*23	7-1/2	13-1/4	15-1/8	3/4

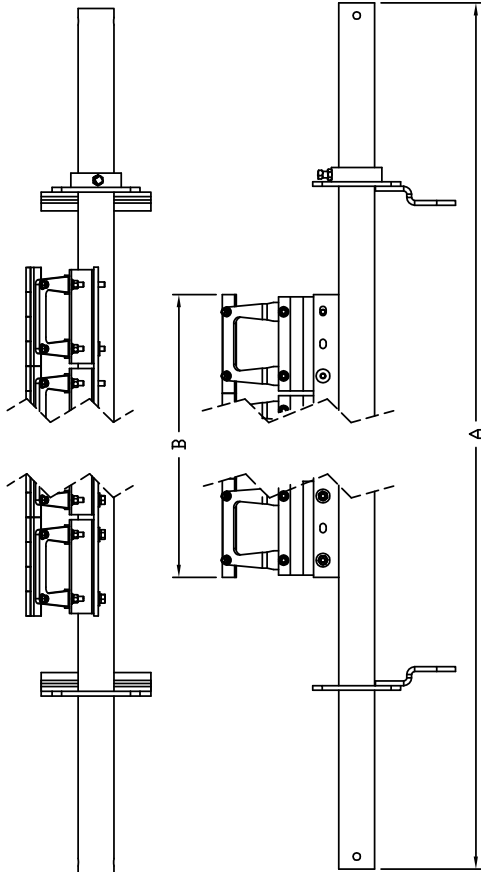
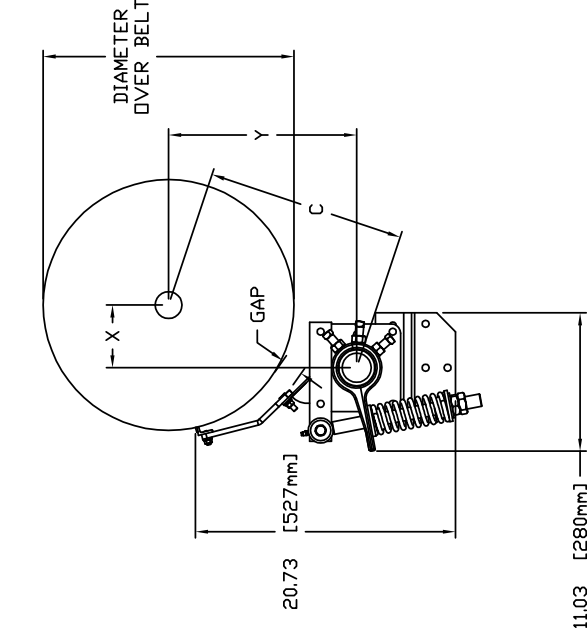
CLEANER	BELT WIDTH	"A"	"B"	NO. OF BLADES AND CUSHIONS
76101	18"	60"	15.75"	2
76102	24"	66"	23.62"	3
76103	30"	72"	33.62"	3
76104	36"	78"	31.45"	4
76105	42"	84"	39.37"	5
76106	48"	90"	39.37"	5

\* OPTIONAL EXTENDED RANGE



# Section 8 – Specs and CAD Drawings

## 8.2 CAD Drawings - H-Type Precleaner with V-Tips - S



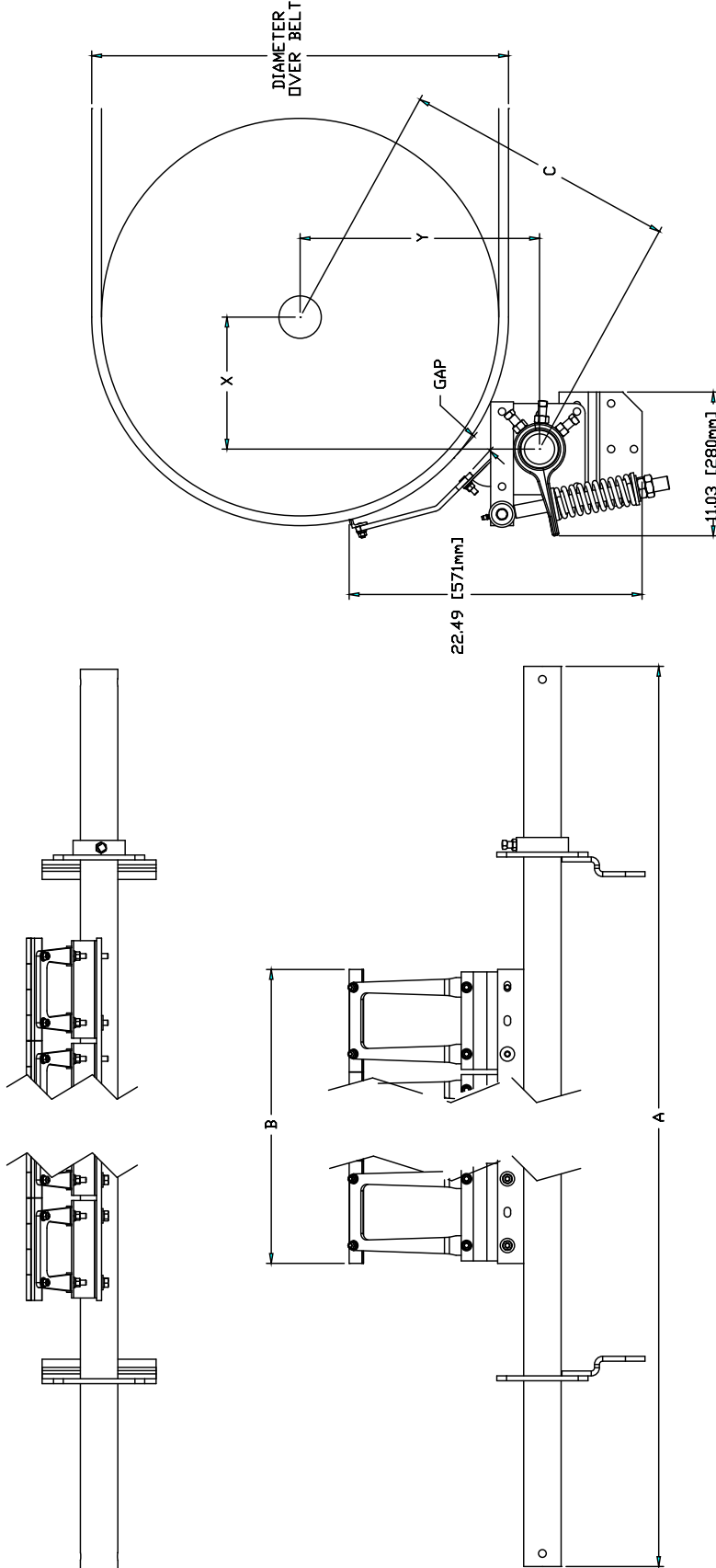
POLE LOCATION CHART				
DIAMETER (OVER BELT)	X	Y	C	GAP
*14	2-1/8	14-1/4	14-3/8	3
*15	2-1/2	14-3/8	14-5/8	2-7/8
*16	3	14-1/2	14-7/8	2-5/8
*17	3-1/2	14-5/8	15	2-1/2
*18	4	14-3/4	15-1/4	2-1/4
*19	4-1/2	14-7/8	15-1/2	2-1/8
20	5	15	15-7/8	2
21	5-1/2	15-1/8	16-1/8	1-7/8
22	5-7/8	15-1/4	16-3/8	1-3/4
23	6-3/8	15-3/8	16-3/4	1-5/8
24	6-7/8	15-1/2	17	1-1/2
25	7-3/8	15-5/8	17-3/8	1-1/2
26	7-7/8	15-3/4	17-5/8	1-3/8
27	8-3/8	15-7/8	18	1-1/4
28	8-7/8	16-1/8	18-3/8	1-1/4
29	9-3/8	16-1/4	18-5/8	1-1/8
30	9-3/4	16-3/8	19	1
*31	10-1/4	16-1/2	19-3/8	1
*32	10-3/4	16-5/8	19-3/4	7/8
*33	11-1/4	16-3/4	20-1/8	7/8
*34	11-3/4	16-7/8	20-1/2	3/4
*35	12-1/4	17	20-7/8	3/4
*36	12-3/4	17-1/8	21-1/4	3/4

\* OPTIONAL EXTENDED RANGE

CLEANER	BELT WIDTH	"A"	"B"	NO. OF BLADES
76190	18"	48"	15.75"	2
76192	24"	54"	23.62"	3
76194	30"	60"	23.62"	3
76196	36"	66"	31.45"	4
76199	42"	72"	39.37"	5
76254	48"	78"	39.37"	5
76107	54"	88"	47.25"	6
76108	60"	108"	55.09"	7
76109	72"	120"	62.96"	8

# Section 8 – Specs and CAD Drawings

## 8.2 CAD Drawings - H-Type Precleaner with V-Tips - N



POLE LOCATION CHART					
DIAMETER (INCLUDING BELT)	X	Y	C	GAP	
*26	7-1/4	17-5/8	19	2-3/8	
*27	7-3/4	17-3/4	19-3/8	2-3/8	
*28	8-1/4	17-7/8	19-5/8	2-1/4	
*29	8-3/4	18	20	2-1/8	
*30	9-1/4	18-1/8	20-3/8	2	
*31	9-3/4	18-1/4	20-5/8	1-7/8	
*32	10-1/8	18-3/8	21	1-7/8	
*33	10-5/8	18-1/2	21-3/8	1-3/4	
*34	11-1/8	18-5/8	21-3/4	1-5/8	
*35	11-5/8	18-3/4	22-1/8	1-5/8	
*36	12-1/8	18-7/8	22-3/8	1-1/2	
*37	12-5/8	19	22-3/4	1-3/8	
*38	13-1/8	19-1/8	23-1/8	1-3/8	
*39	13-1/2	19-1/4	23-5/8	1-1/4	
*40	14	19-3/8	24	1-1/4	
*41	14-1/2	19-1/2	24-3/8	1-1/8	
*42	15	19-5/8	24-3/4	1-1/8	
*43	15-1/2	19-3/4	25-1/8	1-1/8	
*44	16	19-7/8	25-1/2	1	
*45	16-1/2	20	26	1	

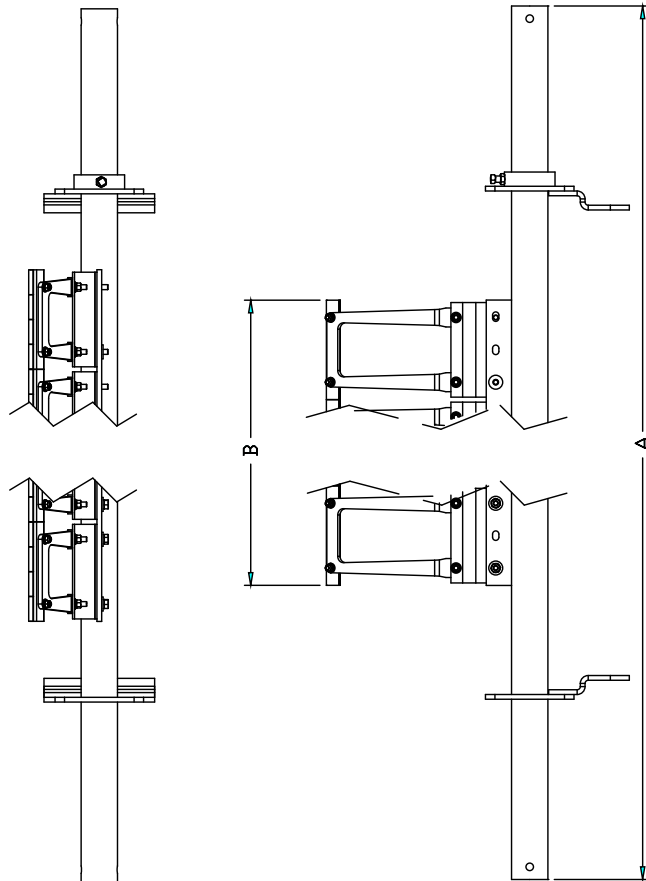
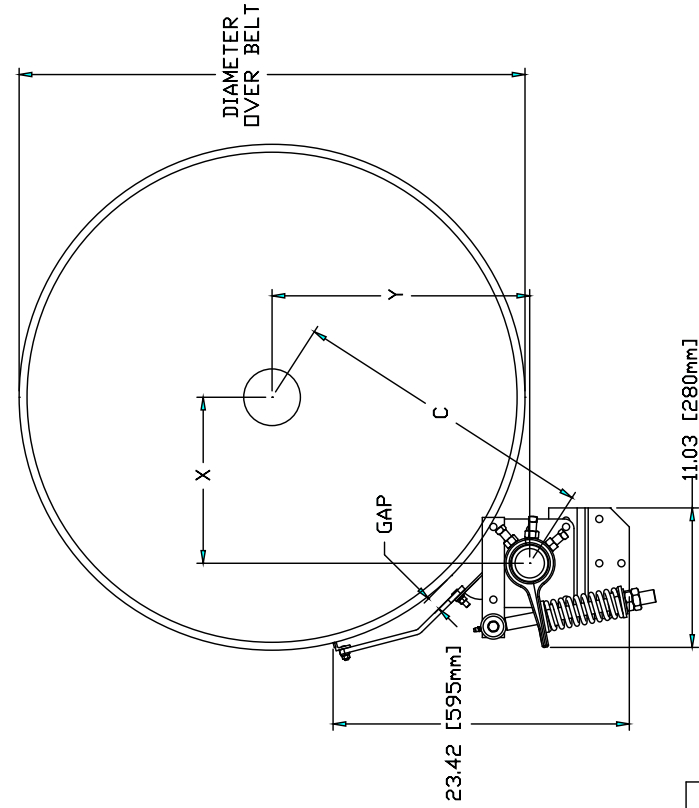
\* OPTIONAL EXTENDED RANGE

CLEANER	BELT WIDTH	"A"	"B"	NO. OF BLADES
76191	18"	60"	15.75"	2
76193	24"	66"	23.62"	3
76195	30"	72"	23.62"	3
76197	36"	78"	31.50"	4
76251	42"	84"	39.38"	5
76255	48"	90"	39.38"	5
76258	54"	96"	47.25"	6
76261	60"	108"	55.12"	7
76264	72"	120"	63.00"	8



# Section 8 – Specs and CAD Drawings

## 8.2 CAD Drawings - H-Type Precleaner with V-Tips - L



POLE LOCATION CHART				
DIAMETER (OVER BELT)	X	Y	C	GAP
*34	10-1/4	19-1/2	22	1-3/4
*35	10-3/4	19-5/8	22-3/8	1-5/8
*36	11-1/4	19-3/4	22-3/4	1-5/8
*37	11-5/8	19-7/8	23-1/8	1-1/2
*38	12-1/8	20	23-1/2	1-3/8
*39	12-5/8	20-1/8	23-7/8	1-3/8
40	13-1/8	20-3/8	24-1/4	1-1/4
41	13-5/8	20-1/2	24-1/2	1-1/8
42	14-1/8	20-5/8	25	1-1/8
43	14-5/8	20-3/4	25-3/8	1
44	15-1/8	20-7/8	25-3/4	1
45	15-1/2	21	26-1/8	7/8
46	16	21-1/8	26-1/2	7/8
47	16-1/2	21-1/4	26-7/8	3/4
*48	17	21-3/8	27-1/4	3/4

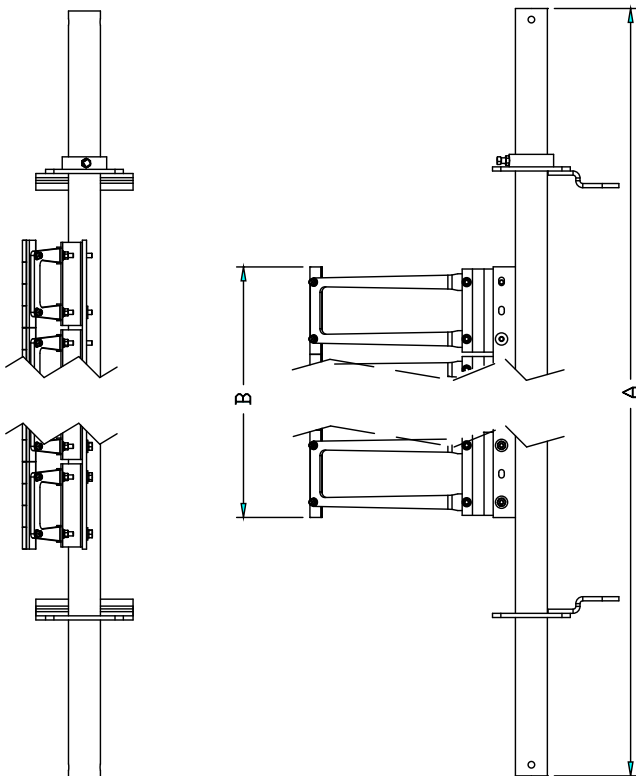
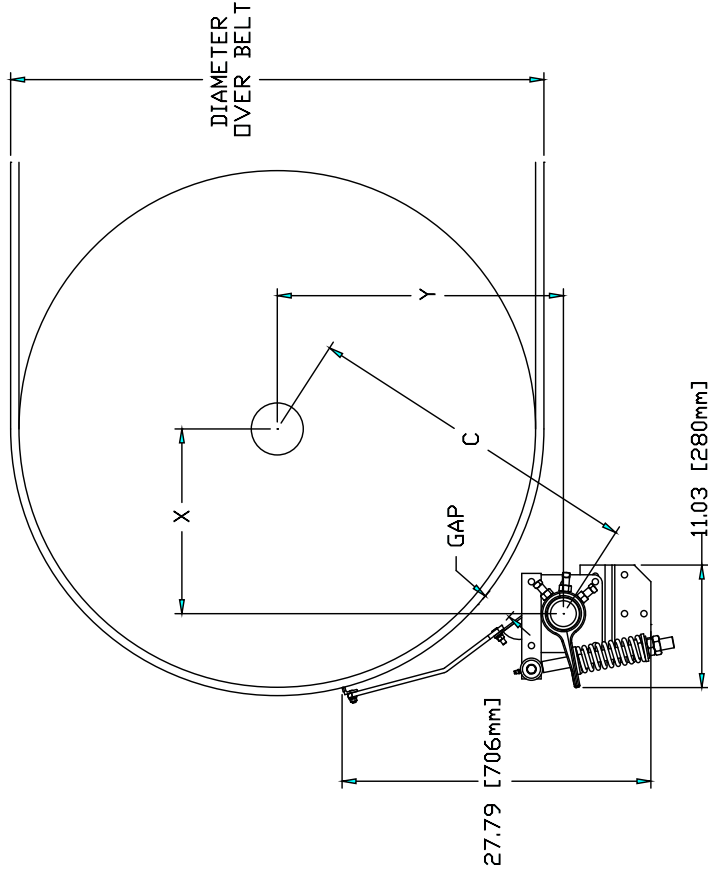
\* OPTIONAL EXTENDED RANGE

CLEANER	BELT WIDTH	"A"	"B"	NO. OF BLADES
76198	36"	78"	31.50"	4
76252	42"	84"	39.38"	5
76256	48"	90"	39.38"	5
76259	54"	96"	47.25"	6
76262	60"	108"	55.12"	7
76265	72"	120"	63.00"	8



# Section 8 – Specs and CAD Drawings

## 8.2 CAD Drawings - H-Type Precleaner with V-Tips - LL

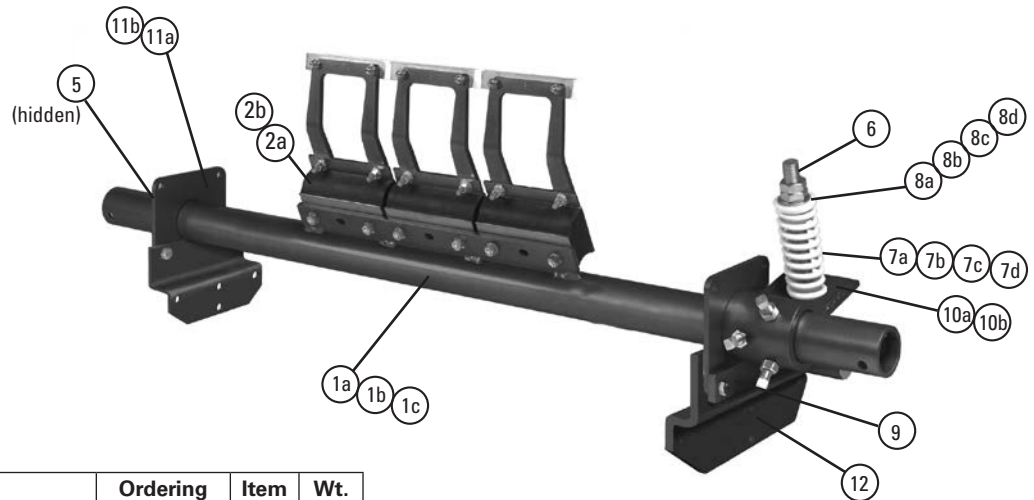


DIAMETER (OVER BELT)	X	Y	C	GAP
48	16-5/8	25-3/4	30-5/8	3
49	17-1/8	25-7/8	31	2-7/8
50	17-5/8	26	31-3/8	2-7/8
51	18-1/8	26-1/8	31-3/4	2-3/4
52	18-5/8	26-1/4	32-1/8	2-5/8
53	19	26-3/8	32-1/2	2-5/8
54	19-1/2	26-1/2	32-7/8	2-1/2
55	20	26-5/8	33-1/4	2-1/2
56	20-1/2	26-3/4	33-3/4	2-3/8
57	21	26-7/8	34-1/8	2-3/8
58	21-1/2	27	34-1/2	2-1/4
59	22	27-1/8	34-7/8	2-1/4
60	22-1/2	27-1/4	35-1/4	2-1/8
61	22-7/8	27-3/8	35-3/4	2-1/8
62	23-3/8	27-1/2	36-1/8	2
63	23-7/8	27-5/8	36-1/2	2
64	24-3/8	27-3/4	37	1-7/8
65	24-7/8	27-7/8	37-3/8	1-7/8
66	25-3/8	28	37-3/4	1-3/4
67	25-7/8	28-1/8	38-1/4	1-3/4

CLEANER	BELT WIDTH	"A"	"B"	NO. OF BLADES
76253	42"	84"	39.35"	5
76257	48"	90"	39.35"	5
76260	54"	96"	47.22"	6
76263	60"	108"	55.12"	7
76266	72"	120"	63.00"	8



# Section 9 – Replacement Parts List



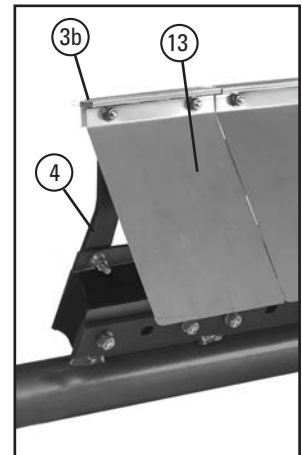
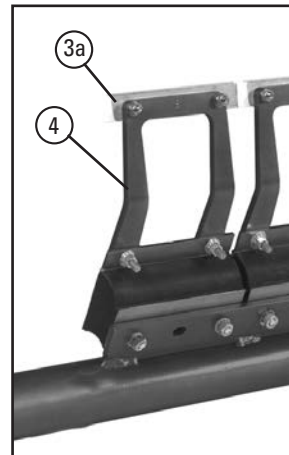
## Replacement Parts

Ref	Description	Ordering Number	Item Code	Wt. KG
1a	450mm (18") Pole	H78P18	73027	10.0
	600mm (24") Pole	H78P24	73029	11.0
	750mm (30") Pole	H78P30	73031	13.0
	900mm (36") Pole	H78P36	73033	15.0
	1050mm (42") Pole	H78P42	73035	20.0
	1200mm (48") Pole	H78P48	73037	22.0
1b	1350mm (54") Pole	H78P54	73065	23.0
	1500mm (60") Pole	H78P60	73066	24.0
	1600mm (64") Pole	H78P64	73739	27.0
1c	1800mm (72") Pole	H78P72	74601	34.0
	2100mm (84") Pole	H78P84	81528	39.0
2a	H2 XF-Tip Cushion* (for S - LL Susp. Arms)	HXFC2	75902	4.0
2b	H2 F-Tip Cushion* (for SS Susp. Arms)	HFC2	75901	4.0
3a	H V-Tip* (1 ea.)	HVT8-S/S	75419	0.5
3b	H Protected V-Tip* (1 ea.) (for vulcanized belts only) (for abusive wear)	HVPT	73631	1.2
4	H SS Suspension Arm*	HSA200SS	73047	0.2
	H S Suspension Arm*	HSA200S	73048	0.5
	H M Suspension Arm*	HSA200M	73049	0.7
	H L Suspension Arm*	HSA200L	73063	0.9
	H LL Suspension Arm*	HSA200LL	73064	1.3
5	Pole Lock Collar* (1 ea.)	MSPPL	75816	0.9
6	Pivot Arm Kit* (1 ea.)	QMTPAK	76096	2.0
7a	Tension Spring - Purple (1 ea.)**	QMTS-P	75845	0.3
7b	Tension Spring - Black (1 ea.)**	ESS-B	76413	0.8
7c	Tension Spring - Gold (1 ea.)**	PSTS-G	76484	1.1
7d	Tension Spring - Silver (1 ea.)**	PSTS-S	75899	1.4
8a	Bushing Kit - Purple (2 ea.) (for Item 6)	MESBK-PS	82364	0.05
8b	Bushing Kit - Black (2 ea.) (for Item 6a)	MESBK-B	82365	0.05
8c	Bushing Kit - Gold (2 ea.) (for Items 6b)	QMTBK-GCN	82174	0.1
8d	Bushing Kit - White/Silver (2 ea.) for Item 6c)	QMTBK-WS-MT	82175	0.1
9	Pivot Shaft Bracket Kit* (1 ea.)	QMTPSBK	76099	2.0
10a	Torque Arm Kit* (1 ea.)	PSTA	75896	5.2
10b	EST Torque Arm Kit* (1 ea.)	ESTAK	81033	3.3
11a	Mounting Plate Kit* (2 ea.)	MSPMPK	75811	3.8
11b	EST Mounting Plate Kit* (2 ea.)	MEZP1	81897	3.5
12	Offset Bracket Kit* (1 ea.) (for sizes 1350+)	HOBK	76399	5.6
13	H SS Tip Shield	HSSTS	74771	0.2
-	H SS Cushion Shield	HSSCS	74772	0.3
-	EST Spring Tensioner* - Purple (incl. 1 ea. Items 5, 6, 7, 8, 9a & 10a)	MEST-P	81068	9.3
-	EST Spring Tensioner* - Black (incl. 1 ea. Items 5, 6a, 7a, 8, 9a & 10a)	MEST-B	81070	9.9
-	QMT Spring Tensioner* - Gold (incl. 1 ea. Items 5, 6b, 7b, 8, 9 & 10)	QMT-G-CN	82181	10.5
-	QMT Spring Tensioner* - Silver (incl. 1 ea. Items 5, 6c, 7c, 8, 9 & 10)	QMT-S-CN	81039	4.1

\*Hardware included  
Lead time: 1 working day

### H-Type Precleaner with V-Tips

- All sizes are now heavy-duty style.
- New, stronger 72mm (2 7/8") diameter pole.
- New, self-contained spring tensioner.



CLEANER TYPE AND SIZE	81068 MEST-P	81070 MEST-B	82181 QMT-G-CN	81039 QMT-S-CN
<b>HV</b>				
450-900mm SS, 450-750mm S, M	X			
1050-1200mm SS, 900-1200mm S,M,L		X		
1350-2100mm M,L; 1350-1600mm LL			X	
2400-3000mm M,L; 1800-3000mm LL				X
<b>HVP</b>				
450-750mm S,M	X			
900-1200mm S, M, L		X		
1350-2100mm M,L; 1350-1600mm LL			X	
2400-3000mm M,L; 1800-3000mm LL				X

## Section 10 – Other Flexco Conveyor Products

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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

### 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

### 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

### PT Max™ Belt Trainer



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

### Flexco Specialty Belt Cleaners



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

### Belt Plows



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

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