

# FGP Food Grade Precleaner

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## Installation, Operation & Maintenance Manual

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# Pre-installation Checks and Options

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## 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
- Inspect the belt and splice(s) for damage (tears, gouges, raised splices, etc.) that may interfere with the cleaner blade.
- Primary mounted belt cleaners are not generally recommended for use on impression cover, textured or cleated belts.
- 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?

**Caution:** All parts of the FGP Food Grade Pre-cleaner must be cleaned and sanitized in compliance with your company’s policies and any applicable legal or regulatory requirements prior to installation and use.

# Pre-installation Checks and Options (cont.)

## Conveyor Mounting Structure

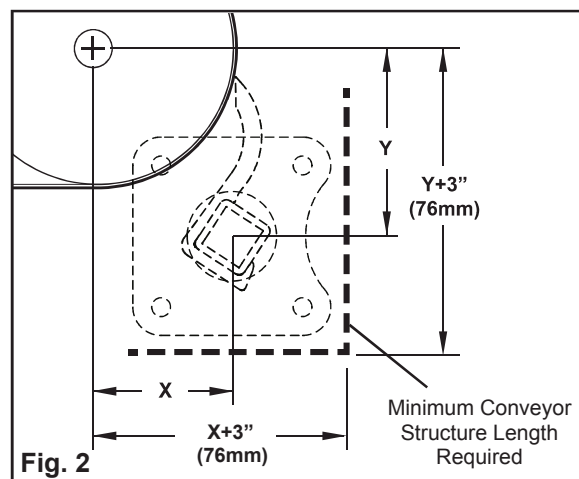
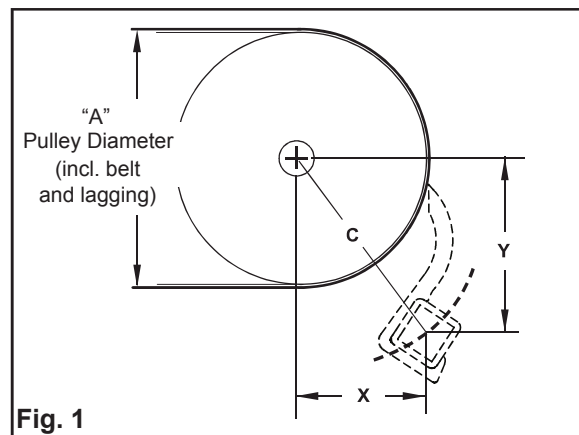
The first step in installing your FGP Food Grade Precleaner is to verify that there is adequate structure at the head pulley for mounting the cleaner.

1. Measure pulley diameter (A), including lagging and belt (Fig. 1).
2. Locate the overall pulley diameter that most closely matches yours on chart A, and use the corresponding X, Y, & C dimensions to locate the position of the center of the cleaner pole (Fig. 1).

Chart A: Pole Location

A		X		Y		C	
in.	mm	in.	mm	in.	mm	in.	mm
2.0	51	0.95	24	2.98	76	3.13	80
2.5	64	1.19	30	3.03	77	3.25	83
3.0	76	1.44	37	3.08	78	3.39	86
3.5	89	1.68	43	3.12	79	3.55	90
4.0	102	1.93	49	3.17	81	3.71	94
4.5	114	2.18	55	3.22	82	3.88	99
5.0	127	2.42	61	3.27	83	4.06	103
5.5	140	2.67	68	3.31	84	4.25	108
6.0	152	2.91	74	3.36	85	4.45	113
6.5	165	3.16	80	3.41	87	4.64	118
7.0	178	3.40	86	3.46	88	4.85	123
7.5	191	3.65	93	3.51	89	5.06	129
8.0	203	3.89	99	3.55	90	5.27	134
8.5	216	4.14	105	3.60	91	5.48	139
9.0	229	4.38	111	3.65	93	5.70	145
9.5	241	4.63	118	3.70	94	5.92	150
10.0	254	4.88	124	3.74	95	6.14	156

A = Diameter of pulley + lagging thickness + belt thickness  
C = Centerline of pulley to centerline of cleaner pole.



3. On both sides of the pulley, ensure that the conveyor structure extends downward from the centerline of the pulley shaft the distance  $Y + 3''$  and that it extends horizontally from the centerline of the pulley shaft the distance  $X + 3''$ . If there is not adequate conveyor structure, go to step 4 below. If the structure is adequate, skip to Section 4 – Installation Instructions.
4. Add the required amount of structure to the conveyor so that it extends to the  $Y + 3''$  and  $X + 3''$  dimensions from the centerline of the pulley shaft. **Note:** A minimum of three mounting bolts are required if bolting belt cleaner to structure.
5. Proceed to Section 4 – Installation Instructions.

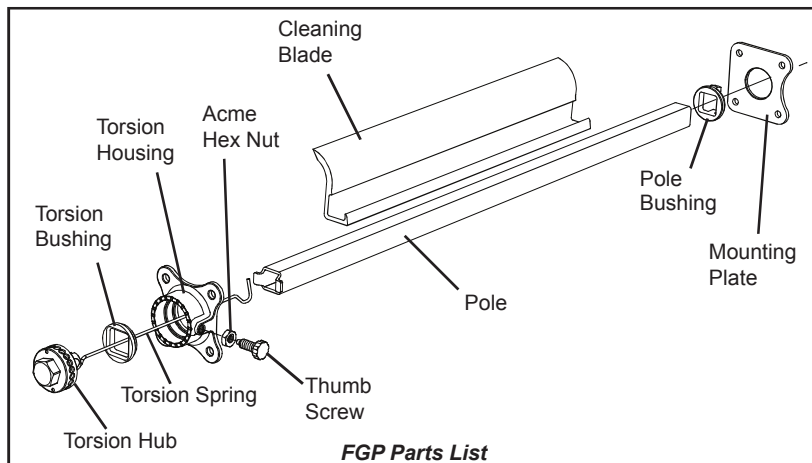
# Installation Instructions - FGP

## FGP Food Grade Precleaner Installation Instructions

**Caution:** FGP Food Grade Precleaner Installation Instructions – If your process or product may be adversely affected by contamination from the use of this belt cleaner, it is the user’s responsibility to take the steps necessary to prevent contamination.

### Tools Required

- Tape measure
- ½” (13 mm) combination wrench
- 5/8” (16 mm) combination wrench
- Ratchet with ½” (13 mm) socket
- Marking pen or soapstone
- 1” (26 mm) wrench
- Cutting torch or 1.75” (44 mm) diameter hole saw
- Welder (optional)



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

### Pre-Installation

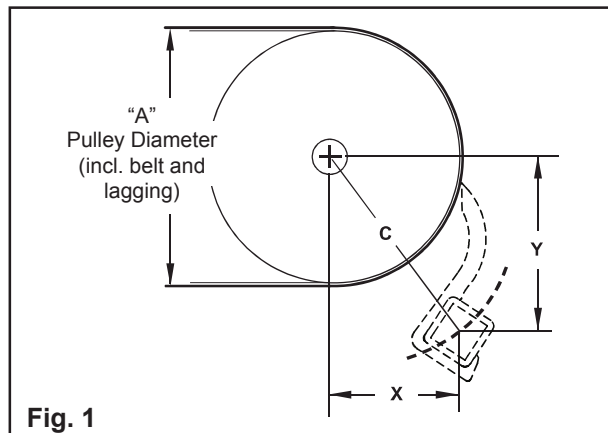
- Unpack belt cleaner from packaging
- Disassemble belt cleaner (see Parts List drawing above)
- Verify that correct size cleaner has been ordered
- Verify that all parts are included

### Installation Instructions

1. Measure outside structure width where cleaner will be mounted.
2. Measure belt cleaner pole length. Minimum pole length is structure width + 2” (50 mm) (Chart B).
3. From center of pulley shaft measure down the distance of Y dimension and place a mark on structure (Fig. 1).
4. From Y location mark, measure away from the pulley the distance of X dimension and mark this position. This will be the location of center of pole (Fig 1). Measure the C dimension to verify that it is correct.
5. Using the same X, Y, C dimensions repeat steps 2-4 on opposite side.

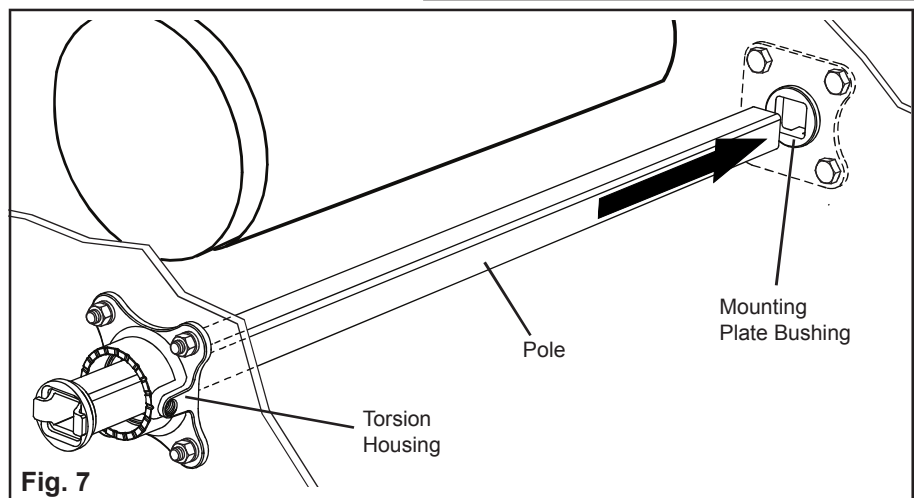
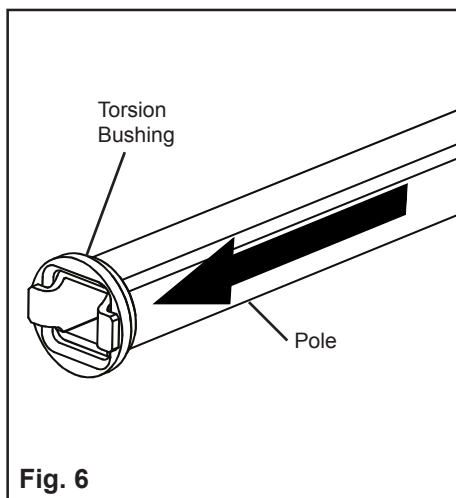
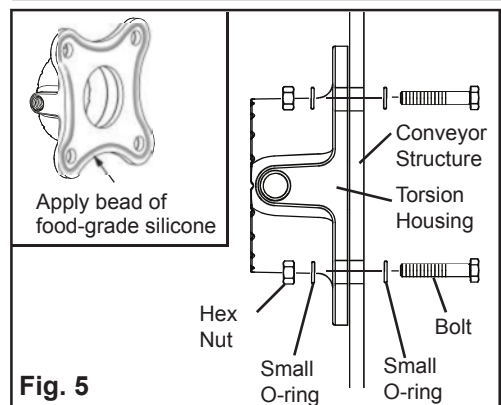
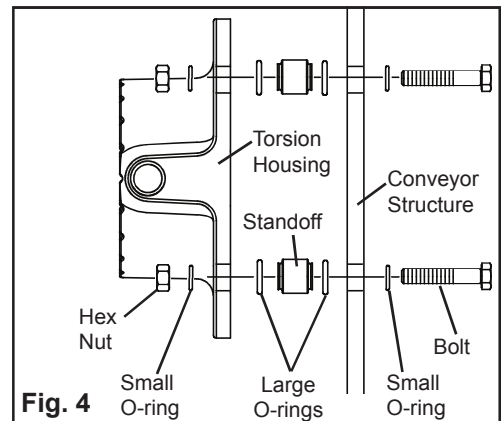
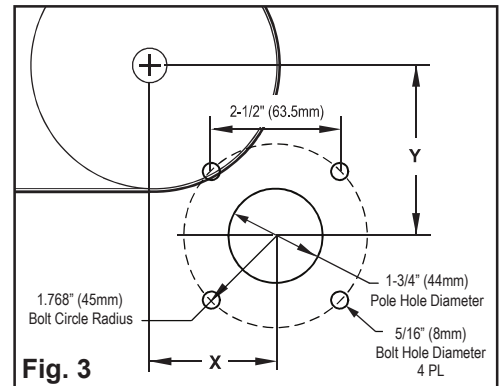
**Chart B: Pole Lengths**

Pole Length		Standard Blade Length		Minimum Blade Length		Minimum Conveyor Width at Cleaner Mounting Location		Maximum Conveyor Width at Cleaner Mounting Location	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
24	610	12	305	9	229	11	279	22	556
30	813	18	457	9	229	14	356	28	708
36	965	24	610	9	229	20	508	34	861
42	1067	30	813	18	457	26	660	40	1013
48	1219	36	965	18	457	32	813	46	1165
54	1372	42	1067	18	457	38	965	52	1318
60	1524	48	1219	18	457	44	1118	58	1470
66	1676	54	1372	18	457	50	1270	64	1623
72	1829	60	1524	18	457	56	1422	70	1775



## Installation Instructions (cont.)

6. If mounting cleaner with supplied bolts, mark location of bolt holes per Fig. 3. The bolt holes need not be positioned at 10, 2, 5 and 7 o'clock. For ease of installation or as conditions require, bolt hole positions may be rotated about the pole centerline.
  7. On each side of the conveyor structure, cut a 1.75" (44mm) diameter hole around the marks that locate the center of the pole (Fig. 3).
  8. If mounting cleaner using supplied bolting, drill four 5/16" (8 mm) bolt holes per the bolt hole diagram (Fig. 3).
  9. Clean up or remove any metal shavings or burrs created during the cutting/drilling of the pole and mounting bolt holes.
  10. Determine which side of the conveyor has sufficient clearance to insert the cleaner pole. A horizontal distance of pole length +6" (152mm) is required. Attach the Torsion Housing to the outside of the conveyor structure using one of the following options:
    - a. With standoff hardware (Fig 4).
    - b. Without standoff hardware – flush mount (Fig 5).
    - c. Welded per local food application guidelines.
- Note:** If using flush mount method, a bead of food grade silicone should be applied on the bottom side of the torsion housing and the mounting plate (Fig 5).
11. Attach opposite side mounting plate per the option selected above.
  12. Install torsion bushing on pole (Fig 6).
  13. Position pole through torsion housing and through mounting plate bushing on opposite side (Fig 7).



## Installation Instructions (cont.)

14. Use included C-Dimension verification gauge to check for proper pole location (Fig. 8; Chart C).
  - a. Snap gauge onto pole at one end of head pulley so that outside edge of gauge is as close to belt as possible without touching the belt.
  - b. Rotate pole toward head pulley until gauge makes contact with belt.
  - c. The point on gauge where contact is made with belt indicates the measurement for gap between pole centerline and face of the belt/pulley. (The gap dimension is equal to C dimension minus radius of pulley.)
  - d. Verify that measured gap dimension is equal to gap dimension in Chart C for your pulley size.
  - e. Repeat measurement at other end of head pulley. Adjust position of pole as necessary to get required C dimension.

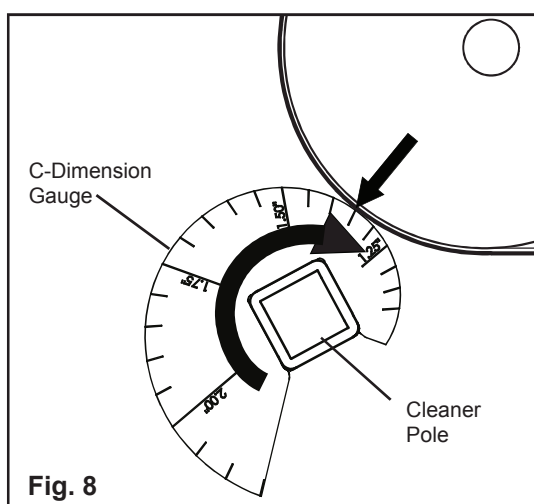
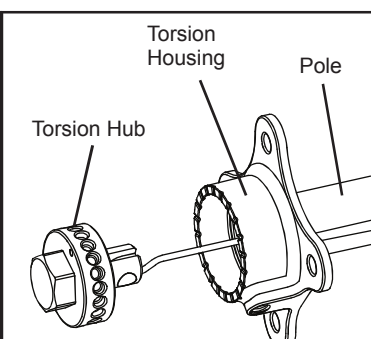
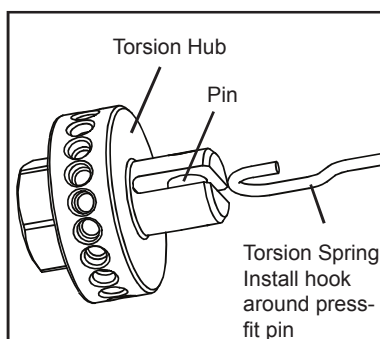


Chart C: Gap

Pulley Diameter (Inches)		Gap Dimension (C-Dim Gauge)		Pulley Diameter (Inches)		Gap Dimension (C-Dim Gauge)	
in.	mm	in.	mm	in.	mm	in.	mm
2.0	51	2.13	54	6.5	165	1.39	35
2.5	64	2.00	51	7.0	178	1.35	34
3.0	76	1.89	48	7.5	191	1.31	33
3.5	89	1.80	46	8.0	203	1.27	32
4.0	102	1.71	43	8.5	216	1.23	31
4.5	114	1.63	41	9.0	229	1.20	30
5.0	127	1.56	40	9.5	241	1.17	30
5.5	140	1.50	38	10.0	254	1.14	29
6.0	152	1.45	37	10.5	267	1.12	28

15. Attach loop end of Torsion Spring to Torsion Hub pin location (Fig. 9).
16. Insert assembled Torsion Hub with Torsion Spring into Torsion Housing and Pole until Torsion Hub is flush with Torsion Housing (Fig. 10).



17. Using a band saw or circular saw, cut Cleaning Blade to desired width. Deburr cut edge of blade as necessary.
  - a. For general purpose cleaner Flexco recommendation is belt width minus 1" (25 mm).
  - b. For cleaning abrasive materials such as sugar and frosting, Flexco recommends material path width + 3" (75 mm) for total blade length.

## Installation Instructions (cont.)

### 18. Attach Cleaning Blade (Fig. 11).

- Center and locate blade so that bottom lip engages with pole.
- Using an adjustable wrench, rotate pole in the direction of the head pulley. Do not rotate the torsion hub as this may damage the spring.
- Use hand to help snap blade to pole while rotating pole.

**Note:** When installing longer blades, it may be helpful to attach the blade starting at one end and work down the pole, engaging small lengths as you go.

### 19. Tension Cleaning Blade to conveyor belt by rotating the Torsion Hub towards the head pulley until blade is making contact with belt and light tension is felt in Torsion Hub (Fig. 12).

### 20. Rotate the Torsion Hub farther to the desired number of notches for tension pre-set. One to three notches is a typical pre-set tension (Fig. 13).

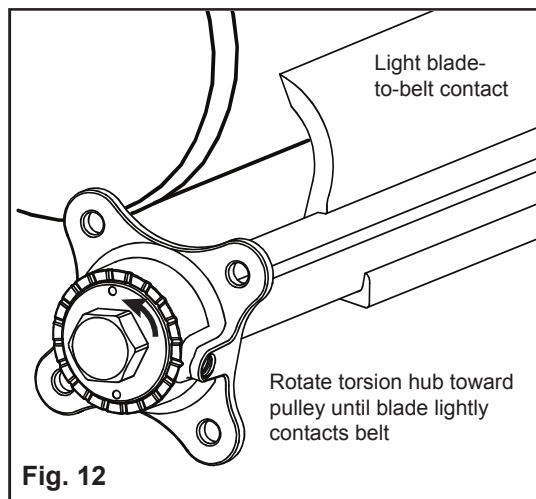
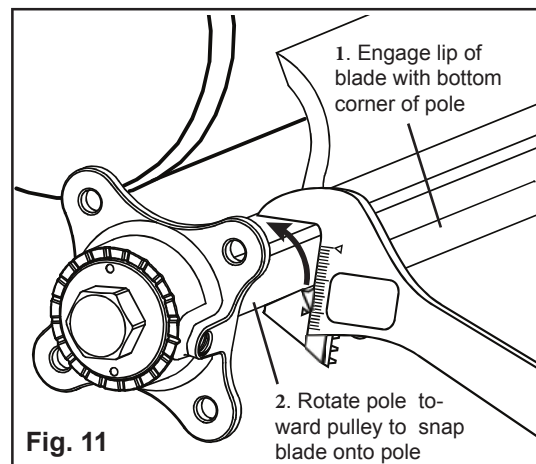
### 21. While holding Torsion Hub in tension pre-set position, tighten thumb screw ensuring that the location pin engages into Torsion Hub hole (Fig. 14).

### 22. Test run conveyor.

### 23. Loosen thumb screw and adjust tension as required for application.

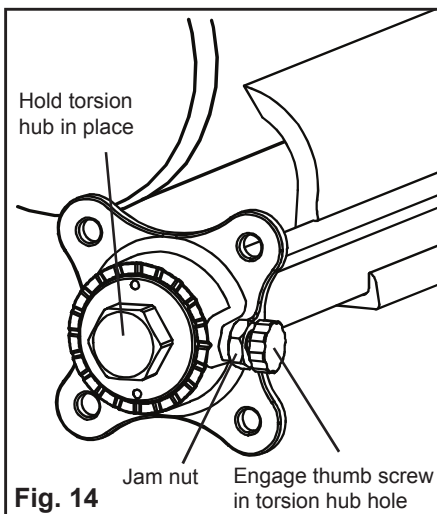
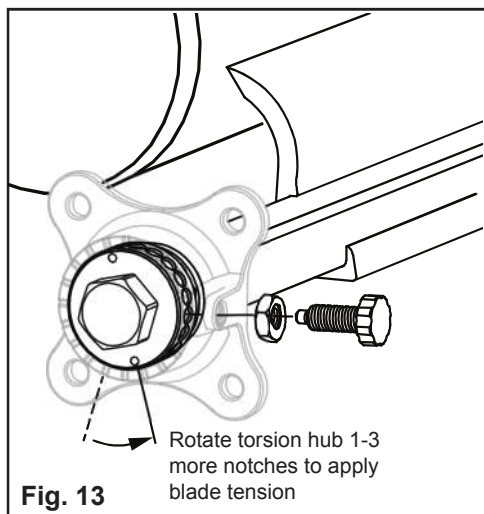
**Caution:** Do not over-tension the cleaner blade as this may damage the cleaner. For cleaners up to 12" rotate hub no more than 7 notches and up to 8 notches for cleaners over 12".

### 24. When desired tension is achieved, tighten thumb screw and jam nut (Fig. 14).



## NOTICE:

**Cleaner has not been sanitized and must be cleaned and sanitized prior to use.**



# Pre-Operation Checklist and Testing

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## Pre-Op Checklist

- Recheck that all fasteners are tightened properly.
- 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.

## Test Run the Conveyor

- Run the conveyor for at least 15 minutes and inspect the cleaning performance.
- If performance is inadequate, loosen jam nut and thumb screw.
- Rotate Torsion Hub to adjust tension as is required for application. Do not over tension the spring. Rotate the hub no more than 7 notches for cleaners up to 30" and 8 notches for cleaners over 30".
- Tighten thumb screw and jam nut.

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

**Visit our website or contact your local distributor to learn more.**

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