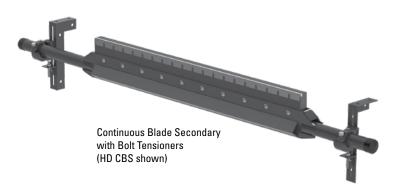
Flexco Continuous Blade Secondary Belt Cleaner

Installation Instructions





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 CBS Secondary Cleaner for your conveyor system.

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

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

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

Customer Service: AUS: 02 8818-2000

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

Section 2 - Safety Considerations and Precautions

Before installing and operating the CBS Secondary Cleaner, it is important to review and understand the following safety information.

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

2.1 Stationary Conveyors

The following activities are performed on stationary conveyors:

- Installation
- Blade replacement
- Tension adjustments
- Cleaning

A DANGER

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

Before working:

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

A WARNING

Use Personal Protective Equipment (PPE):

• Safety eyewear

Repairs

- Hardhats
- Safety footwear

Close quarters, springs and heavy components create a worksite that compromises a worker's eyes, feet and skull. PPE must be worn to control the foreseeable hazards associated with conveyor belt cleaners. Serious injuries can be avoided.

2.2 Operating Conveyors

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

- Inspection of the cleaning performance
- Dynamic troubleshooting

A DANGER

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

A WARNING

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

A WARNING

Never adjust anything on an operating cleaner. Unforseeable belt projections and tears can catch on cleaners and cause violent movements of the cleaner structure. Flailing hardware can cause serious injury or death.

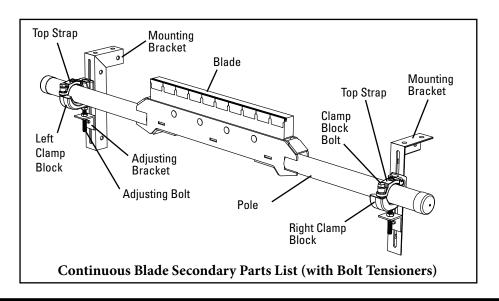


Section 3 - Pre-installation Checks and Options

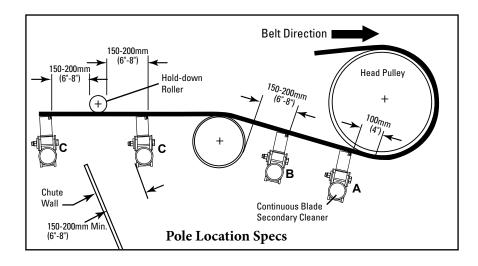
3.1 Checklist

- Check that the cleaner size is correct for the beltline width
- Check the belt cleaner carton and make sure all the parts are included
- Review the "Tools Needed" list on the top of the installation instructions
- Check the conveyor site:
 - Will the cleaner be installed on a chute
 - Is the install on an open head pulley requiring mounting structure (see 3.2 - Optional Installation Accessories)

4.1 Continuous Blade Secondary Cleaner

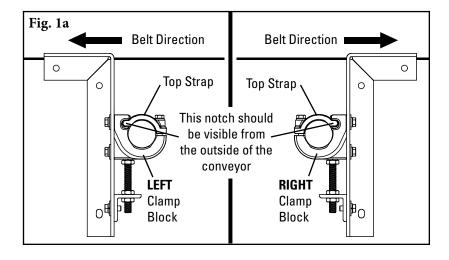


Physically lock out and tag the conveyor at the power source before you begin cleaner installation.



1. Install mounting brackets.

Determine the correct clamp block (left or right) and bracket needed for each side of the conveyor (Fig. 1a). The top strap should be offset away from the belt (you should be able to see the notch for the top strap from the outside of the conveyor).



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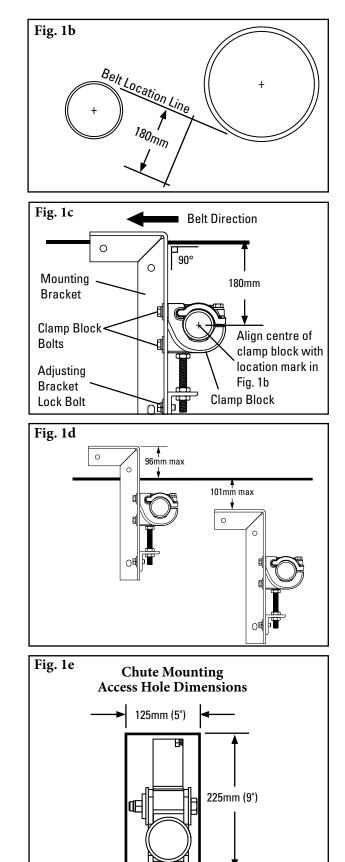
Section 4 - Installation Instructions

4.1 Continuous Blade Secondary Cleaner

For chute mounting: For chute installation a belt location line must first be established. Draw a line on the chute replicating this location. If head pulley and snub pulley are close, it may be necessary to assume an approximate belt line between the two. In the determined location draw a line perpendicular to the belt line. Make a mark on this line 180mm below belt location line (Fig. 1b).

Locate a mounting bracket along the belt location line (Fig. 1b), allowing the centreline of the clamp block to align with the 180mm mark (Fig. 1c). Mounting brackets must be installed with top of bracket a maximum of 96mm above the belt line to 101mm below the belt line (Fig. 1d.) Bolt or weld mounting base into place. Locate and install the mounting base on the opposite side.

To move the clamp blocks, if necessary, loosen the clamp block lock bolts and the adjusting bracket lock bolt and move the clamp block to a position where the centre of the hole is 180mm below the bottom of the belt. Bolt or weld in place. Repeat this step on the opposite side. On one side an access hole may be required (Fig. 1e). NOTE: The mounting brackets must be aligned perpendicular to the belt.



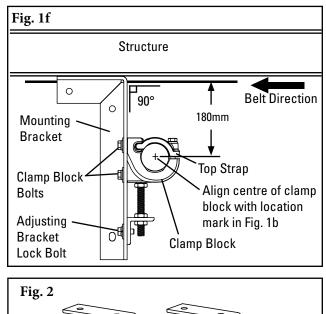
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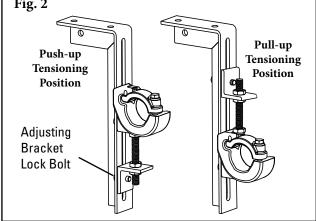
Section 4 - Installation Instructions

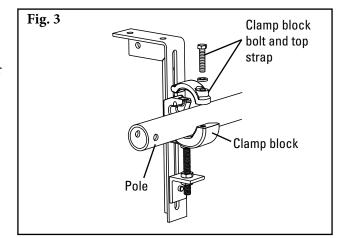
4.1 Continuous Blade Secondary Cleaner

For structure mounting: In most applications the standard mounting brackets will have adequate room to fit on the structure with no cutting. Clamp the mounting bracket into position (use 150mm clamps). Move the clamp block to align the centre of the block with a point 180mm below the belt (Fig. 1e). To move the clamp blocks, if necessary, loosen the clamp block lock bolts and the adjusting bracket lock bolt and turn the adjusting bolt jam nuts. The bracket can now be bolted or welded in place. Locate and install bracket on the opposite side of belt in alignment with the first bracket. **NOTE:** The brackets must be aligned perpendicular to the belt.

- 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 optionally be 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 clamp block top strap on the access side of the conveyor, and on the opposite side loosen the clamp block bolt. Slide the pole across and into the loosened clamp block, then place the near end of pole in bottom section of clamp block (Fig. 3). Replace the top strap on the clamp block, centre the blades on the belt and tighten both clamp block bolts finger tight.





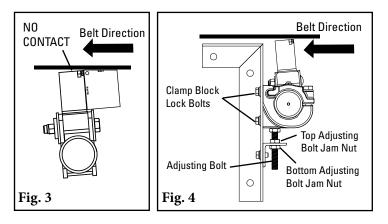




Section 4 - Installation Instructions

4.1 Continuous Blade Secondary Cleaner

4. Set the blade angle. Center the pole/blades on the belt. Rotate the pole until the blade lays back 5° using the setup gauge provided (Fig. 3). Lock the pole in place by tightening the clamp block bolts equally. 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 bolt jam nut (Fig. 4). NOTE: For optimal cleaning performance, it is recommended that mechanical fasteners on the belt be skived.



5. Set the blade tension. With all clamp block lock bolts slightly loosened, back down the bottom adjusting bolt jam nut 4-5 turns on both sides (Fig. 4). Turn the top adjusting bolt jam nuts down until light contact is made between the tips and belt across the entire width of the cleaner. Give an additional 1 turn to both top adjusting bolt jam nuts and tighten both bottom adjusting bolt jam nuts. Tighten all clamp block lock bolts. Double check that all bolts and nuts on the cleaner are tight.

Test run the cleaner and inspect its performance. If vibration occurs or more cleaning efficiency is desired, increase the tip tension by making a 1/4 turn adjustment on each adjusting bolt.

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 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
- Make adjustments as necessary

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

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

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

6.1 New Installation Inspection

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

6.2 Routine Visual Inspection (every 2-4 weeks)

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

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

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

6.3 Routine Physical Inspection (every 6-8 weeks)

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

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



Section 6 - Maintenance

6.4 Maintenance Log

Conveyor Name/No.		
Date:	_ Work done by:	Service Quote #:
Activity:		
Date:	_ Work done by:	Service Quote #:
Activity:		
Date:	Work done by:	Service Quote #:
Activity:		
Date:	_ Work done by:	Service Quote #:
Activity:		
Date:	_ Work done by:	Service Quote #:
Activity:		
	_ Work done by:	
	_ Work done by:	
Date:	_ Work done by:	Service Quote #:
7		

Section 6 - Maintenance

6.5 Cleaner Maintenance Checklist

Site:	Inspected by:	Date:		
Belt Cleaner:	elt Cleaner: Serial Number:			
Beltline Information: Beltline Number:	Belt Condition:			
Belt Width: 🗆 450mm 🗆	600mm 🗆 750mm 🗆 900mm 🗆 1050	nm 🗆 1200mm 🗆 1350mm 🗆 1500mm 🗆 1800mm 🗆 2100mm 🗆 2400mm		
Belt Speed: fpm	Belt Thickness:			
Belt Splice:	Condition of Splice: Nurr	per of Splices:		
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: Le	eft Middle	Right		
Blade condition:	□ Good □ Grooved [] Smiled □ Not contacting belt □ Damaged		
Measurement of spring:	Required	Currently		
For SAT2 Tensioner only: Inspect SAT2 bags and line		ired Currently		
Was Cleaner Adjusted:	🗆 Yes 🛛 No			
Pole Condition:	□ Good □ Bent □ W	rn		
Lagging: 🗆 Sid	de Lag 🛛 Ceramic 🗆 Ru	ober 🗆 Other 🗆 None		
Condition of lagging:	□ Good □ Bad □	Other		
Cleaner's Overall Perform	ance: (Rate the following	- 5, 1= very poor - 5 = very good)		
Appearance: 🗆:	Comments:			
Location:: 🗆 🗆:	Comments:			
Maintenance:: 🗆:	Comments:			
Performance:: 🗆:	Comments:			
Other comments:				



Section 7 - Troubleshooting

7.1 Troubleshooting Guide

Problem	Possible Cause	Possible Solutions	
	Cleaner secure bolts not set	Ensure all locking nuts are tight (Loctite)	
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge)	
Vibration	Belt tension too high	Ensure cleaner can conform to belt, or replace with alternate Flex secondary cleaner	
	Belt flap	Introduce hold-down roller to flatten belt	
	Cleaner over-tensioned	Ensure cleaner is correctly tensioned	
	Cleaner under-tensioned	Ensure cleaner is correctly tensioned	
	Nylon bearing worn out or missing	Replace nylon bearing	
	Cleaner not set up correctly	Ensure cleaner set up properly (5° laid back)	
Material buildup on cleaner	Buildup on chute	Ensure cleaner is not located too close to back of chute, allowing buildup	
on cleaner	Cleaner being overburdened	Introduce Flexco precleaner	
	Excessive sticky material	Frequently clean unit of buildup	
	Cleaner over-tensioned	Ensure cleaner is correctly tensioned	
Damaged belt cover	Cleaner blade damage	Check blade for wear, damage and chips, replace where necessary	
Damaged ben cover	Attack angle not correct	Ensure cleaner set up properly (check tip angle with gauge)	
	Material buildup in chute	Frequently clean unit of buildup	
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge)	
Cleaner not	Belt tension too high	Ensure cleaner can conform to belt (introduce hold-down roller) or replace with alternate Flexco secondary cleaner	
conforming to belt	Belt flap	Introduce hold-down roller to flatten belt	
	Cleaner cannot conform	Ensure cleaner can conform to belt (introduce hold-down roller) or replace with alternate Flexco secondary cleaner	
	Cleaner not set up correctly	Ensure cleaner set up properly (check tip angle with gauge)	
	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	
Material passing cleaner	Belt flap	Introduce hold-down roller to flatten belt	
ciculici	Belt worn or grooved	Introduce water spray pole	
	Cleaner cannot conform	Ensure cleaner can conform to belt (introduce hold-down roller), or replace with alternate Flexco secondary cleaner	
	Blade in backwards	Install blade correctly and set correct tension	
	Incorrect cleaner blade selection	Change blade type to accomodate fastener style (UC or UF)	
Damage to mechanical fastener	Belt not skived correctly	Spot and redo splice correctly, lowering the profile flush or below belt surface	
	Blade angle incorrect	Reset with gauge	
Missing material	Cupped Belt	Install hold-down roller and reset blade angle with gauge	
in belt center only	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary	
Missing material	Cupped Belt	Install hold-down roller and reset blade angle with gauge	
on outer edges only	Cleaner blade worn/damaged	Check blade for wear, damage and chips, replace where necessary	

Section 8 - Specs and CAD Drawings

8.1 Specs and Guidelines

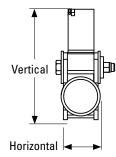
Pole Length Specifications*

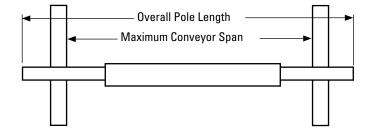
CLEANER SIZE	BLADE WIDTH	POLE LENGTH	MAXIMUM Conveyor Span
450	450	1800	1550
600	600	1950	1700
750	750	2100	1850
900	900	2250	2000
1050	1050	2400	2150
1200	1200	2550	2300
1350	1350	2700	2450
1500	1500	2850	2600
1800	1800	3150	2900
2100	2100	3450	3200
2400	2400	3750	3500

*For special extra long pole length requirements a Pole Extender Kit (#76024) is available that provides 750mm of extended pole length. Pole Diameter - 73mm

Clearance Guidelines for Installation

VERTICAL
CLEARANCE
REQUIRED
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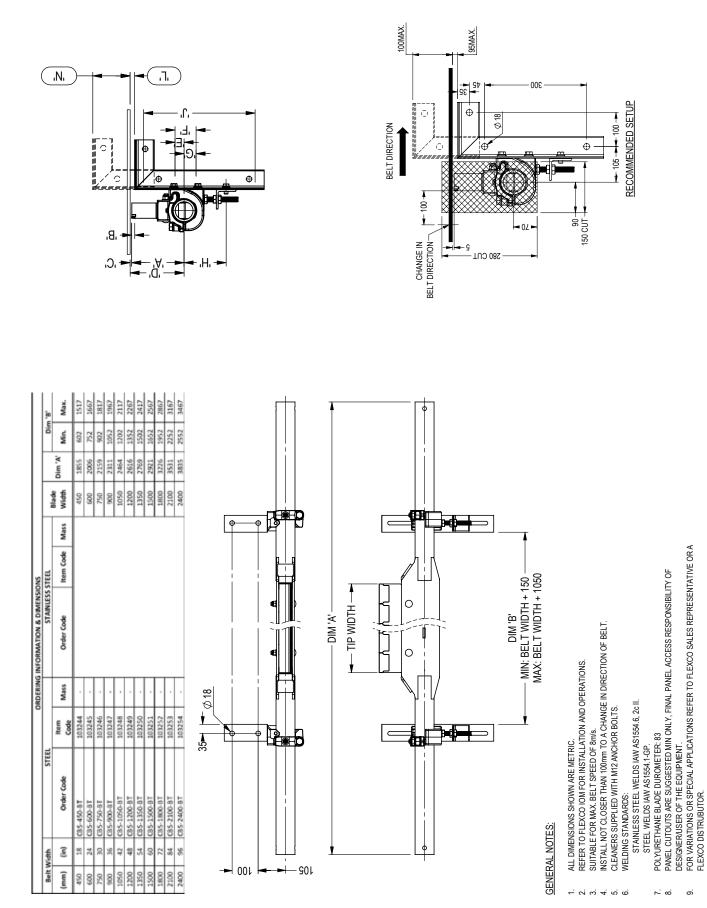


Specifications:

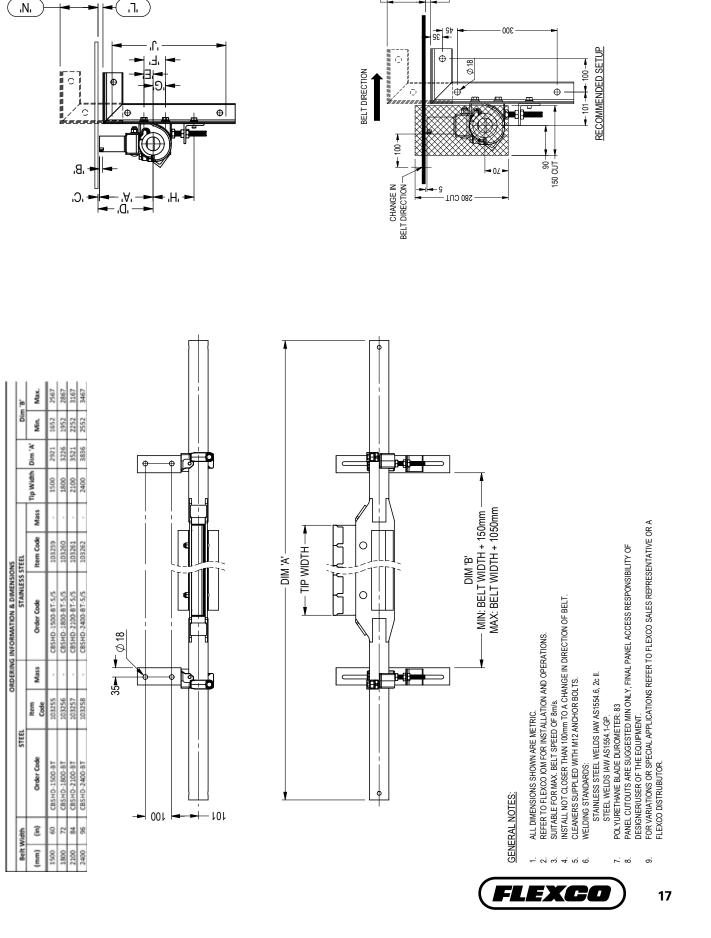
- Temperature Rating-35°C to 82°C



8.2 CAD Drawing - CBS with Bolt Tensioners



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100MAX.

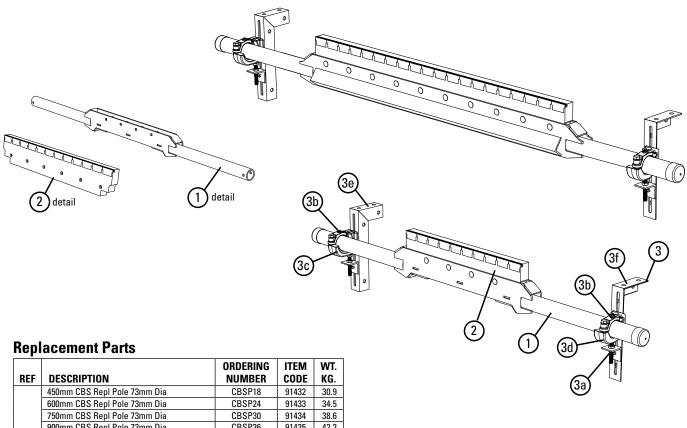
95MAX.

Section 8 - Specs and CAD Drawings

8.3 CAD Drawing - CBS HD with Bolt Tensioners

Section 9 - Replacement Parts

9.1 Replacement Parts List - CBS Secondary Cleaner



	RECORDETION	ORDERING	ITEM	WT.
REF	DESCRIPTION	NUMBER	CODE	KG.
	450mm CBS Repl Pole 73mm Dia	CBSP18	91432	30.9
	600mm CBS Repl Pole 73mm Dia	CBSP24	91433	34.5
	750mm CBS Repl Pole 73mm Dia	CBSP30	91434	38.6
	900mm CBS Repl Pole 73mm Dia	CBSP36	91435	42.2
	1050mm CBS Repl Pole 73mm Dia	CBSP42	91436	45.8
1	1200mm CBS Repl Pole 73mm Dia	CBSP48	91437	49.5
	1350mm CBS Repl Pole 73mm Dia	CBSP54	91438	53.5
	1500mm CBS Repl Pole 73mm Dia Extra HD	CBSHD-1500P	84086	79.8
	1800mm CBS Repl Pole 73mm Dia Extra HD	CBSHD-1800P	84087	89.4
	2100mm CBS Repl Pole 73mm Dia Extra HD		84088	99.1
	2400mm CBS Repl Pole 73mm Dia Extra HD	CBSHD-2400P	84089	108.9
	450mm CBS Blade Flat	CBSBLD18F	79947	7.3
	600mm CBS Blade Flat	CBSBLD24F	79948	10.0
	750mm CBS Blade Flat	CBSBLD30F	79949	12.3
	900mm CBS Blade Flat	CBSBLD36F	79950	15.0
	1050mm CBS Blade Flat CBSBLD 2 1200mm CBS Blade Flat CBSBLD		79951	17.7
2			79952	20.4
	1350mm CBS Blade Flat	CBSBLD54F	79953	22.7
	1500mm CBS Blade Flat	CBSBLD60F	79954	25.4
	1800mm CBS Blade Flat	CBSBLD72F	79955	30.4
	2100mm CBS Blade Flat	CBSBLD84F	79956	35.8
	2400mm CBS Blade Flat	CBSBLD96F	79957	40.8
3	Bolt Tensioner Kit	CCMKHD	78920	16.7
3a	Adjusting Bracket Kit	PAB	75513	0.7
3b	Cradle Clamp Top Strap	CCKHDTS	79232	0.8
3c	Pole Clamp Kit Left	CCKHDL	79225	4.0
3d	Pole Clamp Kit Right	CCKHDR	79229	4.0
3e	Mounting Bracket - Left Hand	PMBL	75516	3.8
3f	Mounting Bracket - Right Hand	PMBR	75519	3.8

*Hardware Included

Lead time: 2 weeks

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:

MMP Precleaner



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

MDWS DryWipe Secondary Cleaner



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

Flexco Specialty Belt Cleaners



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

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

PT Max[™] Belt Trainer



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

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

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