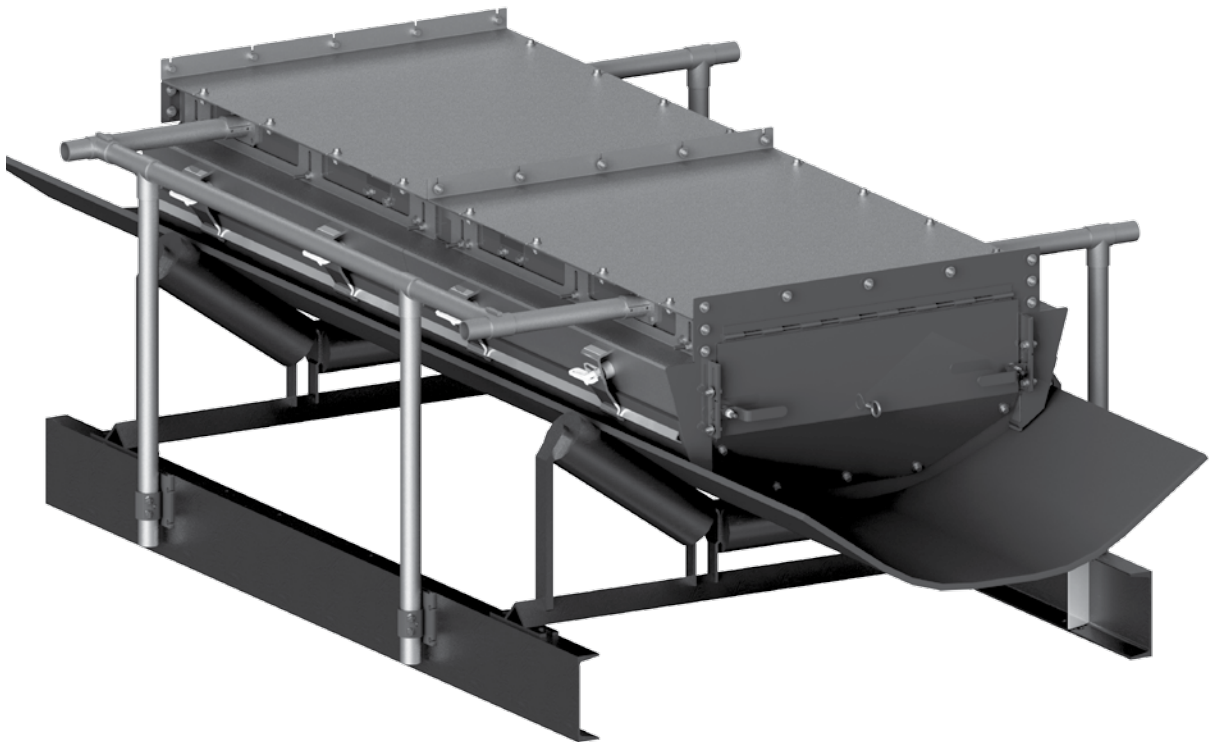


Standard Skirting System

Installation, Operation and Maintenance Manual



Standard Skirting System

Serial Number: _____

Purchase Date: _____

Purchased From: _____

Installation Date: _____

Serial number information can be found on the Serial Number Label included in the Information Packet shipped with the skirting components.

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 our Standard Skirting System for your conveyor system.

This manual will help you to understand the installation, operation, and maintenance 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. In addition, please follow all standard approved safety guidelines when working on your conveyor.

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

Customer Service: 1-800-541-8028

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 the Standard Skirting System. While we have tried to make the installation and service tasks as easy and simple as possible, this product does however require correct installation, regular inspection, and maintenance to maintain top working condition.

1.2 User Benefits

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

- Reduced airborne dust
- Reduced conveyor downtime
- Reduced man-hour labor
- Lower maintenance budget costs

1.3 Installation and Service Option

The Standard Skirting System 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 Engineer or your Flexco Distributor.

Section 1 - Important Information

1.4 Skirting System Spec Sheet

Custom Skirting System Spec Sheet

CUSTOMER INFO:

Company Name: _____

Address: _____ Date: _____

_____ Phone #: _____

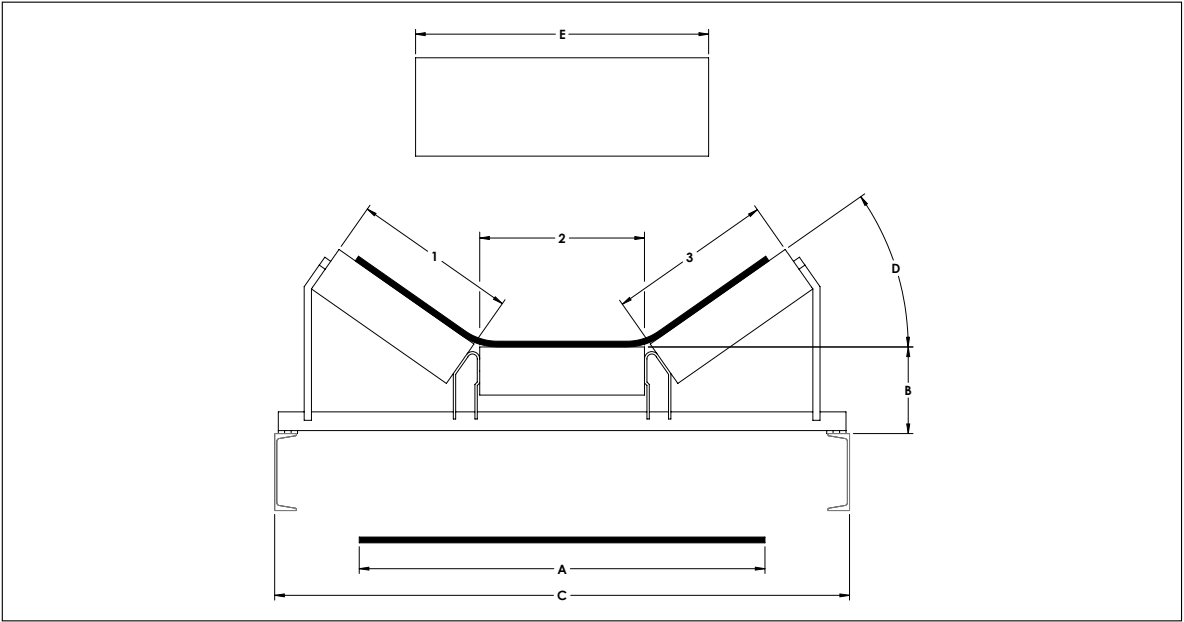
Contact Name: _____ Fax #: _____

Title/Position: _____ e-Mail: _____

DIMENSIONS

Value	Units	Dim	Description
		A	Belt width
		B	Top of stringer to underside belt
		C	Outside of stringer dimensions
		D	Trough angle
		E	Widest inlet component
		1	Idler Roll Length
		2	Idler Roll Length
		3	Idler Roll Length
			Material
			Material Density
			Belt speed / velocity
			Tonnage /Throughput
			Length of load-zone

Please return completed form to **FlexcoFirstTeam@flexco.com**.



Section 2 - Safety Considerations and Precautions

Before installing and operating the Standard Skirting System, 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
- Skirt Rubber Adjustments
- Cleaning

DANGER

It is imperative that all local regulations and codes related to working on conveyors including adherence to lock out/tag out (LOTO) procedures prior to undertaking any work on the conveyor or skirting system. Failure to adhere to safety standards including LOTO exposes workers to uncontrolled behavior of the Standard Skirting System caused by movement of the conveyor belt. Severe injury or death can result.

Before working:

- Lockout/Tagout the conveyor power source
- Clear the conveyor belt in the area to be skirted

WARNING

Close quarters and heavy components create a worksite that compromises a worker's safety. It is important to perform a proper job hazard assessment and determine the appropriate personal protective equipment to safely install and maintain equipment.

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 conveyor is an in-running nip hazard. Never touch or prod an operating Standard Skirting System. Conveyor hazards cause instantaneous amputation and entrapment.

WARNING

Conveyor chutes contain projectile hazards. Stay as far from the Standard Skirting System as practical and use safety eyewear and headgear. Projectiles launched from a conveyor can inflict serious injury.

Never adjust anything on an operating conveyor. Unforeseeable materials falling into the chute can cause violent movements of the Standard Skirting System structure. Falling hardware can cause serious injury or death.

Section 3 - Pre-Installation Checks and Options

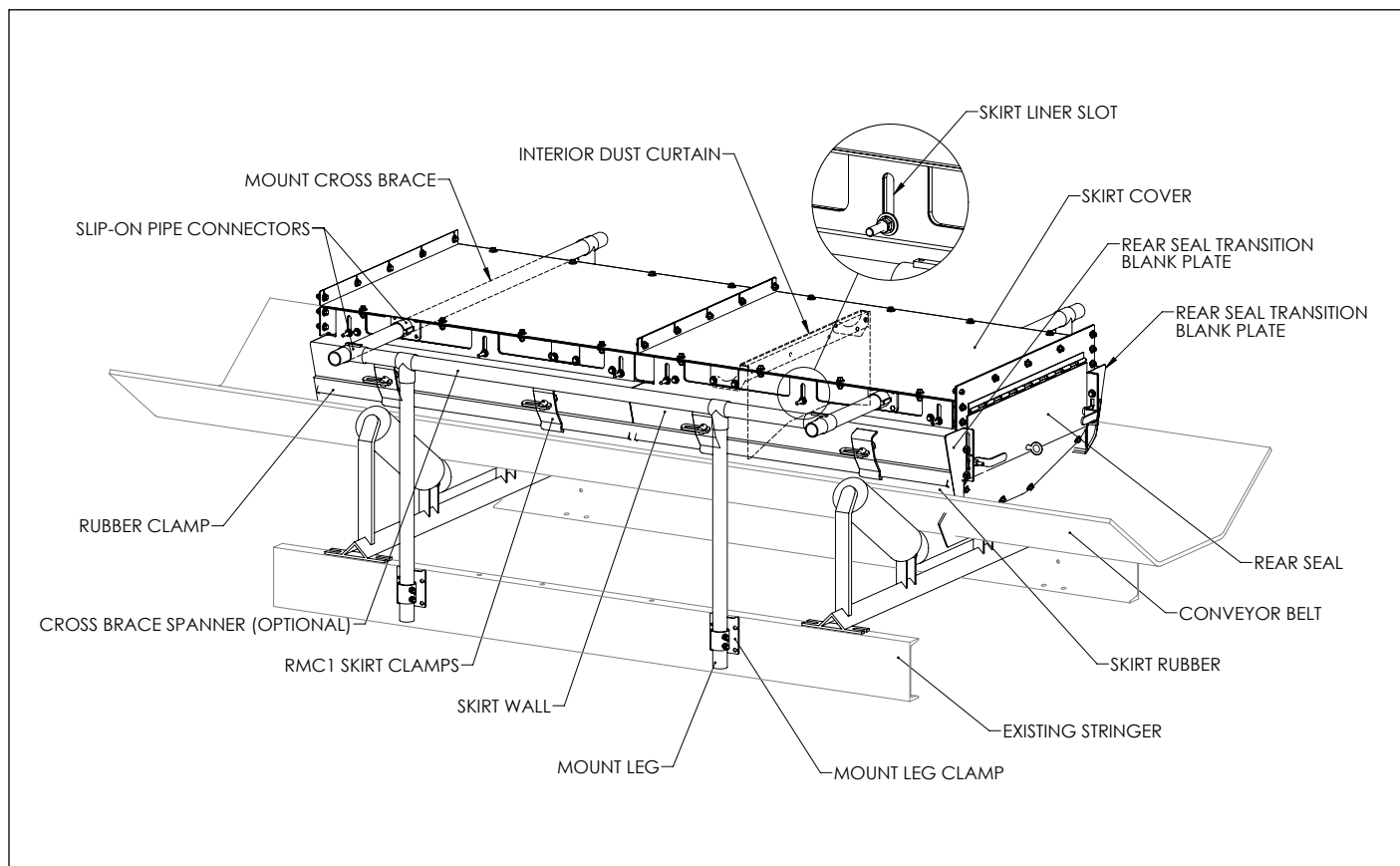
3.1 Checklist

- Installation should only be done by qualified conveyor mechanics.
- Check the Standard Skirting System to be sure all the parts are included in the shipment.
- Check for properly tracked belts before installing Flexco's Standard Skirting System. An improperly tracked belt will result in potential disengagement of the tangential seal skirting rubber which will then result in potential damage to the skirting rubber.
- Skirting rubber durometer should be softer than that of the conveyor belt to avoid any potential of the skirting rubber damaging the conveyor belt.
- Prepare the conveyor site:
 - ▶ Inspect the conveyor structure for damage or misalignment. Make adjustments as necessary
 - ▶ Verify existing ancillary equipment will not be affected by the installation of the skirting system
 - ▶ Determine optimal skirt leg locations and prep areas for mounting
 - ▶ If existing equipment must be adjusted or re-located to assist in installing the skirting system, care should be taken to insure all affected equipment will remain fully functional after the installation of the skirting

Section 4 - Installation Instructions

4.1 Standard Skirting System

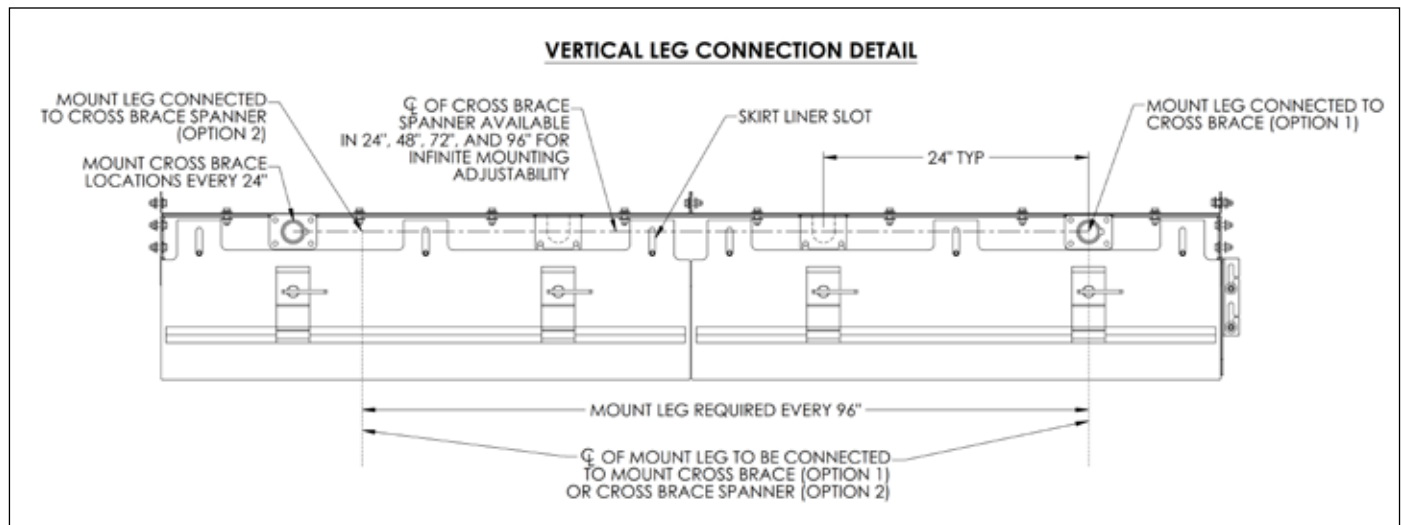
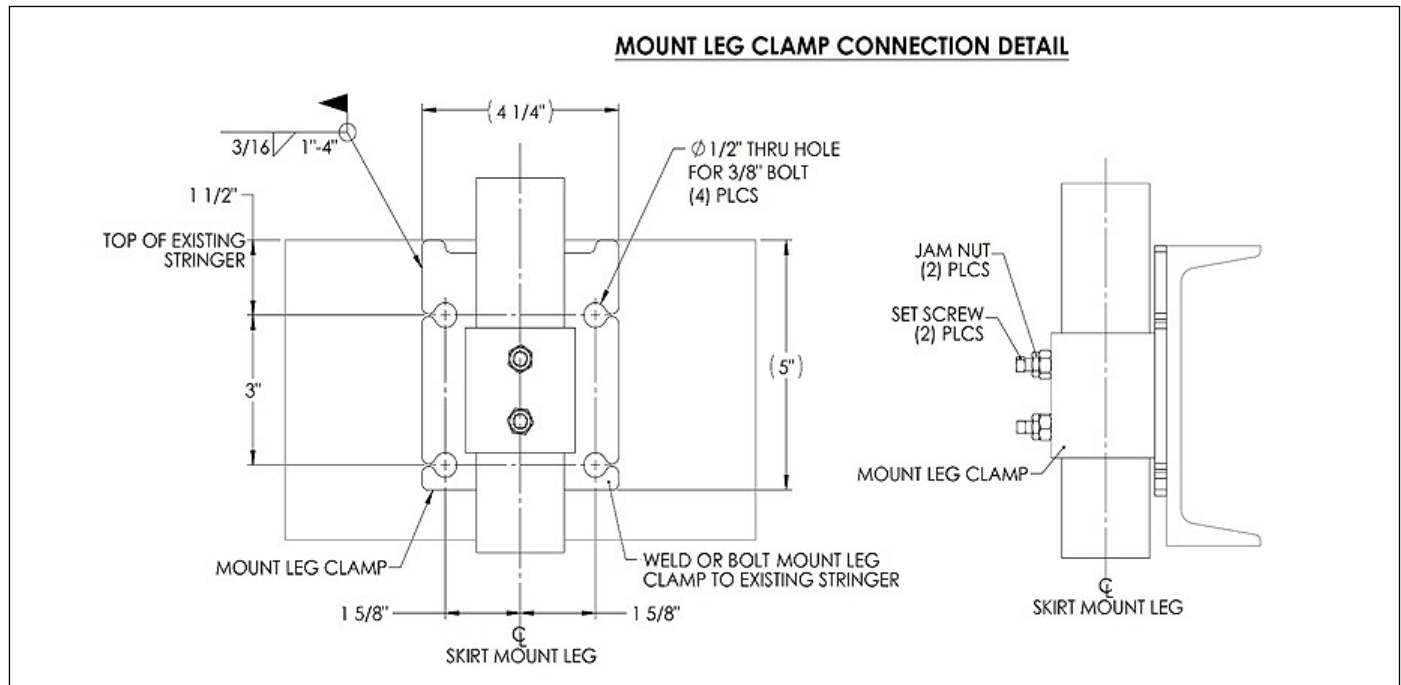
CAUTION: Components may be heavy. Use safety approved lifting procedures.



1. If applicable, remove existing conveyor belt skirting. Clearing existing stringer for mount leg clamps.
2. Determine locations for skirt legs and weld or bolt skirting mount leg clamps to stringer. Skirt walls have locations for mount cross brace every 24" Cross brace spanners are available for infinite leg locations. Mount legs are required every 96".

Section 4 - Installation Instructions

4.1 Standard Skirting System (cont.)



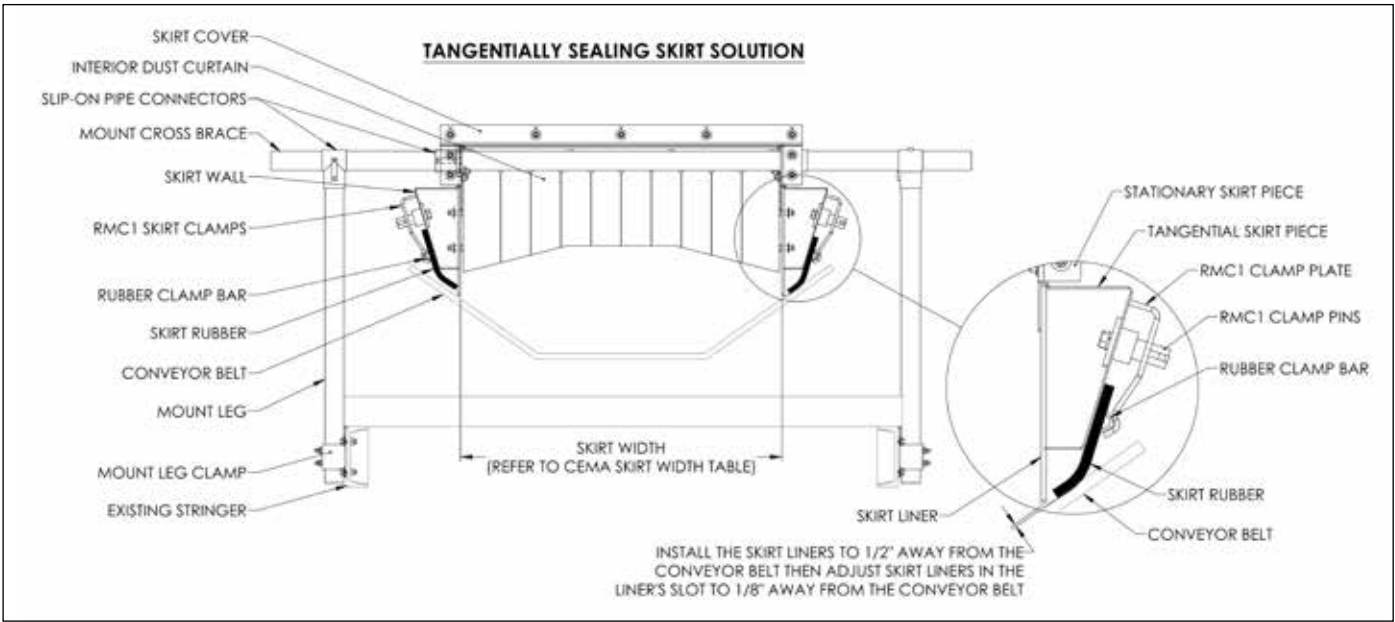
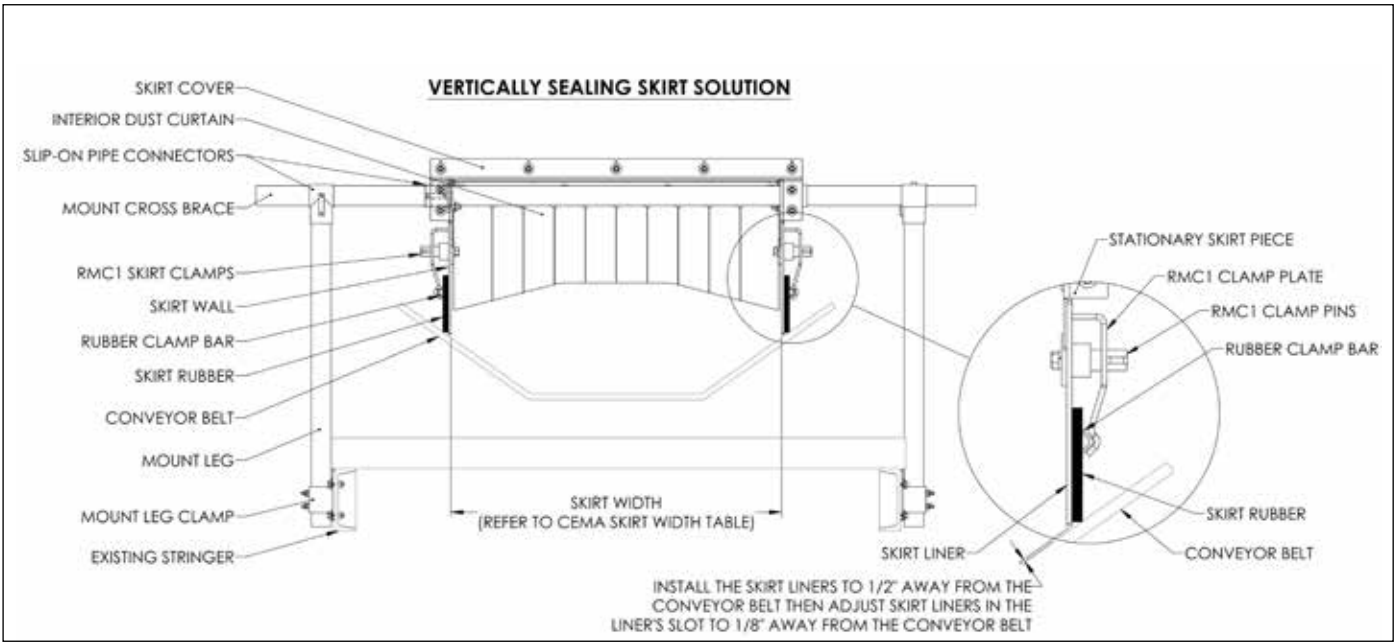
3. Connect mount cross brace assemblies to skirt walls, positioned over conveyor belt, hand-tightening all hardware.
4. Place slip-on pipe connectors from mount legs on mount cross braces and, if applicable, cross brace spanners.
5. Place cross brace spanner on mount cross braces (if applicable).
6. Place mount leg pipes onto mount leg clamps, tightening set screws and jam nuts.
7. Install the assembled skirt wall, mount cross braces, and cross brace spanner (if applicable) onto mount leg pipes.

Section 4 - Installation Instructions

4.1 Standard Skirting System (cont.)

- 8. Set the skirt walls vertical, level to each other, set to the specified CEMA width (see the CEMA skirt width table for the dimension for specific belt widths), and centered on the conveyor belt.
- 9. Locate skirt liners 1/2" away from the conveyor belt.
- 10. Loosely assemble skirt walls to each other, hand-tightening all hardware.
- 11. Loosen all skirt liners and lower them to be 1/8" away from the conveyor belt. Tighten skirt liner hardware.

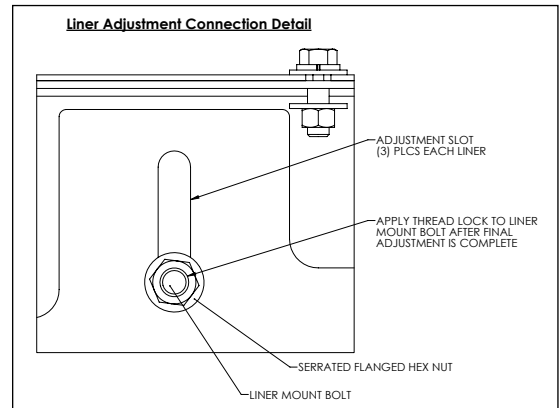
CEMA Skirt Width	
Belt Width	Skirt Width
24"	16"
30"	20"
36"	24"
42"	28"
48"	32"
54"	36"
60"	40"
66"	44"
72"	48"
84"	56"
96"	64"



Section 4 - Installation Instructions

4.1 Standard Skirting System (cont.)

12. Install the rear seal to tail skirt walls.
13. Modify the skirt covers for specific requirements (Dust collection/suppression/chute penetrations/fire suppression/etc).
14. Install interior dust curtains to skirt walls (if applicable).
15. Install the skirt covers.
16. Tighten all connections.
17. After all final adjustments have been made, threadlock, such as Loctite 242 blue, shall be applied to all liner adjustment connections. To do so, one at a time, loosen a nut so that threadlock can be applied to the nut engagement area, per its manufacturers recommendations. Then, tighten the nut to its proper torque, 74 ft-lbs. Repeat this process one nut at a time, for all remaining nuts.
18. Caulk all joints and gaps. Caulk not provided.
19. Position skirt rubber per the **6.5 Skirt Rubber Replacement** directions.



Flexco's Flex-Lok™

Skirting rubber is held in place with Flexco's Flex-Lok™ style skirt clamping system shown below featuring:

- A strong restraining bar that is held in place by clamp plates to allow easy adjustment of the skirt rubber conveniently from the sides of the conveyor.
- Anti-vibration clamp pins can be unlocked with a rubber hammer.
- A unique captive wedge mechanism that ensures no part gets lost.
- Easy to maintain – one person can reposition worn skirt rubber in minutes.



Section 5 - Pre-Operation Checklist and Testing

5.1 Pre-Op Checklist

- Check that all fasteners are tightened
- Check that the empty belt to skirt board clearance is 1/8" minimum at the tail end and no more than 1/2" at the discharge end; it is critical that the skirt liner clearance to the belt is constant or grows in the direction of belt travel.
- Check that skirting rubber is lying free on the conveyor belt and not binding the conveyor belt in any area
- Be sure that all installation materials and tools have been removed from the belt and conveyor area

5.2 Test Run the Conveyor

- Run the conveyor for at least 15 minutes and confirm that the skirt rubber is properly sealing the transfer point
- Adjust skirt rubber as needed
- Ensure rubber is laying free on the conveyor and not binding in any areas
- Confirm that the belt is tracking properly after any skirting adjustment

Section 6 - Maintenance

Flexco's Standard Skirting Systems are designed to operate with minimal maintenance. However, to maintain superior performance some service is required. When the Flexco's Standard Skirting System is installed, a regular maintenance program should be set up. This program will insure that the skirting solution operates at optimal efficiency. With a good maintenance program, problems can be identified and fixed before any damage is done to the conveyor belt, structures, or components.

All safety procedures for inspection of equipment (stationary or operating) must be observed. Flexco's Standard Skirting Solution operates over a moving conveyor belt. Only visual observations can be made while the conveyor belt is running. Tasks must be done by qualified individuals only when the conveyor belt is stopped and workers have observed the correct lockout and tag-out procedures.

6.1 New Installation Inspection

After the skirting solution has been in service for a few days a visual inspection should be made to ensure the skirting is performing properly. Make adjustments as needed.

6.2 Routine Visual Inspection (Every 2-4 weeks)

A visual inspection of the skirting solution can determine:

- If the skirt rubber is adequately keeping the chute area sealed
- If there is excessive material building up around the skirting area
- If there is damage to the skirting, conveyor belt, or other conveyor components

If any of the above conditions exist, the conveyor should be stopped for 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 skirting system can be made to perform the following tasks:

- Clean material buildup around the skirting system and conveyor structure
- Closely inspect each skirt liner for wear and damage, replace if needed
- Check the skirting system for damage
- Inspect all fasteners for tightness and wear; tighten or replace as needed
- Inspect skirt rubber and adjust or replace as needed
- When maintenance tasks are completed, test run the conveyor to ensure the skirting system is performing properly

6.4 Liner Replacement Instructions

When the conveyor is not in operation and properly locked and tagged-out, skirt liner replacement of the skirting system can be made by performing the following tasks:

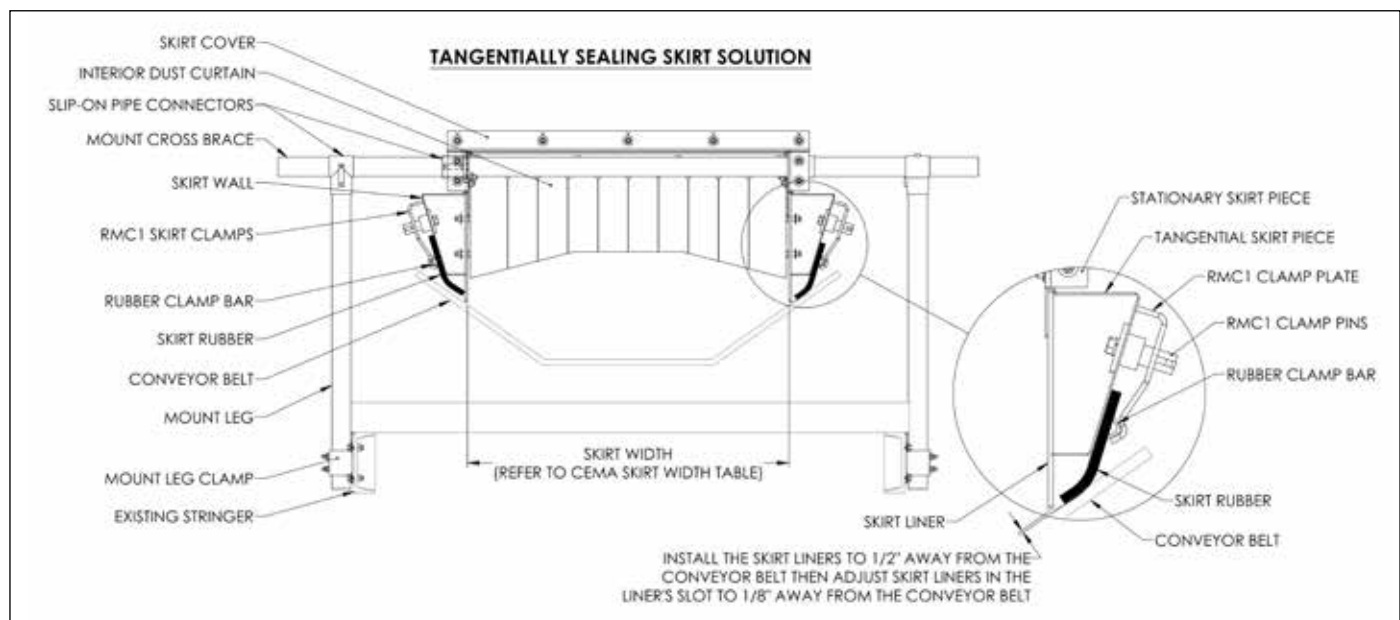
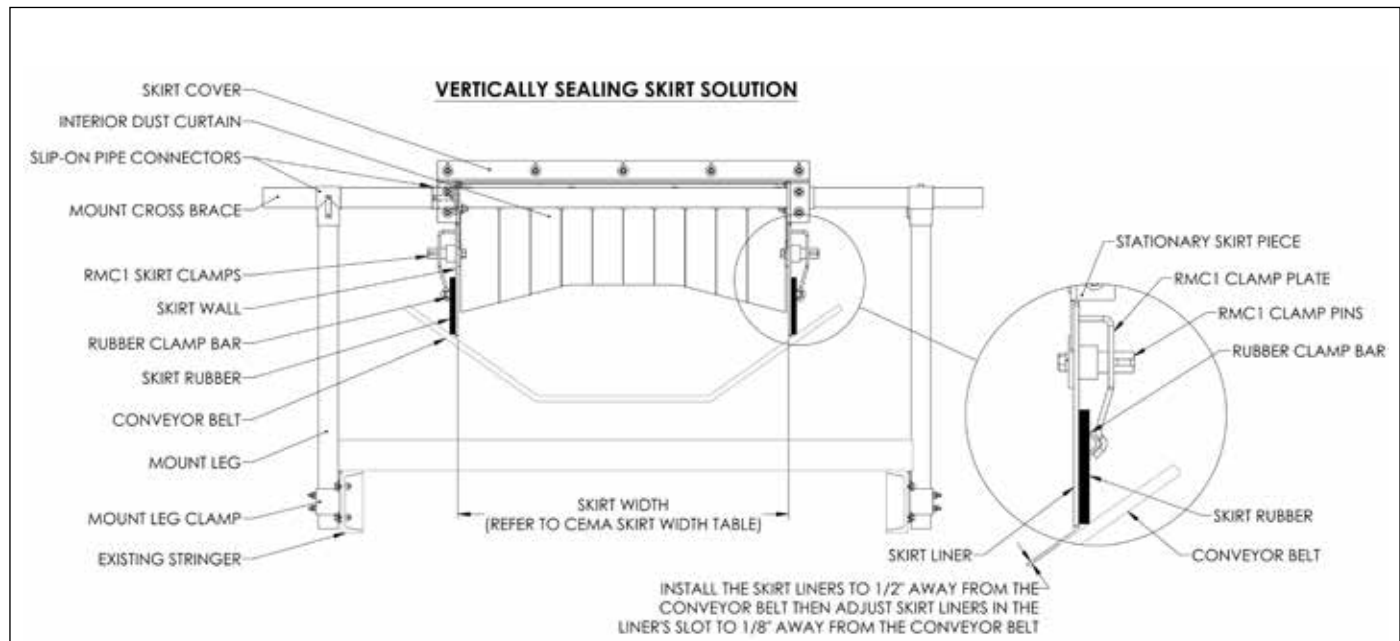
- Remove skirt rubber per the **6.5 Skirt Rubber Replacement** directions
- Remove nuts that hold liner to be replaced in place
- Unfasten and remove skirt liner and, if applicable, tangential skirt piece from the stationary skirt piece
- If applicable, unbolt tangential skirt piece from old skirt liner and bolt it to new skirt liner
- Set in place new skirt liner and, if applicable, tangential skirt piece
- Fasten skirt liner and, if applicable, tangential skirt piece to stationary skirt piece
- Verify new skirt liner to belt clearance is 1/8" minimum and adjust if necessary
- Reposition skirt rubber per the **6.5 Skirt Rubber Replacement** directions
- Test run conveyor and inspect belt to liner area for proper clearances

Section 6 - Maintenance

6.5 Skirt Rubber Replacement

When the conveyor is not in operation and properly locked and tagged-out, the skirt rubber can be replaced by performing the following tasks:

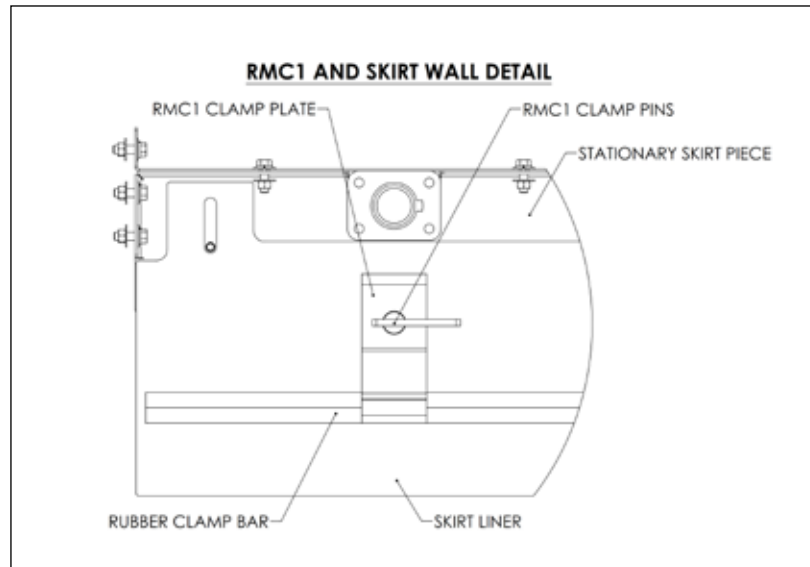
- Use a hammer to loosen the RMC1 clamp pins
- Remove RMC1 clamp plates and rubber clamp bars
- Remove the old skirt rubber
- Position the new skirt rubber as shown in the following diagram:



Section 6 - Maintenance

6.5 Skirt Rubber Replacement (cont.)

- The skirt rubber should not go under the skirt boards
- Relocate RMC1 clamp plates and rubber clamp bars
- Use a hammer to tighten the RMC1 skirt clamps
- Ensure the skirt rubber is lying free on the top of belt and not pinched to the belt; pinched skirt rubber will adversely impact conveyor belt and skirting solution performance and wear
- Test run the conveyor and inspect conveyor belt and skirt rubber for proper sealing



Section 6 - Maintenance

6.6 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

6.7 Standard Skirting System Maintenance Checklist

Beltline Information:

Beltline Number: _____ Belt Condition: _____

Belt Speed: _____ Belt Thickness: _____

Transition Distance (C/L of tail pulley to first full troughing Idler frame): _____

Belt Width: 24" ☐ 30" ☐ 36" ☐ 42" ☐ 48" ☐ 54" ☐ 60" ☐ 66" ☐ 72" ☐ 84" ☐ 96" ☐
 (600mm) (750mm) (900mm) (1050mm) (1200mm) (1350mm) (1500mm) (1600mm) (1800mm) (2100mm) (2400mm)

Vertical distance between Liner and Belt:

Minimum measured: _____ Maximum measured: _____

Liner Life:

Date Liners installed: _____ Date Liners inspected: _____

Date Liners installed: _____ Date Liners inspected: _____

Overall Skirting Condition:

☐ Good ☐ Bent ☐ Rusted

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

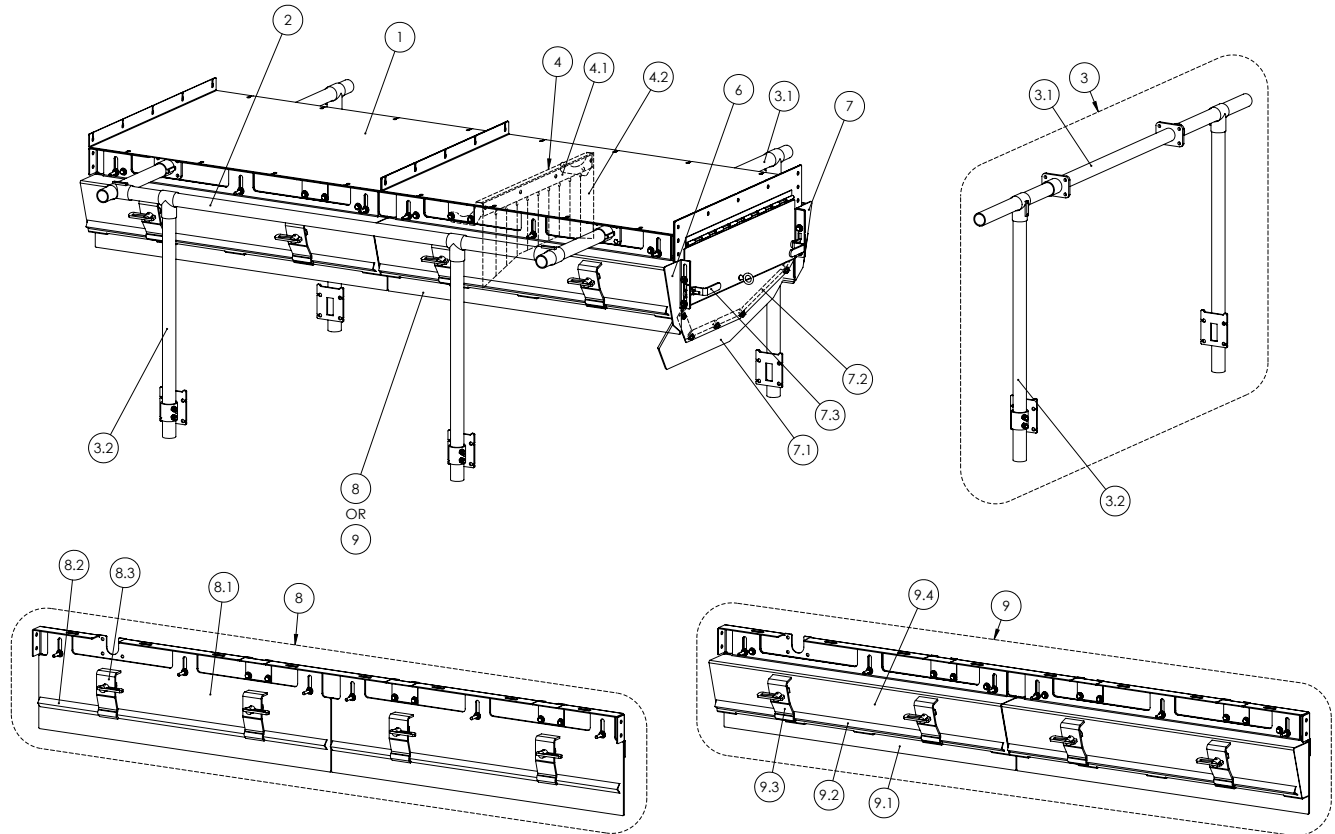
Appearance: ☐ Comments: _____
Location: ☐ Comments: _____
Maintenance: ☐ Comments: _____
Performance: ☐ Comments: _____

Other Comments: _____

Section 7 - Troubleshooting

Problem	Possible Cause	Possible Solutions
Skirt rubber is disengaging belt	Belt is mistracking	Correct tracking
		Install a Flexco Belt Tracker
	Skirt rubber is worn out and too short	Replace skirt rubber
Material is leaking out of skirting	Skirt rubber is not installed correctly	Install skirt rubber correctly
	Skirt rubber is worn out and too short	Replace skirt rubber
	Liner inserts are worn out	Replace liners
	Skirting is not set to the proper height off the belt	Set skirting to the proper height
Excessive dust is coming out of the end of the skirting	Internal dust curtains are missing	Install new dust curtains
	Material is impacting belt too severely in the load zone	Install Flexco Impact Beds
		Consider a Complete Flexco Engineering Chute system

Section 8 - Replacement Parts



REF	DESCRIPTION	ORDERING NUMBER	WT. LBS.
1	Skirt Cover	SC-7- XX	Varies
2	24in Cross Brace Spanner	SP-24	6.0
	48in Cross Brace Spanner	SP-48	11.0
	72in Cross Brace Spanner	SP-72	16.0
	96in Cross Brace Spanner	SP-96	22.0
3	Leg Assembly	LA- XX	Varies
3.1	Cross Brace	CB- XX	Varies
3.2	Mount Leg	SL- ZZ	Varies
4	Dust Curtain Assembly	DC-1-15- XX-YY	Varies
4.1	Dust Curtain Bracket	DB-1- XX	Varies
4.2	Dust Curtain Rubber	DR-15- XX-YY	Varies
5	Tangential Rear Plate - Right	RSB-R-7-15	0.5
6	Tangential Rear Plate - Left	RSB-L-7-15	0.5
7	Rear Seal Assembly	RS-1-15- XX-YY	Varies
7.1	Rear Seal Rubber	RSR-15- XX-YY	Varies
7.2	Rear Seal Retainer	RST-7-15- XX-YY	Varies
7.3	Rear Seal Latch	RSL-1	0.6
8	48in Straight Skirt Wall	4-X-15-4-S-1	65.0
	96in Straight Skirt Wall	8-X-15-4-S-1	130.0
8.1	48in Straight AR400 Liner	LP-15-4-S-48	40.8
8.2	RMC1 Skirt Clamp	RMC1-BPP	6.5
8.3	48in Rubber Clamp	RCB-48	3.1
9	48in Tangential Skirt Wall	4-X-15-4-T-1	91.0
	96in Tangential Skirt Wall	8-X-15-4-T-1	144.0
9.1	48in Tangential AR400 Liner	LP-15-4-T-48	41.1
9.2	RMC1 Skirt Clamp	RMC1-BPP	6.5
9.3	48in Rubber Clamp	RCB-48	3.1
9.4	48in Tangential Skirt Piece	TP-7-15-48	6.9
XX	Belt Width	From 24in to 96in in increments of 6in	
YY	Trough Angle	20deg, 35deg, or 45deg	
ZZ	Mount Leg Height	From 20in to 50in in increments of 3in	
Note: If spanner (SP-__) is required, disassemble leg assembly (LA-XX) and install with spanners as shown.			

Section 9 - Other Flexco 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:

Rockline® EZP1 Precleaner



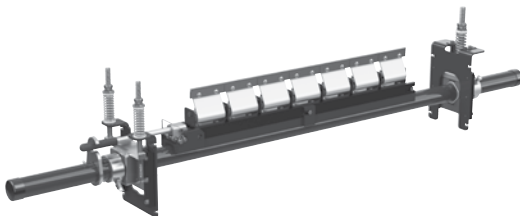
- Patented ConShear™ blade renews its cleaning edge as it wears
- Visual Tension Check™ for optimal blade tensioning and simple retensioning
- Quick and easy one-pin blade replacement Material Path Option™ for optimal cleaning and reduced maintenance

Flex-Lok™ Skirt Clamps



- Eliminates transfer zone spillage
- Interlocking design for easy installation and one person maintenance
- Unique wedge pin holds rubber securely in place and is easy to adjust
- Available in various models and in stainless steel

Rockline® EZS2 Secondary Cleaner



- Long-wearing tungsten carbide blades for superior cleaning efficiency
- Patented PowerFlex™ cushions independently tension each blade to the belt for consistent, constant cleaning power
- Easy to install, simple to service
- Works with Flexco mechanical belt splices

PT Max™ Belt Trainer



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

Flexco Specialty Belt Cleaners



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

Belt Plows



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

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

