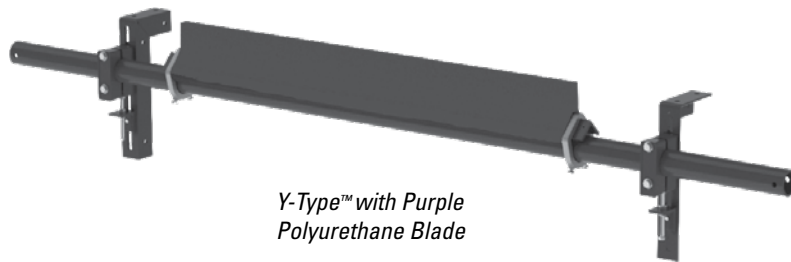
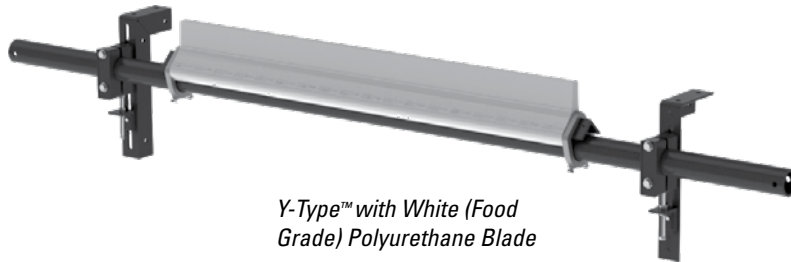


Y-Type™ Heavy-Duty Secondary Belt Cleaner

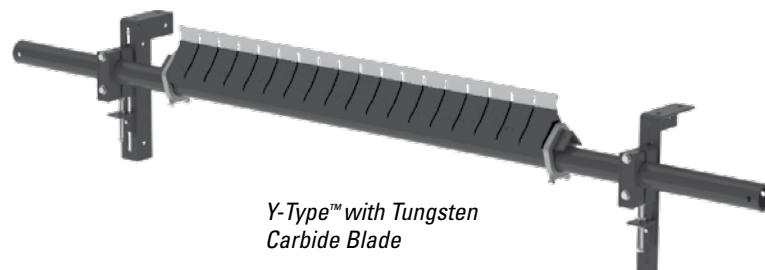
Installation, Operation and Maintenance Manual



*Y-Type™ with Purple
Polyurethane Blade*



*Y-Type™ with White (Food
Grade) Polyurethane Blade*



*Y-Type™ with Tungsten
Carbide Blade*

Y-Type™ Secondary Belt Cleaner

Serial Number: _____

Purchase Date: _____

Purchased From: _____

Installation Date: _____

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

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

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Section 1 – Important Information

1.1 General Introduction

We at Flexco® are very pleased that you have selected a Y-Type™ Secondary Belt Cleaner for your conveyor system.

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

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

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

Customer Service: 91-44-6551-7771

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

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

1.2 User Benefits

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

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

1.3 Service Option

The Y-Type™ Secondary Belt Cleaner is designed to be easily installed and serviced by your on-site personnel. However, if you would prefer complete turn-key factory service, please contact your local Flexco Field Representative.

Section 2 – Safety Considerations and Precautions

Before installing and operating the Y-Type™ Secondary Belt Cleaner, it is important to review and understand the following safety information.

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

2.1 Stationary Conveyors

The following activities are performed on stationary conveyors:

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

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.

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. Unforeseeable belt projections and tears can catch on cleaners and cause violent movements of the cleaner structure. Flailing hardware can cause serious injury or death.

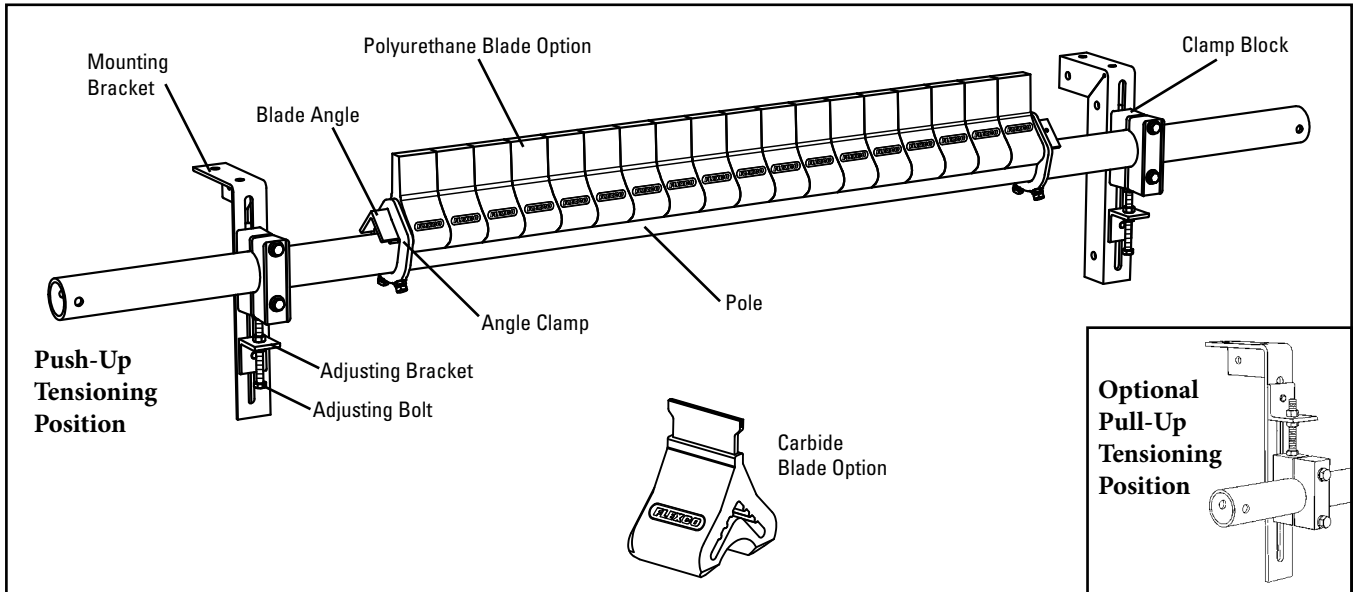
Section 3 – Pre-installation Checks and Options

3.1 Checklist

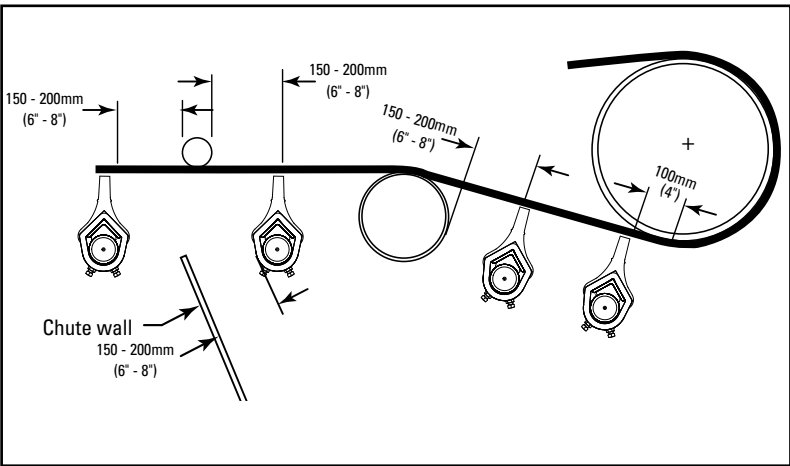
- Check that the cleaner size is correct for the beltline width
- Check belt cleaner carton and make sure all parts are included
- Review “Tools Needed” list on the top of installation instructions
- Check the conveyor site:
 - Will the cleaner be installed on a chute
 - Is the install on an open head pulley requiring mounting structure

Section 4 – Installation Instructions

Y-Type™ Heavy-Duty Secondary Belt Cleaner (Polyurethane or Carbide Option)



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



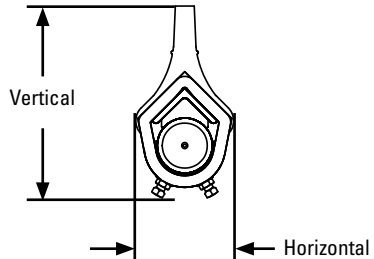
- ### Tools Needed
- 16mm (5/8") Wrench
 - 13mm (1/2") Wrench
 - 19mm (3/4") Wrench
 - Tape Measure
 - Ratchet with 19mm (3/4") Socket
 - (2) 152mm (6") C-Clamps (for Temporary Positioning of Mounting Brackets)
 - Cutting Torch and/or Welder
 - Marking Pen

Before You Begin:

- For chute mounting it may be necessary to cut an access hole to allow for installation and inspections. (See dimensions in Step 1.)
- Follow all safety precautions when using a cutting torch.
- If welding, protect all fastener threads from weld spatter.
- For cleaner clearance requirements see chart at right.

Clearance Requirements for Installation

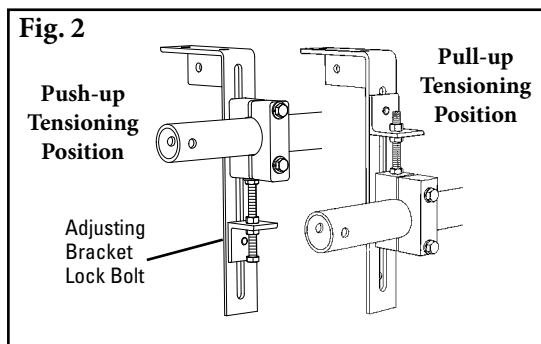
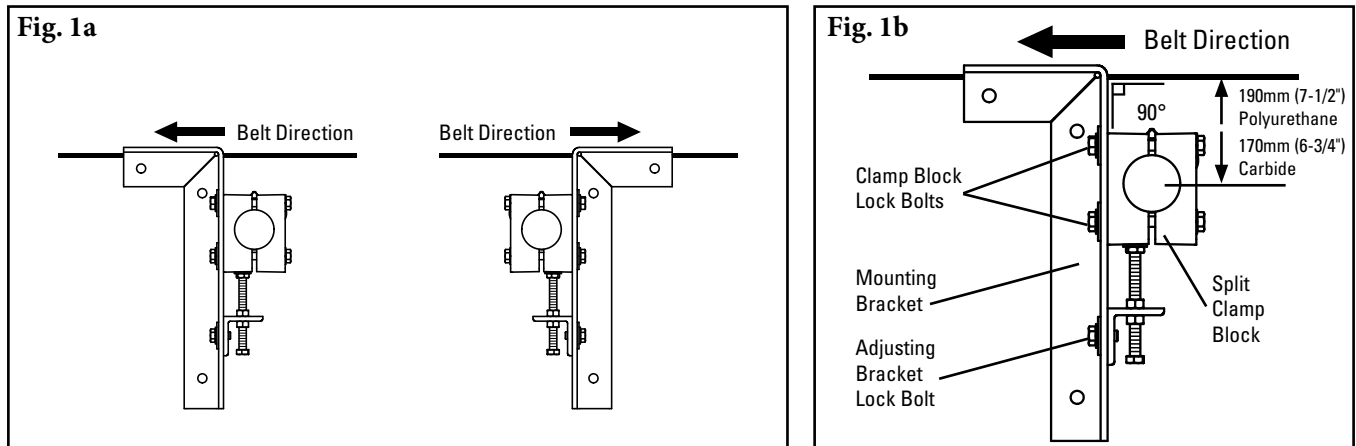
	Vertical	Horizontal
Y-Type Polyurethane	248mm (9-3/4")	133mm (5-1/4")
Y-Type Carbide	241mm (9-1/2")	133mm (5-1/4")



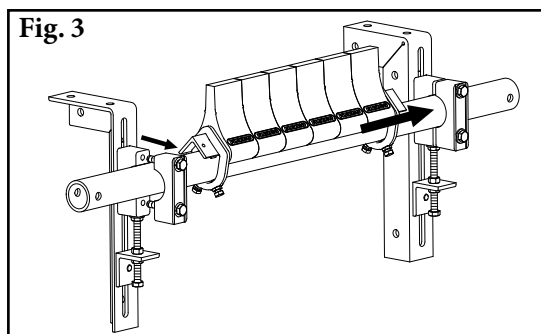
Section 4 – Installation Instructions (cont.)

Y-Type™ Heavy-Duty Secondary Belt Cleaner

- 1. Install the mounting brackets.** Position the mounting bracket to locate the cleaner pole centerline 190mm (7-1/2") below the beltline for polyurethane cleaners or 170mm (6-3/4") below the beltline for carbide cleaners. The pole must be installed so the blades do not touch the belt. Positioning the brackets perpendicular to the belt is recommended (Fig.1b).



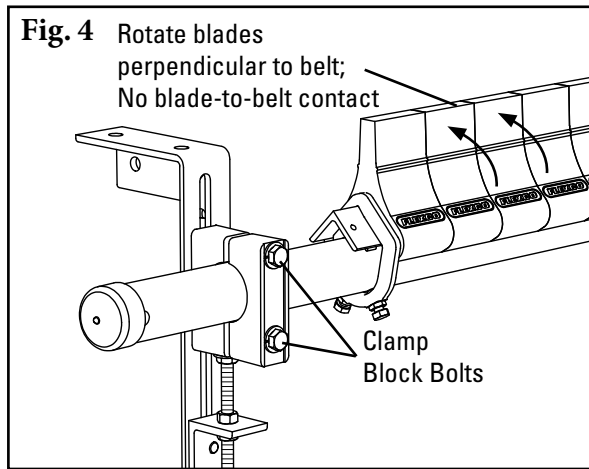
- 2. Choose the tensioner position.** The tensioner is shipped mounted in the push-up position. Depending upon the space constraints of the installation, the tensioner can be optionally mounted in a pull-up position. To do this, loosen the threaded rod lock nut, unscrew the threaded rod and remove adjusting bracket lock bolt. Then move the adjusting bracket and threaded rod to the top of the clamp blocks (Fig. 2) and tighten threaded rod lock nut.



- 3. Install the pole.** Remove the outer half of the clamp block on one side, and on the opposite side, loosen the two clamp block bolts. Slide the pole across and into the loosened clamp block, replace the outer clamp block, center the blades on the belt and tighten all four clamp block bolts finger tight.

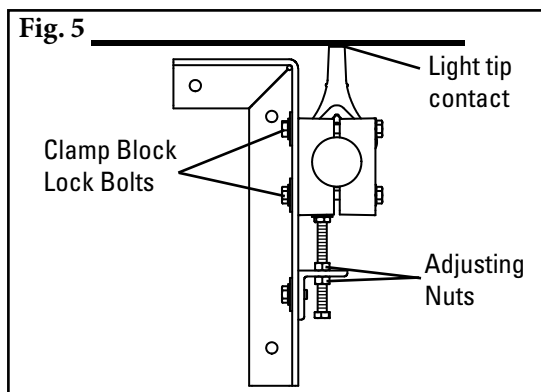
Section 4 – Installation Instructions (cont.)

Y-Type™ Heavy-Duty Secondary Belt Cleaner



- Secure pole.** Center pole/blades on belt and rotate pole until blades are perpendicular to belt. Tighten clamp block bolts equally on each tensioner assembly to lock pole in place (Fig. 4).

Note: make sure there is no tip-to-belt contact while making this alignment. If contact occurs, lower the pole by loosening the clamp block lock bolts and raising the top adjusting jam nut (fig.5). When tips are lowered and not touching the belt, repeat this step.



- Set the blade tension.** Loosen the 4 clamp block lock bolts (on the back of the mounting brackets) and turn the top adjusting jam nut on each side until the blades make light contact across the entire width of the belt. Make an additional 5 full turns on the adjusting nuts to tension the blades. Tighten the bottom adjusting nuts and the clamp block bolts (Fig. 5).

Test run the cleaner and inspect the performance. If more cleaning efficiency is desired, the blade tension can be increased in 1/2 turns on the adjusting nuts (see Step 5).

Section 5 – Pre-Operation Checklist and Testing

5.1 Pre-Op Checklist

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

5.2 Test Run the Conveyor

- Run conveyor for at least 15 minutes and inspect cleaning performance.
- If vibration occurs or more cleaning efficiency is desired, increase blade tension by making 1/2 turns on the adjusting nuts.
- Check adjusting brackets and tips for proper tensioning.
- Make adjustments as necessary.

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

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

6.1 New Installation Inspection

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

6.2 Routine Visual Inspection (every 2-4 weeks)

A visual inspection of the cleaner and belt can determine if:

- Belt looks clean or if there are areas that are dirty.
- Blade is worn out and needs to be replaced.
- There is damage to the blade or other cleaner components.
- Fugitive material is built up on cleaner or in transfer area.
- There is cover damage to the belt.
- There is vibration or bouncing of the cleaner on the belt.
- There is material buildup on snub pulley (if used).
- Significant signs of carryback exist.

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, perform a physical inspection of the cleaner through the following tasks:

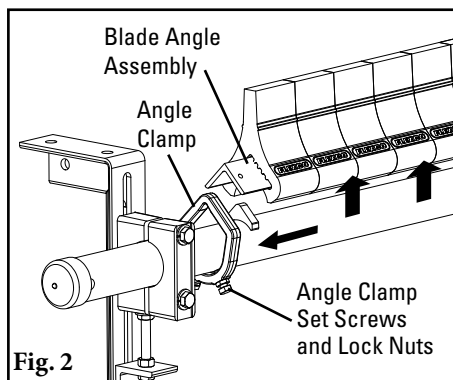
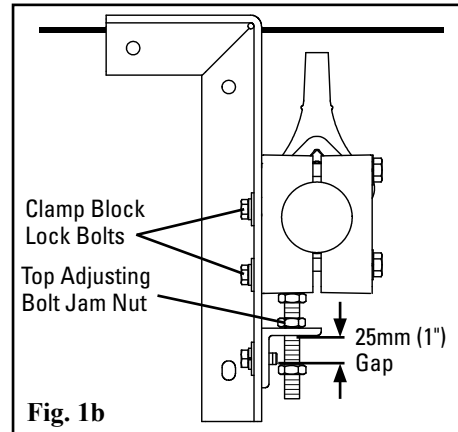
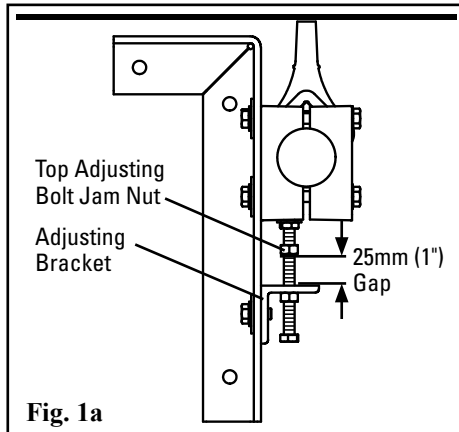
- Clean material buildup from cleaner blade and pole.
- Closely inspect blade for wear and any damage. Replace if needed.
- Ensure full blade to belt contact.
- Inspect cleaner pole for damage.
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Replace any worn or damaged components.
- Check tension of cleaner blade to belt. Adjust tension if necessary using the steps on page 7.
- When maintenance tasks are completed, test run conveyor to ensure cleaner is performing properly.

Section 6 – Maintenance (cont.)

6.4 Blade Replacement Instructions (Carbide or Polyurethane)

1. Release the blade tension and remove worn blade tips.

- Loosen and turn the top adjusting bolt jam nuts 25mm (1") above the tops of the adjusting brackets (Fig. 1a).
- Loosen the clamp block lock bolts on both sides and allow the pole to move down and rest on the raised top adjusting bolt jam nuts (Fig. 1b).

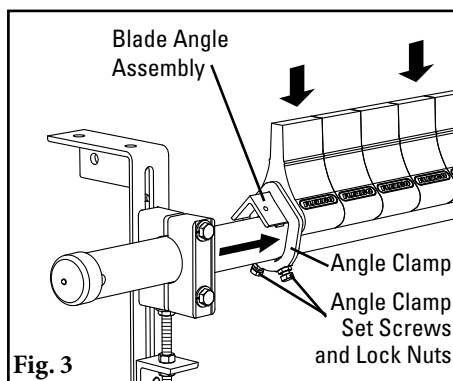


2. Remove blade angle from pole.

Loosen angle clamp lock nuts and set screws on both sides of cleaner (Fig. 2). Slide angle clamps off each end of angle and remove blade angle assembly from pole.

3. Replace the cushions.

Cushions may be removed from the angle by sliding them off each end, or entire angle with all cushions may be replaced at once.

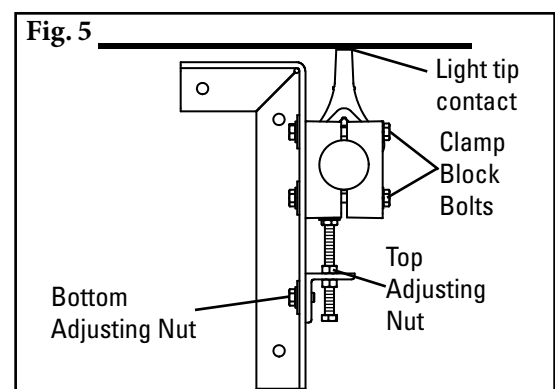


4. Reinstall blade angle.

Set new cushions and angle back on pole and slide angle clamps back onto the angle (Fig. 3). Tighten angle clamp set screws and lock nuts on both sides. Verify blades are centered and perpendicular to belt.

- Set blade tension.** Turn the top adjusting jam nut on each side until the blades make light contact across the entire width of the belt. Make an additional 5 full turns on the adjusting nuts to tension the blades. Tighten the bottom adjusting nuts and the clamp block bolts (Fig. 5).

Test run cleaner and inspect cleaning performance. If vibration occurs or more cleaning efficiency is desired, increase blade tension by making 1/2 turns on adjusting nuts..



Section 6 – Maintenance (cont.)

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: _____

Section 6 – Maintenance (cont.)

6.6 Cleaner Maintenance Checklist

Site: _____ Inspected by: _____ Date: _____

Belt Cleaner: _____ **Serial Number:** _____

Beltline Information:

Beltline Number: _____ Belt Condition: _____

Belt Width: 900mm 1050mm 1200mm 1350mm 1500mm 1800mm
(36") (42") (48") (54") (60") (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 height: Left _____ Middle _____ Right _____

Blade condition: Good Grooved Smiled Not contacting belt Damaged

Was Cleaner Adjusted: Yes No

Pole Condition: Good Bent Worn

Lagging: Slide 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
Vibration	Cleaner secure bolts not set	Ensure all locking nuts are tight (Loctite)
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle)
	Belt tension too high	Ensure cleaner can conform to belt, or replace with alternate Flexco® secondary cleaner
	Belt flap	Introduce hold-down roller to flatten belt
	Cleaner over-tensioned	Ensure cleaner is correctly tensioned
	Cleaner under-tensioned	Ensure cleaner is correctly tensioned
Material buildup on cleaner	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle)
	Buildup on chute	Ensure cleaner is not located too close to back of chute, allowing buildup
	Cleaner being overburdened	Introduce Flexco precleaner
	Excessive sticky material	Frequently clean unit of buildup
Cleaner not conforming to belt	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle)
	Belt tension too high	Ensure cleaner can conform to belt, introduce hold-down roller, or replace with alternate Flexco secondary cleaner
	Belt flap	Introduce hold-down roller to flatten belt
	Cleaner cannot conform	Ensure cleaner can conform to belt, introduce hold-down roller, or replace with alternate Flexco secondary cleaner
Material passing cleaner	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle)
	Cleaner tension too low	Ensure cleaner is correctly tensioned
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary
	Cleaner being overburdened	Introduce Flexco precleaner
	Belt flap	Introduce hold-down roller to flatten belt
	Belt worn or grooved	Introduce water spray pole
	Cleaner cannot conform	Ensure cleaner can conform to belt, introduce hold-down roller, or replace with alternate Flexco secondary cleaner
Missing material in belt center only	Cupped Belt	Install hold-down roller and reset blade angle
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary
Missing material on outer edges only	Cupped Belt	Install hold-down roller and reset blade angle
	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary
Tensioners binding	Tensioners not aligned properly	Adjust mounting bases until tensioners travel without binding

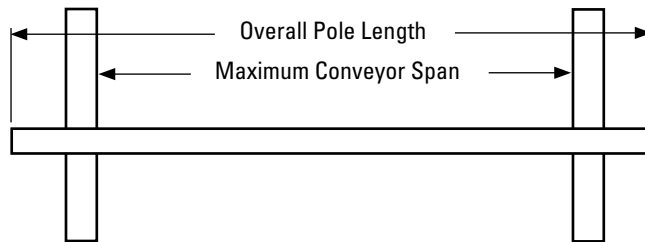
Section 8 – Specifications and CAD Drawings

8.1 Specifications and Guidelines

Pole Length Specifications

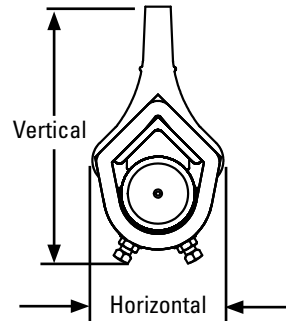
Cleaner Size		Pole Length		Maximum Conveyor Span	
mm	in.	mm	in.	mm	in.
900	36	2286	90	2083	82
1050	42	2438	96	2235	94
1200	48	2590	102	2388	100
1350	54	2743	108	2540	106
1500	60	2895	114	2692	118
1800	72	3200	126	2997	120

Pole Length - Belt +1350mm (54")
 Pole Diameter - 73mm (2-7/8")



Clearance Guidelines for Installation

Cleaner Type	Belt Width/ Cleaner Size		Horizontal Clearance Required		Vertical Clearance Required	
	mm	in.	mm	in.	mm	in.
Y-Type® Polyurethane	900 - 1800	36 - 72	133	5-1/4	241	9-1/2
Y-Type Carbide	900 - 1800	36 - 72	133	5-1/4	248	9-3/4



Y-Type Blade Specifications

Cushion	Durometer	Temperature Range
Purple (Standard)	86A	-35° to 82° C (-30° to 180°F)
White (Food Grade) ‡	83A	-35° to 82° C (-30° to 180°F)
Carbide	n/a	-35° to 82° C (-30° to 180°F)

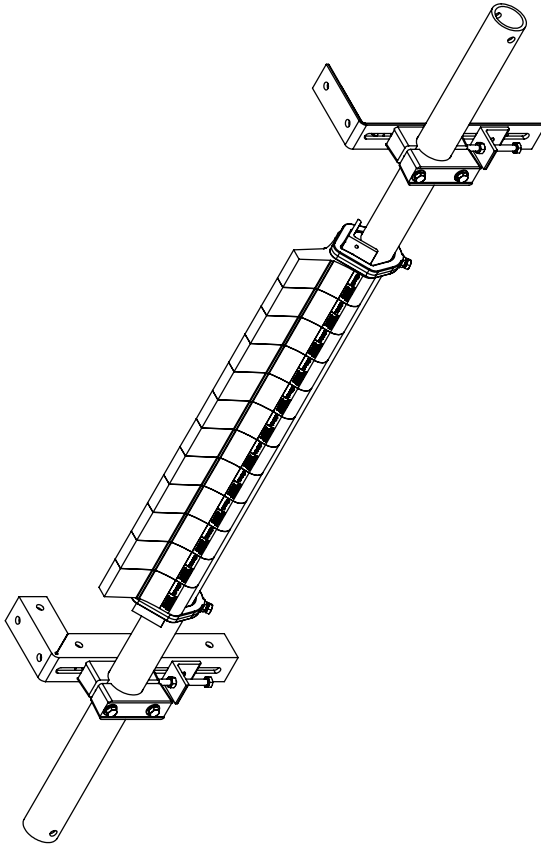
‡ All ingredients used in the polyurethane formulation of this blade comply with the relevant requirements of 21 CFR (FDA Code of Federal Regulations) for use in repeated bulk dry food applications

Specifications:

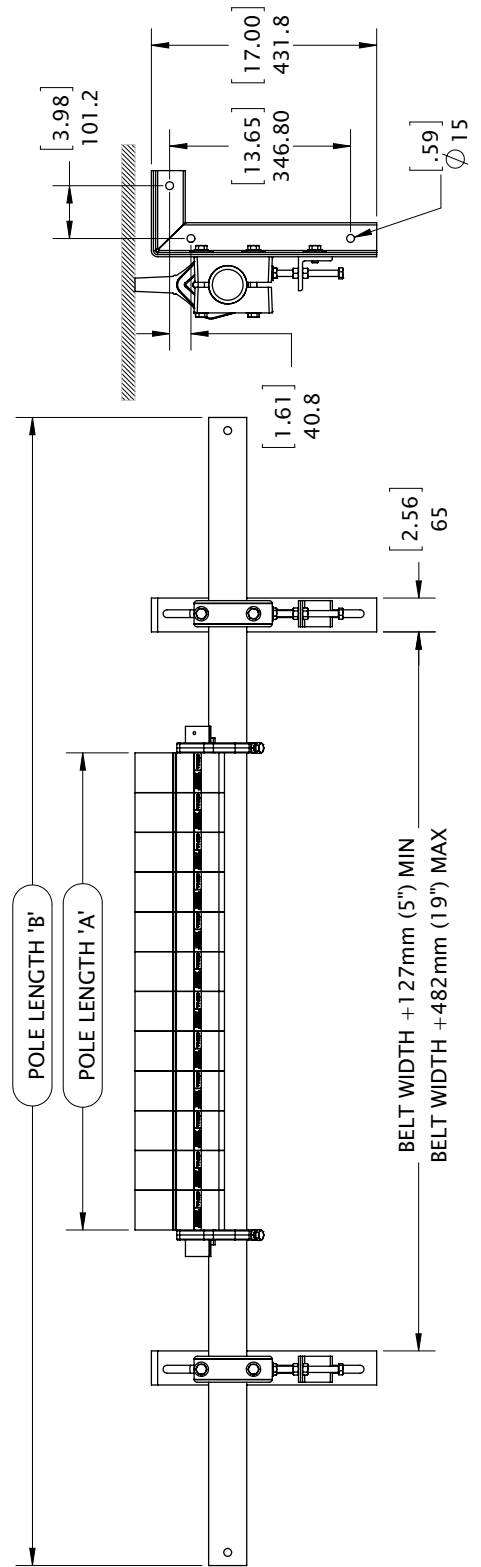
- Maximum Belt Speed.....3.8M/sec (750 FPM)
- Temperature Rating.....-35°C to 82°C (-30°F to 180°F)
- Usable Blade Wear Length.....75mm (3") (Polyurethane)
10mm (3/8") (Carbide)
- Blade Materials.....**Purple:** Polyurethane (proprietary blend for abrasion resistance and long wear)
White: Polyurethane (chemical resistant/food grade)
Carbide: Tungsten Carbide
- Available for Belt Widths.....900 to 1800mm (36" to 72"). Other sizes available upon request.

Section 8 – Specifications and CAD Drawings (cont.)

8.2 CAD Drawing – Y-Type™ HD Polyurethane

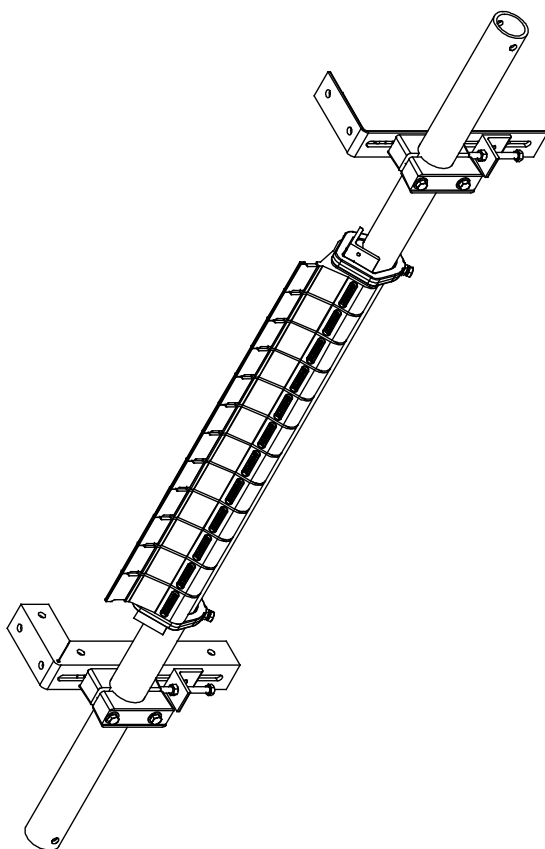


SPECIFICATIONS			ITEM CODE
BELT WIDTH 'A'	POLE LENGTH 'B'	BLADE TYPE	
(IN)	(IN)	(mm)	ORDER NUMBER
36	78.75	2000	YTHD-900 83092
			YTCHD-900 83099
			YTWHD-900 83113
42	92.50	2350	YTHD-1050 83093
			YTCHD-1050 83100
			YTWHD-1050 83114
48	104.30	2650	YTHD-1200 83094
			YTCHD-1200 83101
			YTWHD-1200 83115
54	106.30	2700	YTHD-1350 83095
			YTCHD-1350 83102
			YTWHD-1350 83116
60	116.14	2950	YTHD-1500 83096
			YTCHD-1500 83103
			YTWHD-1500 83117
64	122.05	3100	YTHD-1650 83097
			YTCHD-1650 83104
			YTWHD-1650 83118
72	127.95	3250	YTHD-1800 83098
			YTCHD-1800 83105
			YTWHD-1800 83119

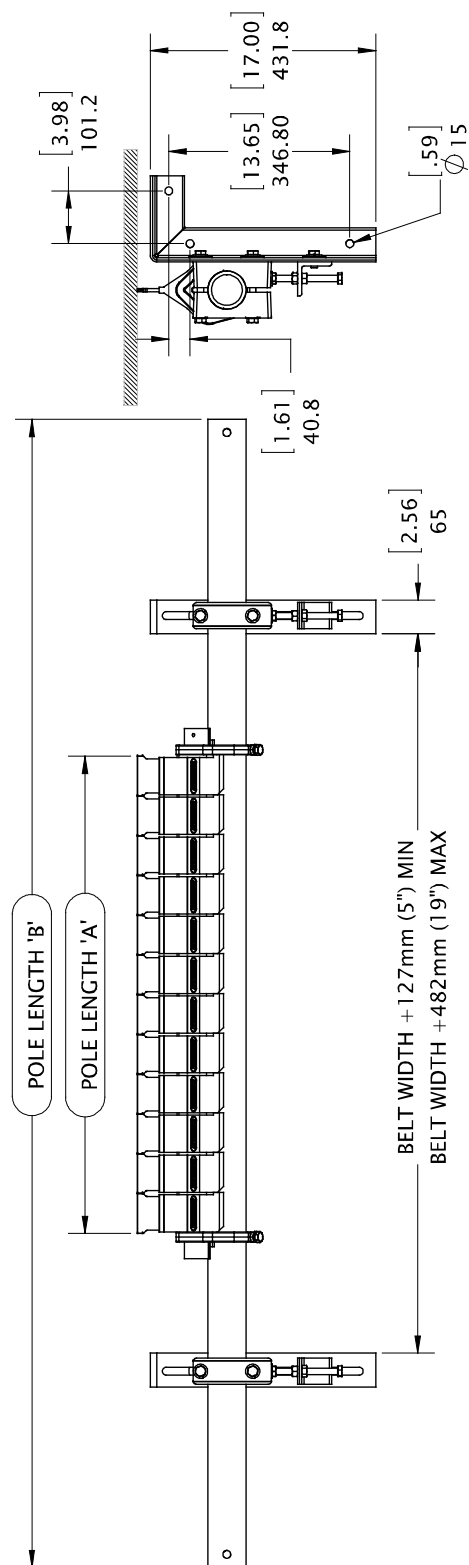


Section 8 – Specifications and CAD Drawings (cont.)

8.3 CAD Drawing – Y-Type™ HD Carbide



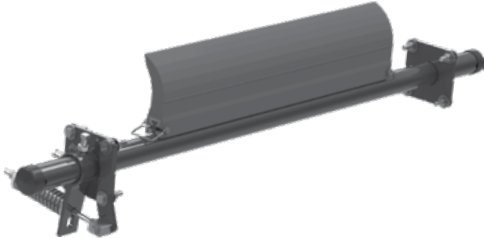
SPECIFICATIONS			BLADE TYPE	ORDER NUMBER	ITEM CODE
BELT WIDTH 'A' (IN)	POLE LENGTH 'B' (IN)	POLE LENGTH 'B' (mm)			
36	78.75	2000	PURPLE	YTHD-900	83092
			CARBIDE	YTCHD-900	83099
			WHITE	YTHD-900	83113
42	92.50	2350	PURPLE	YTHD-1050	83093
			CARBIDE	YTCHD-1050	83100
			WHITE	YTHD-1050	83114
48	104.30	2650	PURPLE	YTHD-1200	83094
			CARBIDE	YTCHD-1200	83101
			WHITE	YTHD-1200	83115
54	106.30	2700	PURPLE	YTHD-1350	83095
			CARBIDE	YTCHD-1350	83102
			WHITE	YTHD-1350	83116
60	116.14	2950	PURPLE	YTHD-1500	83096
			CARBIDE	YTCHD-1500	83103
			WHITE	YTHD-1500	83117
64	122.05	3100	PURPLE	YTHD-1650	83097
			CARBIDE	YTCHD-1650	83104
			WHITE	YTHD-1650	83118
72	127.95	3250	PURPLE	YTHD-1800	83098
			CARBIDE	YTCHD-1800	83105
			WHITE	YTHD-1800	83119



Section 10 – Other Flexco Conveyor Products

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

EZP1 Precleaner



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

Flexco Slider and 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

Inspection Door



- Multiple door sizes available for a variety of applications.
- Dust-tight silicone seal between mounting plate and chute wall.
- Latch mechanism is designed to allow easy adjustability to tightness of door seal.
- Optional hinged, bolted screen allows safe visual inspection and does not require removal for authorized workers to access the chute.

PT Smart™ 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 seize or freeze up
- Simple brackets and component construction ensure a quick and easy installation

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

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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