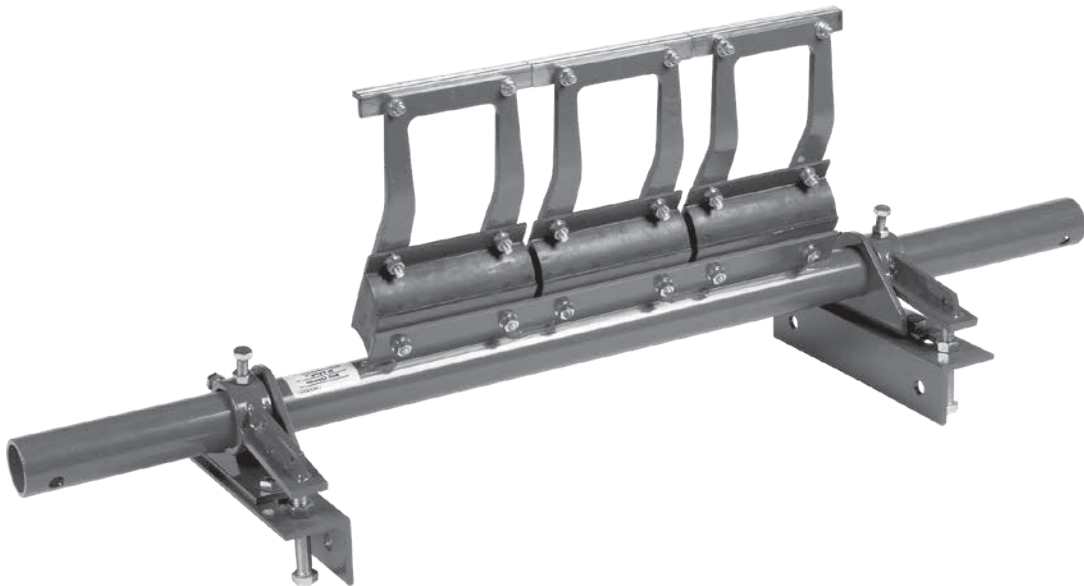


# H-Type<sup>®</sup> Primary Cleaner with V-Tips

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## Installation, Operation and Maintenance Manual

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## H-Type® Primary Cleaner with V-Tips

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Purchase Date: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Installation Date: \_\_\_\_\_

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

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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® Primary Cleaner 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: 612-8818-2000**

**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 Primary Cleaner 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® Primary Cleaner 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.

---

### 2.1 Stationary Conveyors

The following activities are performed on stationary conveyors:

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

#### **DANGER**

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

**Before working:**

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

#### **WARNING**

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

- Safety eyewear
- Hardhats
- Safety footwear

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

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

---

### 2.2 Operating Conveyors

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

- Inspection of the cleaning performance
- Dynamic troubleshooting

#### **DANGER**

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

#### **WARNING**

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

---

### 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.

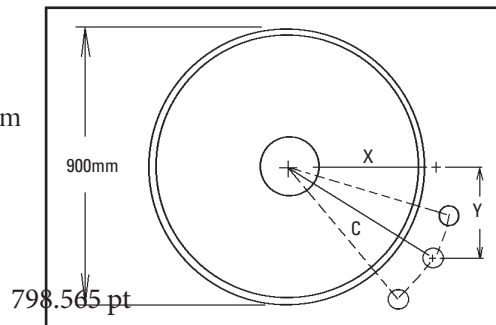
Conveyor situation:

Pulley Diameter: 900mm

X = 301mm

Y = 478mm

C = 565mm



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

X = ?

Y = 478 + 50 = 528mm

C = 565mm

3. **Determine final dimension.** On a flat vertical surface, using a level, draw one horizontal line and one vertical line creating a right triangle (Fig 3a). Measure down from the intersection the determined “Y” dimension and mark (Fig 3b). With the tape measure starting at the modified “Y” mark, swing the tape across the “X” line and mark at the “C” dimension where it crosses the “X” line (Fig 3c). Measure from the intersection to the “C” intersection and this will be your new “X” dimension (Fig. 3d).

X = 201mm

Y = 528mm

C = 565mm

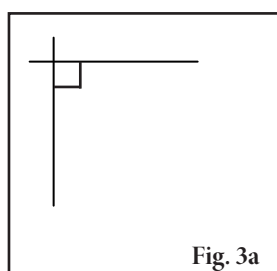


Fig. 3a

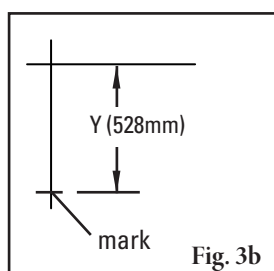


Fig. 3b

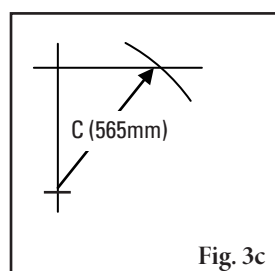


Fig. 3c

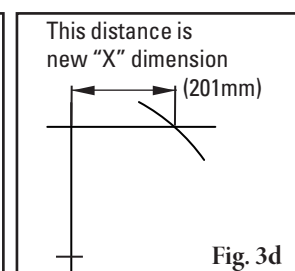
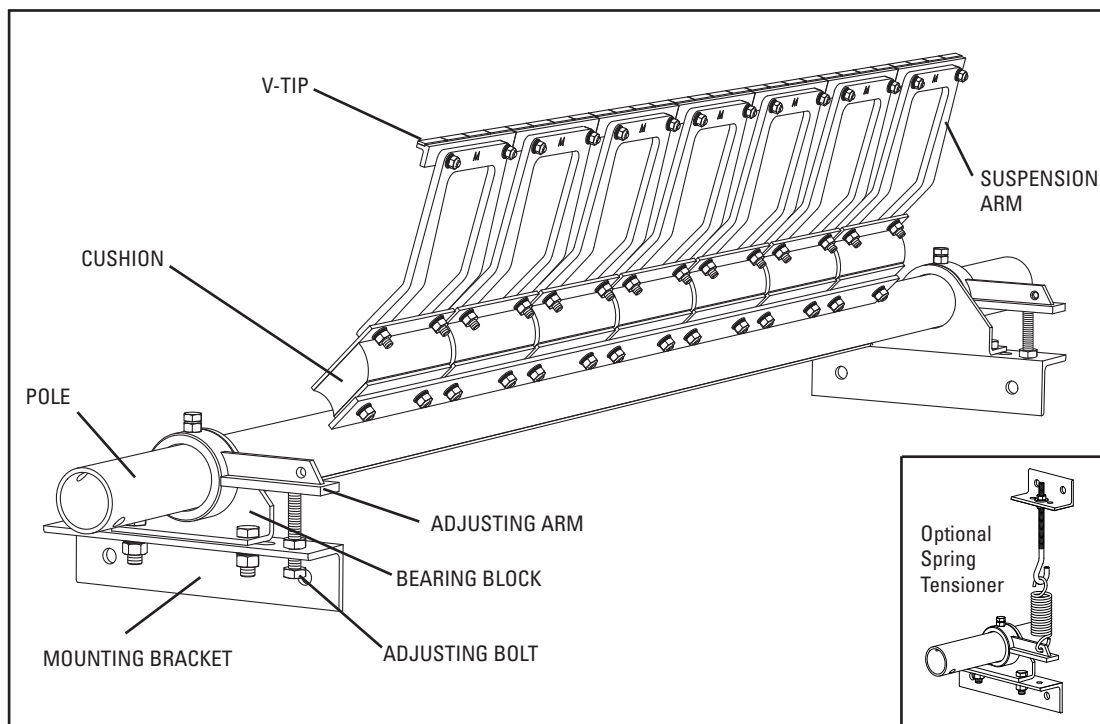


Fig. 3d

## Section 4 – Installation Instructions

### 4.1 H-Type Primary Cleaner with V-Tips and J-Bolt Tensioner



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

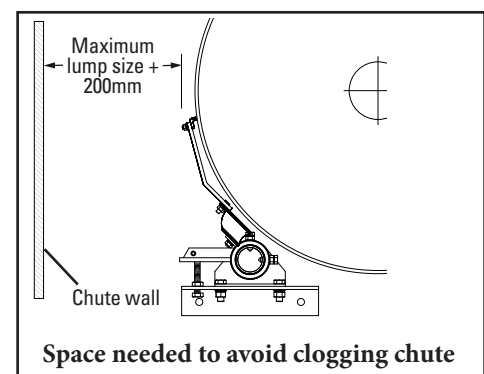
#### Before You Begin:

- Installation specs and instructions are based on the assumption that the conveyor is in its working position (angle). If the conveyor angle will be different, the cleaner should be installed per the final position.
- Choose instructions for chute mounting or open head mounting. For chute mounting it may be necessary to cut an access hole to allow for installation and inspections. (See dimensions in Step 7 under Chute Mounting.)
- Follow all safety precautions when using a cutting torch.
- If welding, protect all fastener threads from weld spatter.

V-Tip Size	Pulley Diameter + Belt and Lagging
SS	up to 499mm
S	500-799mm
M	800-999mm
L	1000-1199mm
LL	1200-1700mm

#### Tools Needed

- Tape Measure
- 19mm Wrench
- Ratchet With 19mm Socket
- Adjustable Wrench
- Cutting Torch and/or Welder
- (2) 150mm C-Clamps (For Temporary Positioning of Mounting Brackets)
- 600mm Level
- Marking Pen





## Section 4 – Installation Instructions

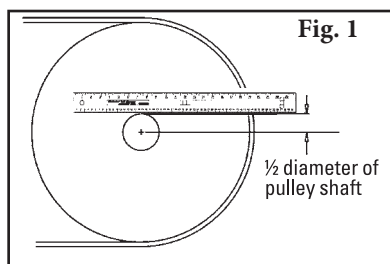
### 4.1 H-Type Primary Cleaner with V-Tips and J-Bolt Tensioner

#### Chute Mounting

1. **Find X and Y measurements.** Find the X and Y measurement specifications for the pulley diameter. See charts on pages 14, 15 and 16. The pulley diameter measurement should include lagging and belt.

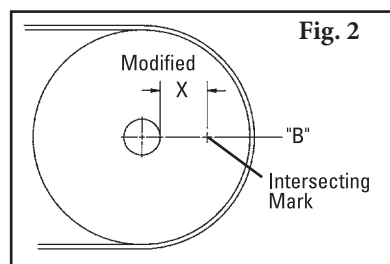
Pulley Diameter \_\_\_\_\_ mm; X = \_\_\_\_\_ mm; Y = \_\_\_\_\_ mm

Using the correct X and Y coordinates will position the cleaner at 15° below the horizontal plane on the head pulley.

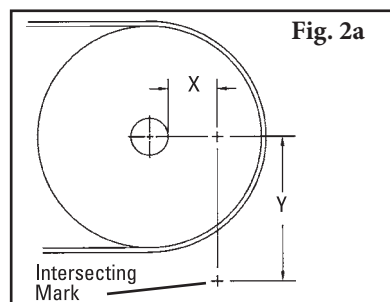


- 2a. **Measure head pulley shaft.** Determine the diameter of the pulley shaft and divide by 2.

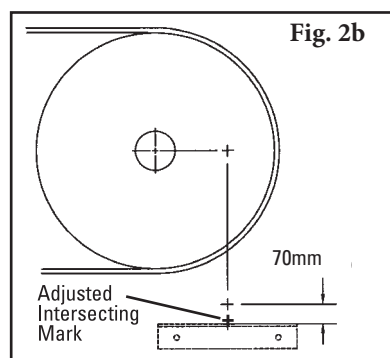
- 2b. **Put a level on top of the pulley shaft and draw a horizontal line A.** Measure down from Line A half the diameter of the pulley shaft and draw Line B parallel from the pulley shaft (Fig. 1).



- 3a. **Mark X dimension.** Subtract the above dimension (Step 2a) 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).



- 3b. **Determine Y dimension.** From the horizontal X mark, drop a line vertically down to the selected Y dimension and draw an intersecting mark (Fig. 2a). This is the correct position of the centre of the pole.

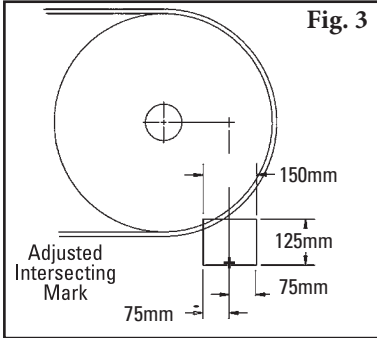


4. **Locate mounting bracket position (horizontal position).** To locate the position of the cleaner mounting bracket, add 70mm to the intersecting mark (Fig. 2b). This mark indicates the top centre of the mounting bracket.

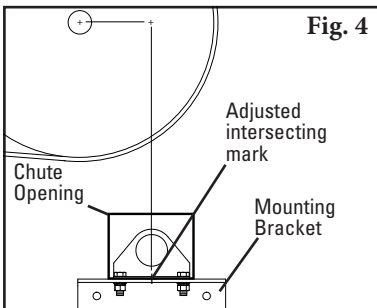
## Section 4 – Installation Instructions

### 4.2a H-Type Primary Cleaner with V-Tips and J-Bolt Tensioner (cont.)

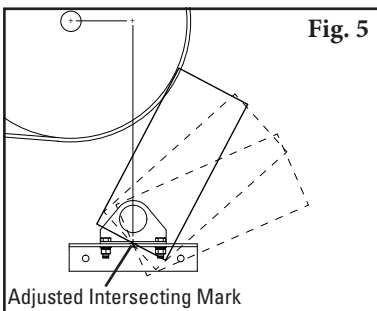
#### Chute Mounting (cont.)



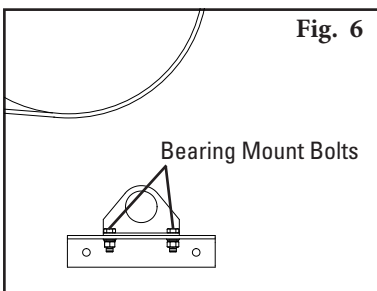
5. **Cut chute opening.** Using the adjusted intersecting mark (“+”) established in Step 4, layout and cut the required opening 125x150mm on the chute (Fig. 3). If access hole is required, see Step 7.



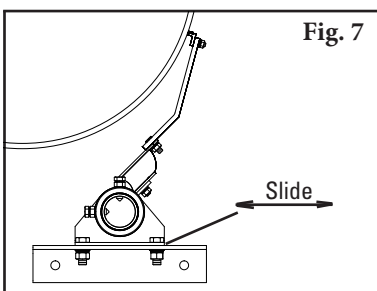
6. **Install the mounting brackets.** Centre the mounting bracket on the bottom of the opening. Bolt or weld in position (Fig 4). Repeat process on opposite side.



7. **Cutting the access hole.** Cut access hole, centring the bottom edge on the adjusted intersecting mark (“+”) established in Step 4. Width of hole should be 175mm; height should be 325mm for extra small arms, 375mm for small arms, 420mm for medium arms, 450mm for large arms or 555mm for extra large arms. Access hole may be oriented within the range shown (Fig. 5), provided bottom edge is still centreed as described above.



8. **Install the pole.** Remove the two bearing mount bolts from one of the bearing mounts (Fig. 6). (If chute mount, remove from the side with access hole.) Slide the pole across the pulley and into the bearing mount on other side and allow tips to hang down. Install the removed bearing mount on the pole and reattach to the mounting bracket. Do not tighten; leave finger tight.



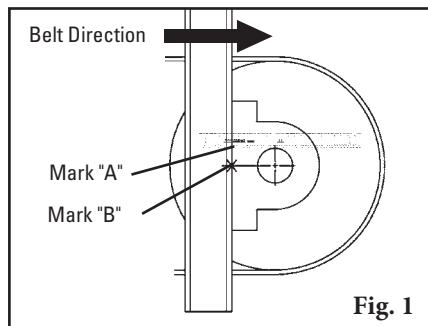
9. **Position the pole.** Rotate pole upward to bring tips into contact with head pulley (Fig. 7). Centre the tips across the belt. While applying light pressure on the centre tip, shift loosened bearing mount until tips are contacting belt evenly across full width. Lock cleaner into this position by tightening bearing mount bolts.

For step-by-step instructions on installing the spring tensioner, refer to page 10.

## Section 4 – Installation Instructions

### 4.2b H-Type Primary Cleaner with V-Tips and J-Bolt Tensioner (cont.)

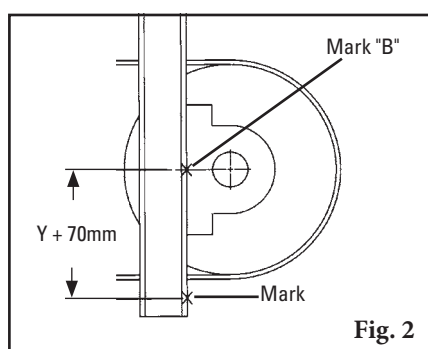
#### Open Head Mounting



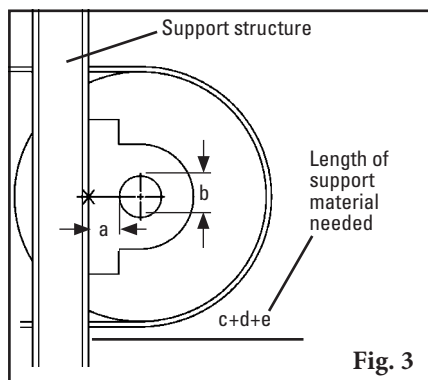
- 1. Find X and Y measurements.** Find the X and Y measurement specifications for the pulley diameter. See charts on pages 12 and 13. The pulley diameter measurement should include lagging and belt.

Pulley Diameter \_\_\_\_\_ mm    X \_\_\_\_\_ mm    Y \_\_\_\_\_ mm

Using the correct X and Y coordinates will position the cleaner at 15° below the horizontal plane on the head pulley.



- 2a. Locate Y location.** Determine the diameter of the pulley shaft and divide by 2.
- 2b. Put a level on top of the pulley shaft and mark A at the structure.** Measure down from Mark A half the diameter of the pulley shaft and mark B, locating the shaft centreline (Fig. 1).
- 2c. Measure down the given Y dimension plus 70mm and mark (Fig. 2).** This mark indicates the top location of support material to be added for installing the cleaner mounting brackets.



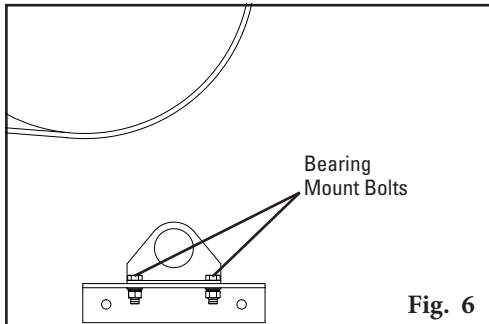
a) shaft to structure	_____	
b) pulley shaft diameter _____ ÷ 2	_____	+
c) pulley shaft centre line to structure	= _____	
d) add X measurement from chart	_____	+
centre of pole from structure	= _____	
e) add 175mm (half length of mounting bracket)	175mm	+
<b>length of support material needed</b>	= _____	

- 3. Locate X location.**
  - Measure from the back of the pulley shaft to the support structure (Fig. 3).
  - Pulley shaft diameter divided by 2.
  - Add dimensions from a) and b). This dimension is the pulley shaft centreline to the support structure.
  - Add the given X dimension to c). The sum indicates the distance from the centre of the pole to the support structure.
  - Add 175mm (half the length of the mounting bracket). The sum is the total length of support material needed to correctly locate the mounting brackets.
- 4. Secure mounting support pieces to the support structure.** Weld support pieces to the support structure. 75x75mm angle works well for these support pieces.
- 5. Prepare the support pieces for the cleaner mounting brackets.** Clamp the mounting bracket on the support piece. Mark and drill holes for mounting or weld.

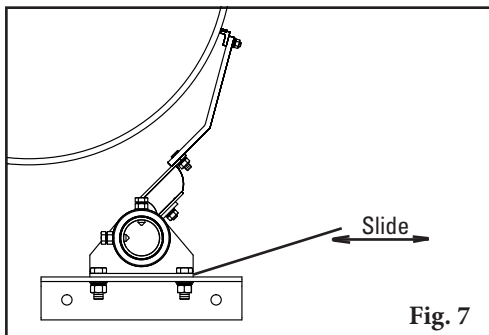
## Section 4 – Installation Instructions

### 4.2b H-Type Primary Cleaner with V-Tips and J-Bolt Tensioner (cont.)

#### Open Head Mounting (cont.)



6. **Install the pole.** Remove the two bearing mount bolts from one of the bearing mounts (Fig. 6). (If chute mount, remove from the side with access hole.) Slide the pole across the pulley and into the bearing mount on other side and allow tips to hang down. Install the removed bearing mount on the pole and reattach to the mounting bracket. **NOTE:** Do not tighten; leave finger tight.



7. **Position the pole.** Rotate pole upward to bring tips into contact with head pulley (Fig. 7). Centre the tips across the belt. While applying light pressure on the centre tip, shift loosened bearing mount until tips are contacting belt evenly across full width. Lock cleaner into this position by tightening bearing mount bolts.

#### 4.3a Cushion/Shield Design

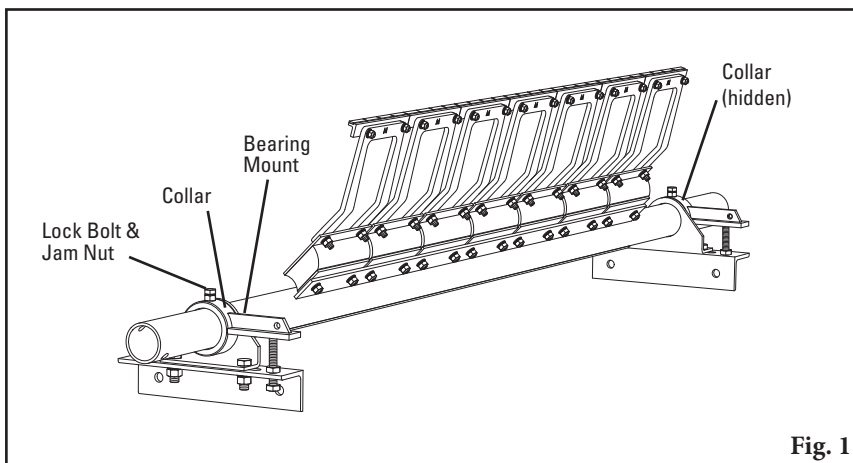


Fig. 1

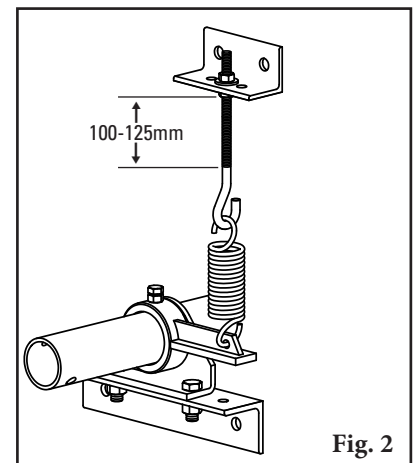


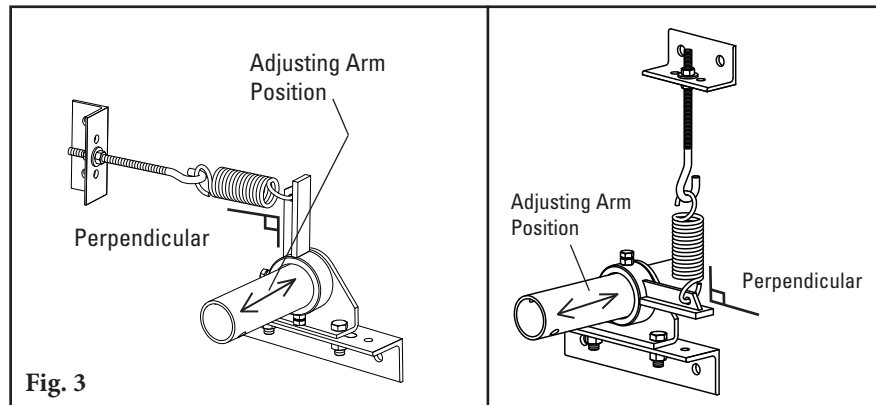
Fig. 2

- 8a. **Install the Tensioning System.** With the pole rotated up so that all the tips contact the head pulley, slide a collar on each end of the pole. Position the collars tight against the bearing mounts and tighten the lock bolt and jam nut on each collar (Fig. 1).
- 8b. **Assemble the tension spring and the J bolt mount to an adjusting arm (Fig. 2).** **IMPORTANT:** Allow for at least 100-125mm upward movement on the J bolt for future blade tip adjustments.

## Section 4 – Installation Instructions

### 4.3a H-Type Primary Cleaner with V-Tips and J-Bolt Tensioner (cont.)

#### Spring Tension Mounting Kit (cont.)



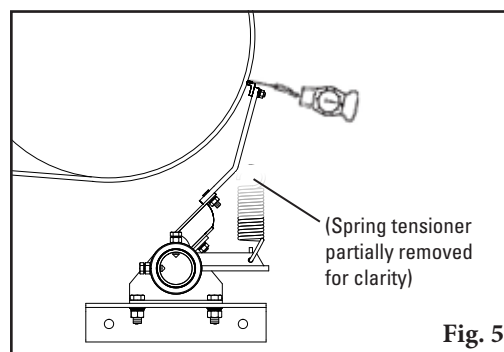
- 8c. Install an adjusting arm onto pole end.** Rotate the tensioner around the pole until the optimum mounting position is located. The J bolt mount can be located in any position 360° around the pole. The only requirement is that the J bolt and spring remain perpendicular to the adjusting arm (Fig. 3). **NOTE:** adjusting arm can be located any place along the end of the pole to align with J bolt mount.
- 8d. Clamp the J bolt mount in place and weld or bolt in position.**
- 8e. With the adjusting arm positioned perpendicular to the J bolt mount, tighten the adjusting arm lock bolts and jam nuts (for optimum hold, tighten the back bolt first and then the top bolt).**

## Section 4 – Installation Instructions

### 4.3a H-Type Primary Cleaner with V-Tips and J-Bolt Tensioner (cont.)

#### Spring Tension Mounting Kit (cont.)

- 10. Check for Correct Blade Tip Tension.** Place the Tip Tension Gauge between the blade tip and belt on the centre tip (or tips) (Fig. 5). While pulling in a straight motion, read the tension required to break contact between the tip and belt. 13Kg is recommended. Also check tension on both outer tips. Make tension adjustments if needed.

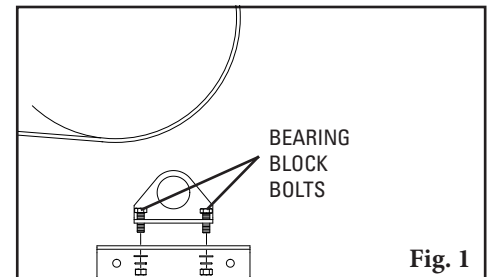


**Fig. 5**

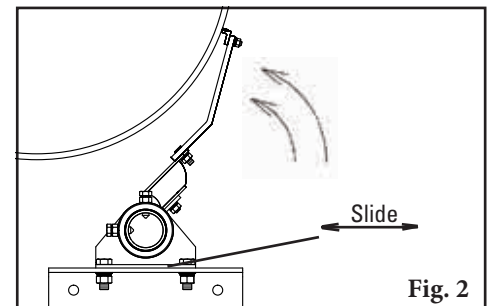
## Section 4 – Installation Instructions

### 4.3b H-Type Primary Cleaner with V-Tips and Bolt-Up Tensioner

1. **Install the pole.** Remove the two bearing block bolts from one of the bearing blocks (Fig. 1). (If chute mount, remove from the side with access hole.) Slide the pole across the pulley and into the bearing block on other side and allow tips to hang down. Install the removed bearing block on the pole and reattach to the mounting bracket. Do not tighten; leave finger tight.



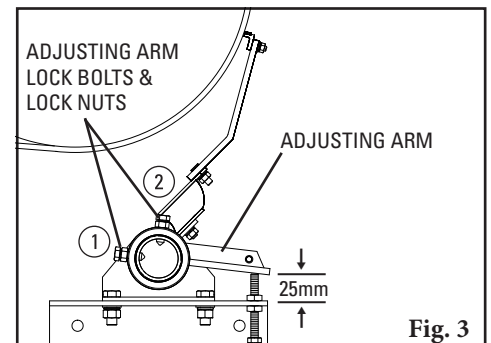
2. **Position the pole.** Rotate pole upward to bring tips into contact with head pulley (Fig. 2). Centre the tips across the belt. While applying light pressure on the centre tip, shift loosened bearing block until tips are contacting belt evenly across full width. Lock cleaner into this position by tightening bearing mount bolts.



3. **Install adjusting arms.**

Note: If using optional spring tensioner, go to separate instructions included in packet.

- a. Screw adjusting bolts into the welded nut on each mounting bracket (about 25mm above the mounting bracket).
- b. With pole rotated up, so that all tips contact the head pulley, slide the adjusting arm onto pole, tight against bearing block, resting on the adjusting bolt, pointed away from the head pulley (Fig. 8). Tighten both adjusting arm lock bolts and lock nuts (in the order shown in Fig. 3). Repeat on opposite side.

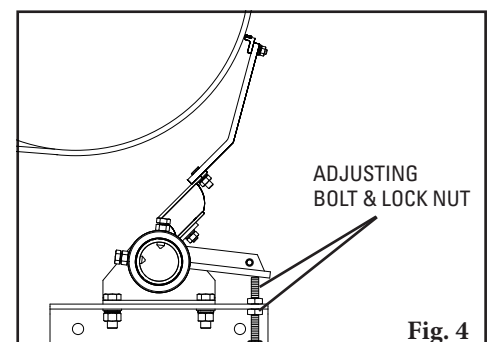


4. **Set tip tension.**

Apply the following tension:

V-Tips -- 1-1/2 turns

Lock both adjusting bolt lock nuts (Fig. 4).



## Section 4 – Installation Instructions

### 4.3b H-Type Primary Cleaner with V-Tips and Bolt-Up Tensioner (cont.)

5. **Check for correct tip tension.** Place a Tip Tension Gauge between the tip and the belt on the centre tip (or tips) (Fig. 5). While pulling in a straight motion, read the tension required to break contact between the tip and belt. 8kg is recommended. Also check tension on both outer tips. Make tension adjustments if needed.

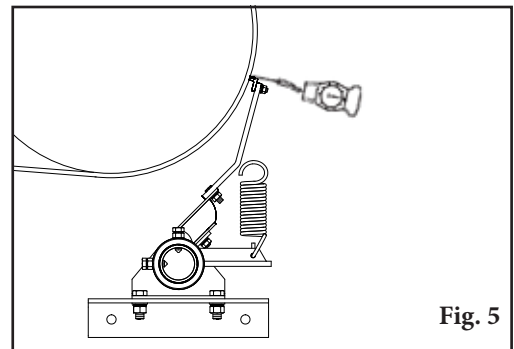


Fig. 5

6. **Check tip alignment with gauge provided.** Align the gauge against the head pulley and move down until the gauge contacts the top of the blade. The suspension arm should align with lines marked on gauge (Fig. 6). If the alignment is not correct, loosen both bearing block bolts and slide pole to gain correct alignment. Correct one side at a time. Tighten bolts and repeat Step 5.

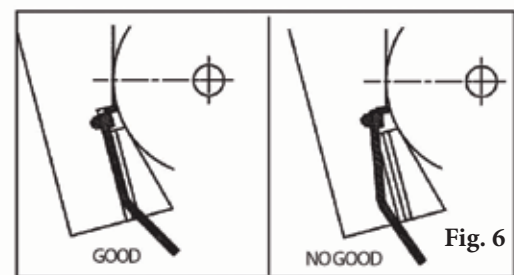


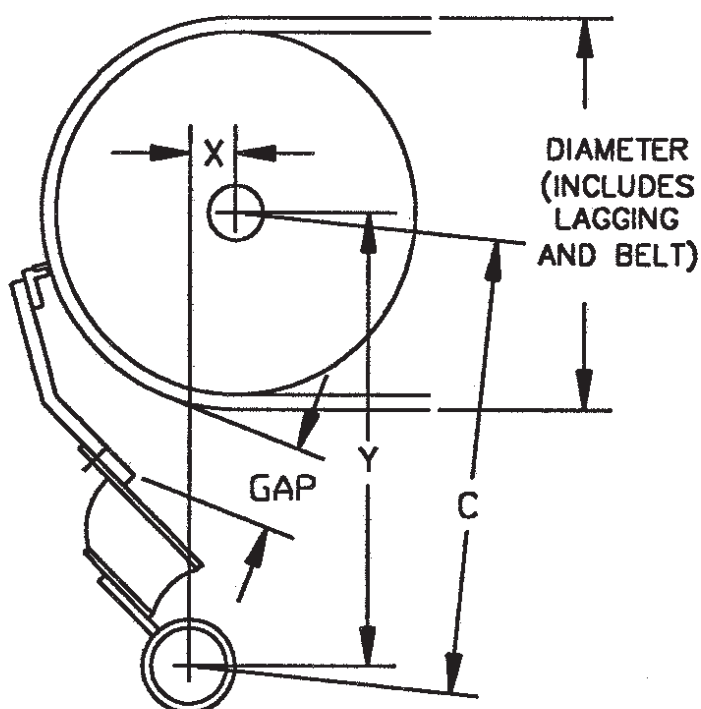
Fig. 6

7. **Test run cleaner and inspect operation.** If vibration occurs or more cleaning efficiency is desired, increase tip tension by making a 1/2 turn on each adjustment bolt.



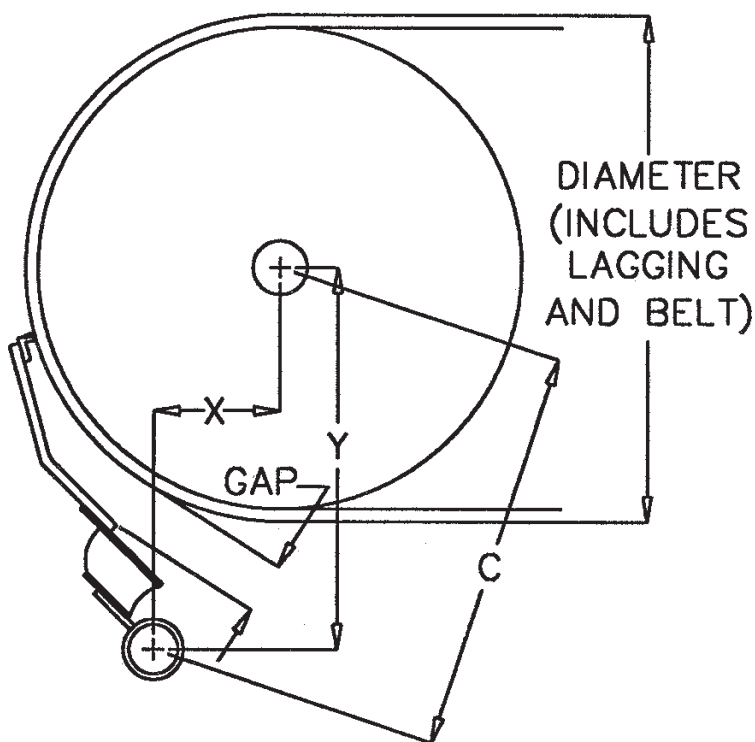
## Section 5 – Cleaner Pole Location Charts

### 5.1 Pole Location Charts



**Extra Small (SS) V-Arms  
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

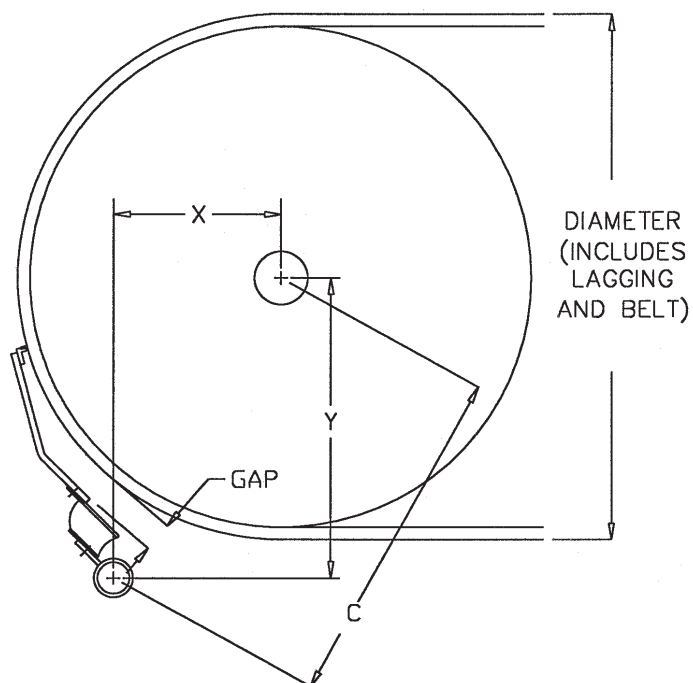


**Small (S) V-Arms  
for Head Pulley Diameters  
500-799mm**

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

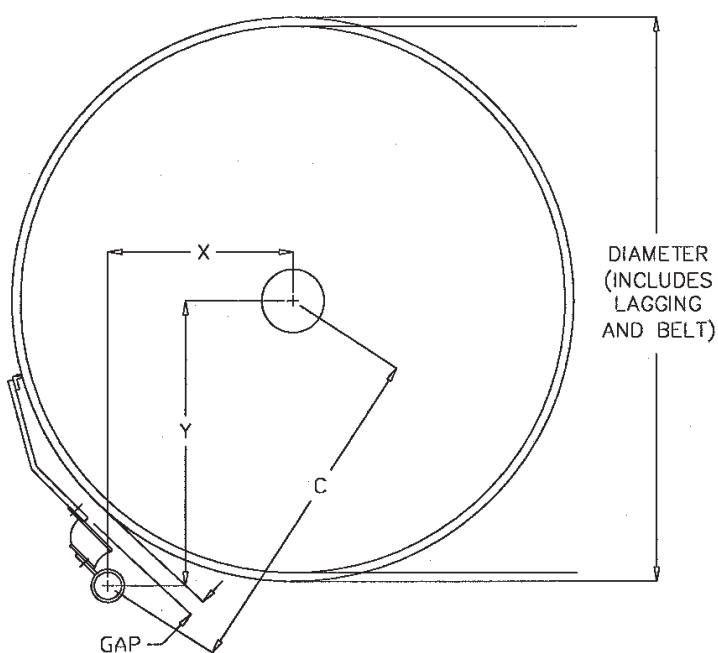
## Section 5 – Cleaner Pole Location Charts

### 5.1 Pole Location Charts (cont.)



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

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

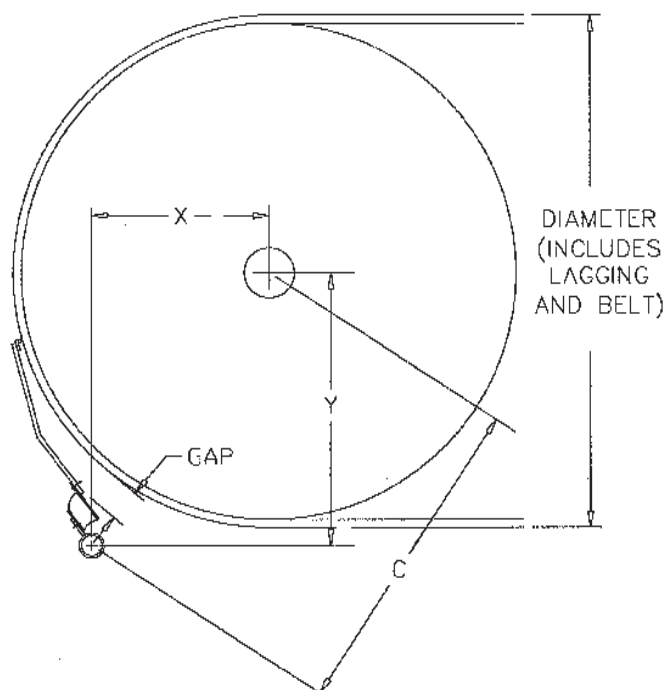


**Large (L) V-Arms  
for Head Pulley Diameters  
1000-1199mm**

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

## Section 5 – Cleaner Pole Location Charts

### 5.1 Pole Location Charts (cont.)



**Extra Large (XL) V-Arms  
for Head Pulley Diameters  
1200-1700mm**

Diameter (Over Belt)	X	Y	C	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
1700	655	715	970	44

## Section 6 – Pre-Operation Checklist and Testing

---

### 6.1 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.

### 6.2 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 7 – Maintenance

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

### 7.1 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.

### 7.2 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.

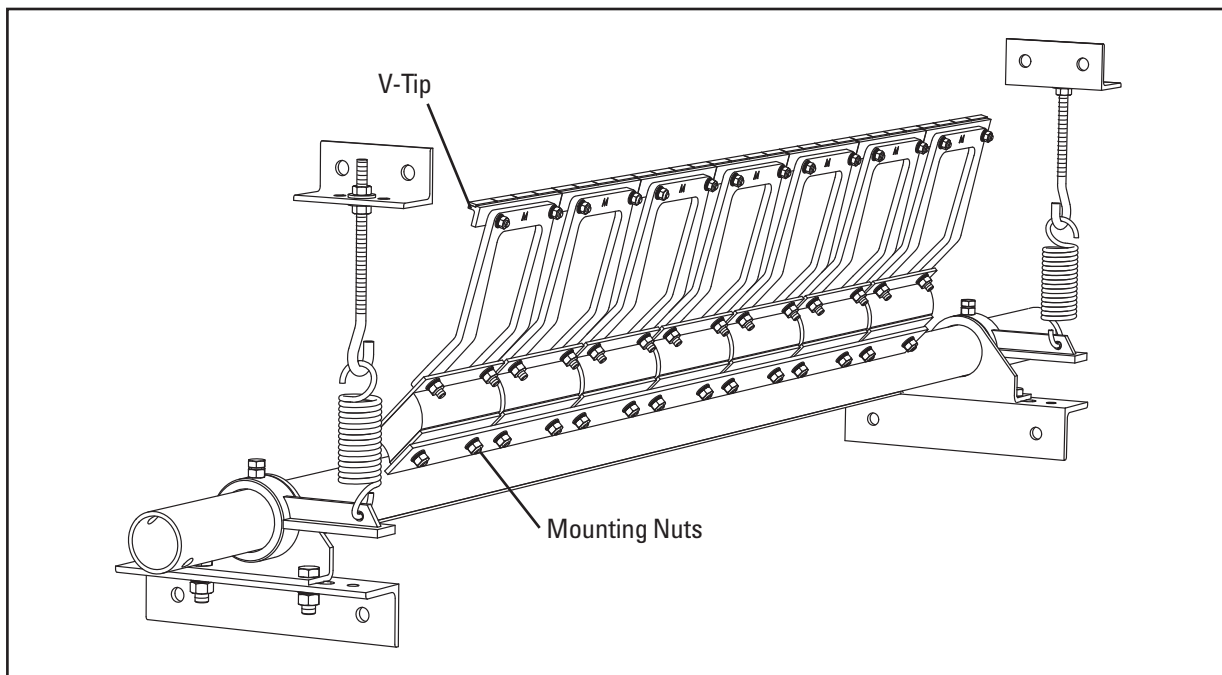
### 7.3 Routine Physical Inspection (every 6-8 weeks)

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

## Section 7 – Maintenance

### 7.4 Blade Replacement Instructions



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

#### Tools Needed

- Tape measure
- (2) 38mm wrenches or crescent wrenches
- (1) 17mm wrench
- Wire brush (for cleaning pole)
- Small putty knife (for cleaning pole)

1. **Remove the tension.** Loosen the adjusting nuts on the mounting bracket/J-bolt assembly to remove tension from the arm (Fig. 1). This releases the tension of the blade on the belt.

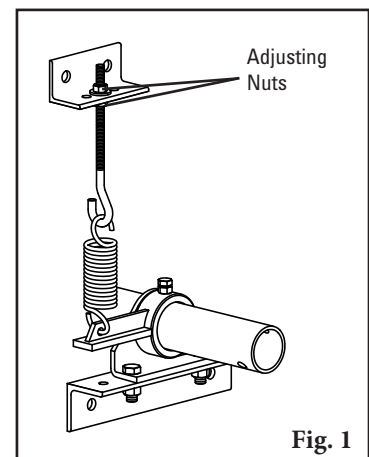


Fig. 1

2. **Remove the worn tips.** Remove the nuts on each tip and remove the tips from the cushion (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.

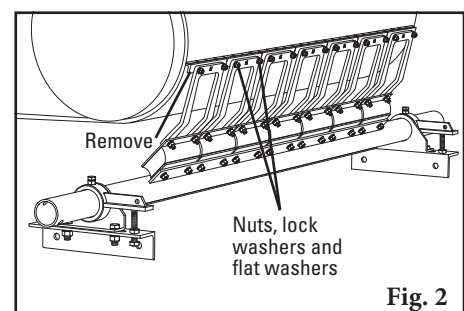


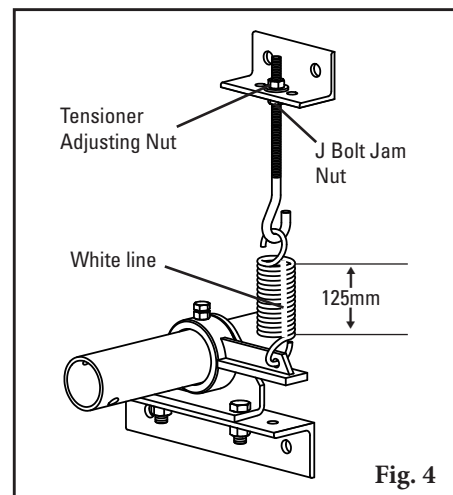
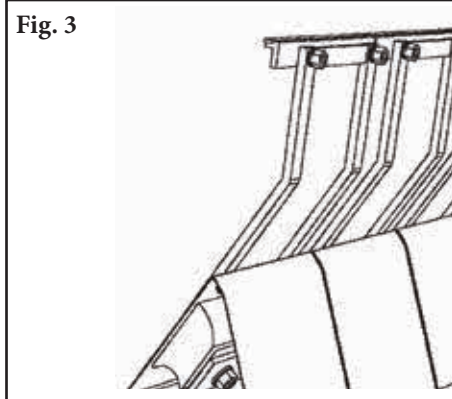
Fig. 2

## Section 7 – Maintenance

### 7.4 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 suspension arm (Fig. 3).
4. **Reset the correct blade tension.** Loosen the J bolt jam nut and turn the tensioner adjusting nut until the coil is 125mm long. Measure the length of the white line on the spring (Fig. 4). Complete on both sides of cleaner, if required. **NOTE:** The given spring length measurement is a starting point only. Actual length for correct cleaner blade tensioning may vary by cleaner width.

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



# Section 7 – Maintenance

## 7.5 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: \_\_\_\_\_

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

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

---

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

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

---

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

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

---



## Section 7 – Maintenance

### 7.6 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 8 – 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
Centre wear on blade (smile effect)	Blade wider than material path	Replace blade with width to match material path
	Tension on cleaner too high/low	Adjust to correct tension – see 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

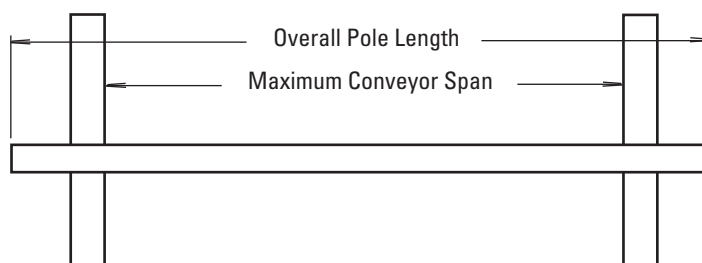
## Section 9 – Specs and CAD Drawings

### 9.1 Specifications and Guidelines

**Pole Length Specifications\***

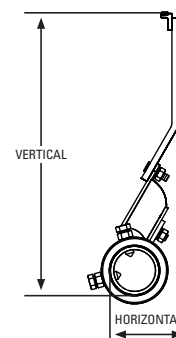
Cleaner Size		Pole Length		Maximum Conveyor Span	
mm	in.	mm	in.	mm	in.
450	18	1650	66	1400	56
600	24	1800	72	1550	62
750	30	1950	78	1700	68
900	36	2100	84	1850	74
1050	42	2250	90	2000	80
1200	48	2400	96	2150	86

Pole Diameter - 60mm (2-3/5")



**Clearance Guidelines for Installation**

Suspension Arm Size	Horizontal Clearance Required		Vertical Clearance Required	
	mm	in.	mm	in.
SS	175	7	325	12 13/16
S	175	7	375	14 3/4
M	175	7	420	16 9/16
L	175	7	450	17 3/4
LL	175	7	555	21 7/8



#### Specifications:

- Maximum Belt Speed ..... 5m/s
- Temperature Rating ..... -35°C to 204°C
- Usable Blade Wear Length ..... 9mm
- Blade Material..... Long Life Tungsten Carbide (for vulcanized belts only)
- Available for Belt Widths ..... 450 to 1200mm.  
Other sizes available upon request.
- CEMA Cleaner Rating ..... Class 4

## 9.2 CAD Drawing - Primary Cleaner with V-Tips for Belts up to 1600mm

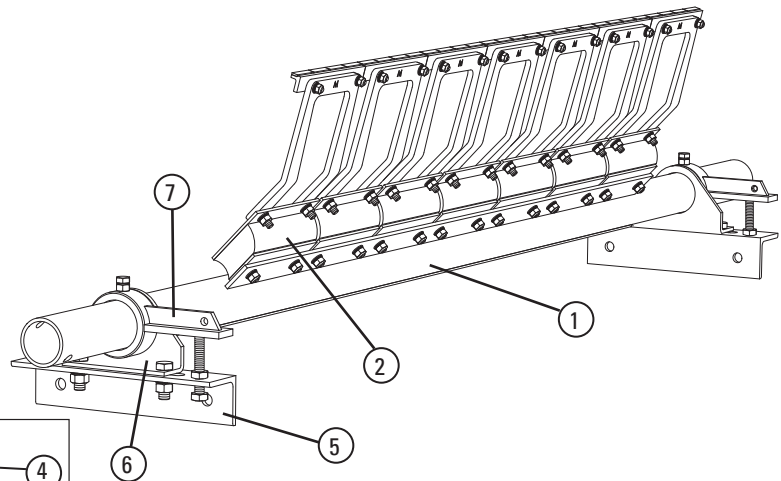
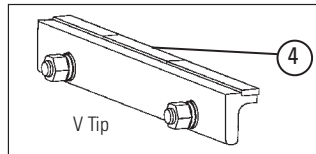
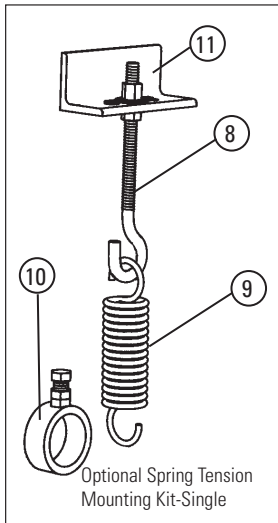
O/A PULLEY DIA.	CHUTE CUTOUT		TIP/ARM
	M	N	
UP TO 499	325		SS
500 - 799	375		S
800 - 999	420	175	M
1000-1199	450		L
1200-1700	555		LL

## 9.2 CAD Drawing - Primary Cleaner with V-Tips for Belts over 1800mm

**IMPORTANT NOTE:**

REFER INSTALLATION GUIDE FOR DIMENSIONS "X" AND "Y". THESE DIMENSIONS ARE DEPENDANT ON BELT THICKNESS AND PULLEY DIAMETER. THE CLEANER IS DESIGNED TO PERFORM CORRECTLY WHEN THE BELT MEETS THE BELT AT 90°. 15" DOWN FROM THE CENTRELINE OF THE PULLEY. REFER TO INSTALLATION MANUAL.

## Section 10 – Replacement Parts List



REPLACEMENT PARTS				POWDER COATED			STAINLESS STEEL	
REF	DESCRIPTION	BELT WIDTH	POLE LENGTH	ORDERING NUMBER	ITEM CODE	WT. KGS.	ORDERING NUMBER	ITEM CODE
1	H-Type Pole Standard-60 mm Pole Diameter	450	1250	HP450	73027	10.0	HP450-S/S	75373
		600	1350	HP600	73029	11.0	HP600-S/S	75374
		750	1500	HP750	73031	13.0	HP750-S/S	75375
		900	1650	HP900	73033	15.0	HP900-S/S	75376
		1050	1800	HP1050	73035	20.0	HP1050-S/S	75377
	H-Type Pole Standard-73 mm Pole Diameter	1500	2350	HP1500	73066	24.0	HP1500-S/S	75379
		1600	2450	HP1600	73739	27.0	HP1600-S/S	75380
	H-Type Pole Heavy-Duty-73 mm Pole Diameter Braced and Gussetted	1800	2650	HPHD1800	74601	34.0	HPHD1800-S/S	A2063
2	Cushion			HSA	73486	2.0	HVC-S/S	73494
	Heavy-Duty Cushion			HSKD	73483	2.0	HSKS-S/S	76467
-	H Polyshield (Not shown)			HPS8	73050	1.0	HSTSS	74771
4	V-Tip			HSA200	73489	0.5	HVT8-S/S	75419
							HVPT-S/S	73631
SIDE MOUNTING ASSEMBLY COMPONENTS- TO SUIT 60 mm								
5	H Mounting Bracket			HDMRK	74582	2.0	HDMRK-S/S	76245
6	H Bearing			HBRK	73068	1.5	HBRK-S/S	75422
7	H Adjusting Arm			HARK	73069	1.5	HARK-S/S	75423
8	J-Bolt			STJK	74417	1.0		
9	Tension Spring			STTS	74419	1.0		
10	Spring Tensioner Collar			STCK	74506	1.0	STCK-S/S	75425
11	Spring Tensioner J-Bolt Mount			STJM	74775	1.0	STJM-S/S	75426
-	Spring Tension Kit-Dual (incl. STJK, STTS, STCK, STJM- 2 ea.)			STKD	74504	5.0	STKD-S/S	75427
-	H Mounting Kit- Dual (incl. HDMRK, HBRK, HARK- 2 ea.)			HMK	73054	11.0	HMK-S/S	75424
SIDE MOUNTING ASSEMBLY COMPONENTS- TO SUIT 73 mm								
5	H Mounting Bracket			HDMRK	74582	3.0	HDMRK-S/S	76245
6	H Bearing			HBRKX	74549	2.0	HBRKX-S/S	76246
7	H Adjusting Arm			HDARK	74550	2.0	HDARK-S/S	76247
8	J-Bolt			STJK	74417	1.0		
9	Tension Spring			UTS	74420	1.0		
10	Spring Tensioner Collar			HDCK	74490	1.0	HDSTCK-S/S	A2189
11	Spring Tensioner J-Bolt Mount			STJM	74775	1.0	STJM-S/S	75426
-	Spring Tension Kit-Dual (incl. STJK, UTS, HDCK, STJM- 2 ea.)			HDSTKD	A2518	5.0	HDSTKD-S/S	A2519
-	H Mounting Kit- Dual (incl. HDMRK, HBRKX, HDARK- 2 ea.)			HDMK	74551	14.0	HDMK-S/S	76248

Shaded items are made to order. Call for lead time.

## Section 11 – 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:

### Rockline® EZP1 Primary Cleaner



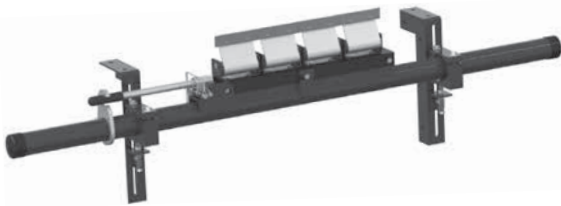
- Patented ConShear™ blade renews its cleaning edge as it wears
- Visual Tension Check™ for optimal blade tensioning and simple retensioning
- Quick and easy one-pin blade replacement Material Path Option™ for optimal cleaning and reduced maintenance

### Flexco Slider/Impact Beds



- Adjusting troughing angles for easy installation and adjustability
- Long-wearing UHMW for sealing the load zone
- Offered in both Light & Medium duty designs to affordably fit your application

### MHS SAC Secondary Cleaner



- Long-wearing tungsten carbide blades for superior cleaning efficiency
- Patented PowerFlex™ cushions, the proven design found on our industry-leading MHS Secondary Cleaner
- Service Advantage Cartridge can be easily removed and replaced, even in the dirtiest conditions
- 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 minimise 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
- 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 Ploughs



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

## **The Flexco Vision**

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

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