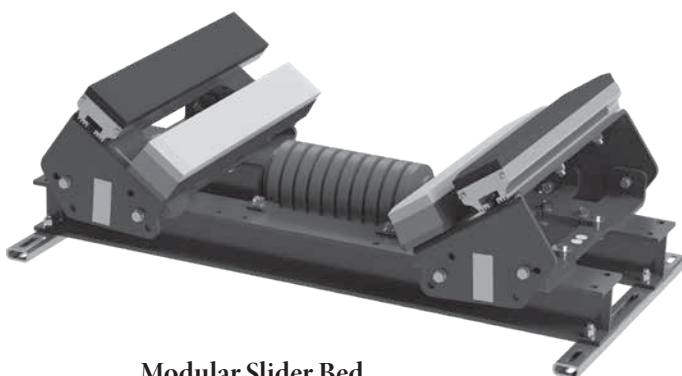
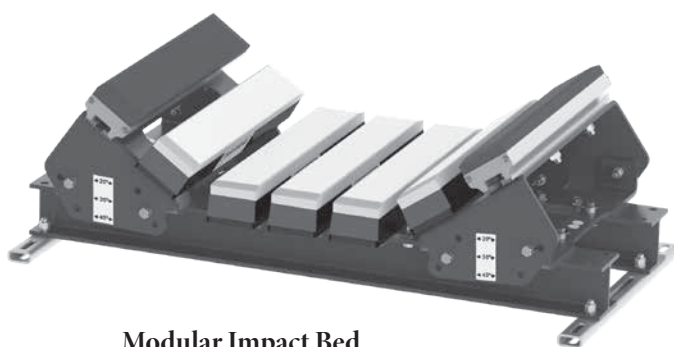


Modular Impact Beds

Installation, Operation and Maintenance Manual



Modular Slider Bed



Modular Impact Bed

Modular Slider/ Impact Beds

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 impact bed.

This information will be helpful for any future inquiries or questions about 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 Modular Impact Bed 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: +65-6484-1533

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

The “transfer point” is integrally important to the successful operation of a belt conveyor system. The material transferred from one conveyor (or other source) to another conveyor must be done without damaging the conveyor’s key component...the belt. A correctly-selected impact bed is critical for this task.

Since material size, weight and the drop height can cause considerable impact force that can damage the belt, the right impact bed must be chosen to absorb the impact energy and minimize any damage to the beltline.

The proper impact bed can also support the belt in the loading zone to prevent material spillage.

Section 1 - Important Information

1.3 Proper Impact Bed Selection

Flexco's Modular Impact beds are expressly designed to absorb energy from falling materials. The bed model should be specified to the needs of the conveyor application. To do this, the following data points are needed (Also see the Impact Bed Spec Sheet on Page 7).

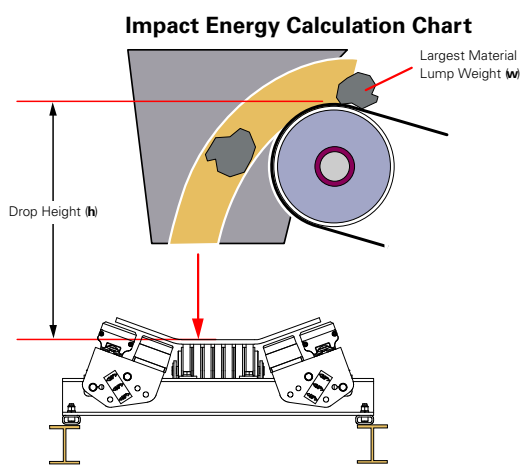
1. **Belt Width** - This is typically a simple check and the only additional information that would be required is if belt width is inconsistent with structure width.
2. **Troughing Angle** - What is the angle of the current bed or troughing set?
3. **Roller Diameter and CEMA Rating** - Rollers are typically 125 or 150mm (5" or 6") and rated CEMA C, D or E.
4. **Bed Length** - 600mm (2'). For other lengths, combine multiple Modular Beds.
5. **Drop Height and Lump Size & Weight** - This is the critical information required.
 - a. **Drop Height** - The measurement from where the material leaves the feeding conveyor to where it makes contact with the receiving conveyor.
 - b. **Lump Size and Weight** - The lump size - The largest dimension of the material pieces dropping. The material weight is of the largest lump size found and weighed.
 - c. **Chart for Rough Calculations** - Weighing is always more accurate, but the chart values will give a rough weight estimate.

Material	kg/m ³
Coke	657
Fertilizer	961
Bauxite, crushed	1282
Potash	1282
Coal, Bituminous, Solid	1346
Coal, Anthracite, Solid	1506
Slag, Solid	2114
Chromium Ore	2163
Halite (Salt), Solid	2323
Phosphorus	2339
Stone (Common, Generic)	2515
Limestone, Solid	2611
Shale, Solid	2675
Granite, Solid	2691
Gypsum, Solid	2787
Trap Rock, Solid	2883
Dolomite, Solid	2899
Malachite (Copper Ore)	3860
Platinum Ore	4293
Hematite (Iron Ore)	5158

Section 1 - Important Information

Now you can calculate the impact energy (in kg-m) and make the bed selection by the rating chart.

Impact Energy Calculation Chart



By using this simple lb-ft formula, for whatever your application, you will know the load capacities needed to specify the best Impact Bed to get the job done right.

Calculate Impact Energy:

Lump weight _____ kg

x Drop length _____ m

Total _____ kg-m

Match lb-ft to bed rating:

0-25 kg-m (0-200 lb-ft) MSB

0-200 kg-m (0-1500 lb-ft) MIB

A sample Impact Bed Spec Sheet is included (Page 7) for future use.

1.4 Installation and Service Option

The Modular Impact Bed 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.

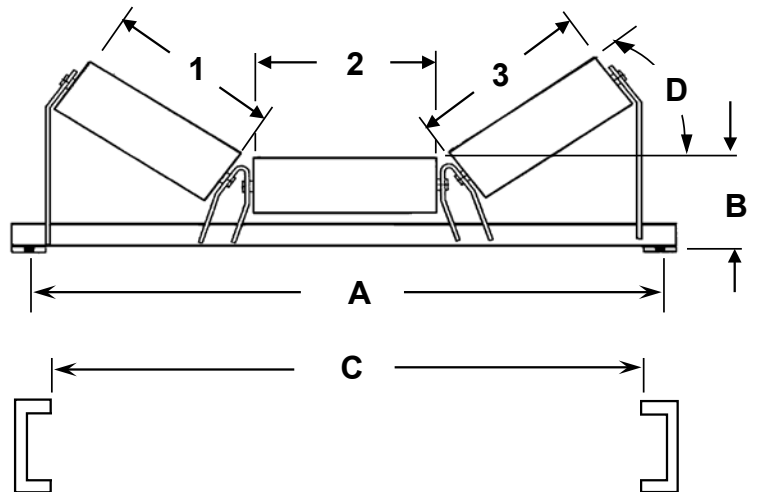
Section 1 - Important Information

1.5 Impact Bed Spec Sheet

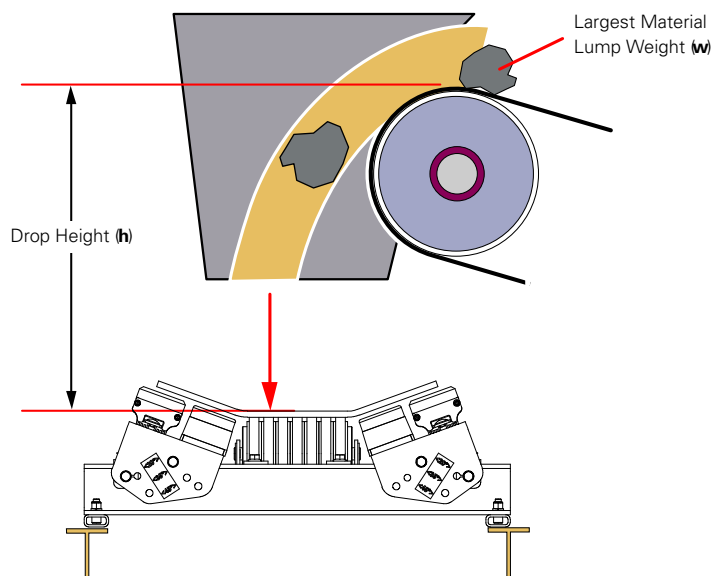
CUSTOMER INFO:

Company Name: _____
 Address: _____ Date: _____
 Phone # _____
 Contact Name: _____ Fax # _____
 Title/Position: _____ E-Mail: _____

_____ A Mounting bolt center-to-center _____ Roll Length 1
 _____ B Center roll height above mounting base _____ Roll Length 2
 _____ C Inside structure dimension _____ Roll Length 3
 _____ D Trough angle
 _____ E Belt width
 _____ F Length of load zone
 _____ G Material
 _____ H Drop Height
 _____ I Maximum Lump size
 _____ J Tons per Hour
 _____ W Maximum Lump weight



Impact Energy Calculation Chart



Impact Energy

Lump Weight (w) _____
 Drop Height (h) x _____
 Total - lb-ft (kg-m) _____

(See Below)

0-25 kg-m (0-200 lb-ft) **MSB**
 0-200 kg-m (0-1500 lb-ft) **MIB**

Section 2 - Safety Considerations and Precautions

Before installing and operating the Modular Impact Bed, 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
- Impact bar replacement
- Repairs
- Skirt rubber 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 impact bed 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 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 components. 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 sealing performance
- Dynamic troubleshooting

DANGER

Every belt conveyor is an in-running nip hazard. Never touch or prod an operating impact bed. Conveyor hazards cause instantaneous amputation and entrapment.

WARNING

Never adjust anything on an operating impact bed. Unforseeable materials falling into the chute can cause violent movements of the impact bed structure. Flailing hardware can cause serious injury or death.

WARNING

Conveyor chutes contain projectile hazards. Stay as far from the impact bed as practical and use safety eyewear and headgear. Missiles can inflict serious injury.

Section 3 - Pre-Installation Checks and Options

3.1 Checklist

- Check the model and size of the impact bed. Is it the right one for your beltline?
- Check the bed to be sure all the parts are included in the shipment.
- Find the Information Packet in the shipment.
- Review the “Tools Needed” section on the front of the installation instructions.
- Prepare the conveyor site:
 - Lift the belt in the transfer zone. Use a lifting hoist or Flexco’s Belt Lifters.
 - Remove the old impact bed or impact idlers.
 - Inspect the conveyor structure for damage or misalignment. Make adjustments as necessary.
 - Troughing idlers should be installed directly before and after the new impact bed.

Section 3 - Pre-Installation Checks and Options

3.2 Optional Installation Accessories

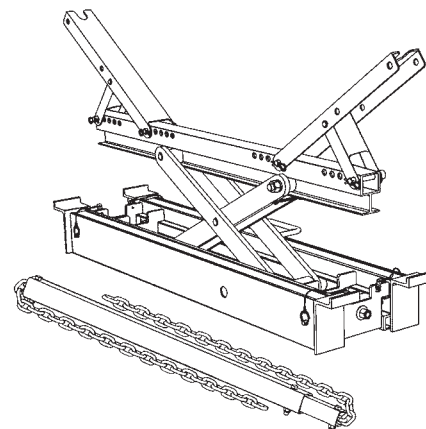
Optional tools can make the installation of the Modular Impact Bed easier and faster.

Flex-Lifter™ Conveyor Belt Lifter

Description	Ordering Number	Item Code
Medium Flex-Lifter™ 900 - 1500mm (36" - 60")	FL-M	76469
Large Flex-Lifter 1200 - 1800mm (48" - 72")	FL-L	76470
XL Flex-Lifter 1800 - 2400mm (72" - 96")	FL-XL	76983

Flex-Lifter™ Conveyor Belt Lifter

The Flexco Flex-Lifter makes the job of lifting the conveyor belt easy and safe. Using two Flex-Lifters, the belt can be quickly lifted out of the way to install the impact bed. The Flex-Lifter has the highest safe lift rating available at 1800 kg (4000 lbs.) on Medium and Large, and 2725 kg (6000 lbs.) on XL. And it's versatile. It can also be used to lift topside or return side belt for splicing, roller replacement or other maintenance jobs. Available in three sizes: Medium for belt widths 900 - 1500mm (36" - 60"), Large for belt widths 1200 - 1800mm (48" - 72"), and XL for belt widths 1800 - 2400mm (72" - 96").



Impact Bed Handy Wrench

Description	Ordering Number	Item Code	Wt. Kg.
Impact Bed Handy Wrench	HW-IMPB	76939	0.7



Impact Bed Handy Wrench

A handy ratcheting wrench with two common sizes (19mm and 24mm or 3/4" and 15/16") for easier installation and maintenance of impact beds.

Shims

Depending on your idler rating and size, shimming may be required. See chart below for quantity of kits required. Each shim kit provides 13mm (1/2") of lift.

Impact Bed Shim Kits

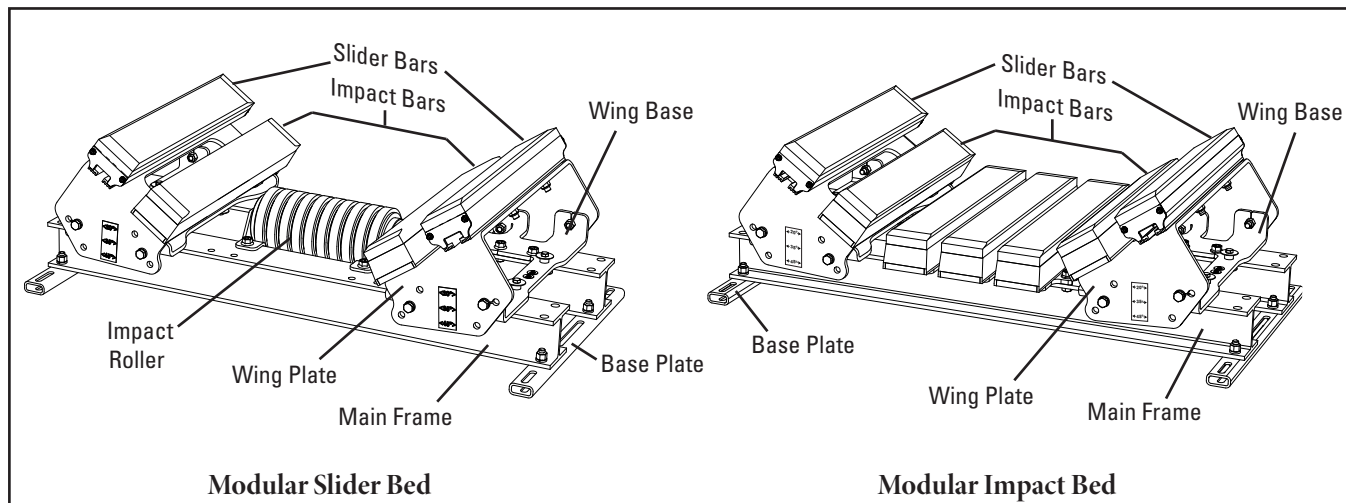
Description	Ordering Number	Item Code	Wt. Kg.
Shim Kit Modular	SHIM-KITMOD	79989	11.3

Table 1: Shim Requirements

Idler Diameter (CEMA C or D)	600-900mm (24"-36") Belt Width	1050-1800mm (42"-72") Belt Width
125mm (5")	Idler up 13mm (1/2") 1 shim kit	No shim
150mm (6")	No shim	Bed up 13mm (1/2") 1 shim kit
Idler Diameter (CEMA E)	900-1500mm (36"-60") Belt Width	1800mm (72") Belt Width
150mm (6")	Bed up 38mm (1.5") 3 shim kits	Bed up 50mm (2") 4 shim kits
175mm (7")	Bed up 50mm (2") 4 shim kits	Bed up 64mm (2.5") 5 shim kits

Section 4 - Installation Instructions

4.1 Modular Slider/Impact Beds



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

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

Before Installation: Inspect structure; confirm CEMA rating. Shim bed or idlers per Table 1. **NOTE:** Installation of an idler is required 25-150mm (1"-6") before and after a Flexco Modular Slider or Impact Bed. If more than five sections are used, idlers should be installed every 3M (10').

If CEMA rating is unknown, measure the leading and trailing idler for height from the top of center roll to the top of conveyor structure. Table 2 shows the nominal center height required for the idler based on belt width. If incorrect, shim idler(s) to the height shown in Table 2.

Tools Needed:

- Welder
- Grease Pencil
- Tape Measure
- Cutting torch
- 90° square
- 19mm (3/4") open-ended wrench
- 19mm (3/4") sockets with socket wrench or impact wrench
- Flex-Lifter™ (helpful)

Table 1: Shim Requirements

Idler Diameter (CEMA C or D)	600-900mm (24"-36") Belt Width	1050-1800mm (42"-72") Belt Width
125mm (5")	Idler up 13mm (1/2")	No shim
150mm (6")	No shim	Bed up 13mm (1/2")
Idler Diameter (CEMA E)	900-1500mm (36"-60") Belt Width	1800mm (72") Belt Width
150mm (6")	Bed up 38mm (1.5")	Bed up 50mm (2")
175mm (7")	Bed up 50mm (2")	Bed up 64mm (2.5")

Table 2: Nominal Center Roll Height

Belt Width	600-1200mm (24" - 48")	1350-1500mm (54" - 60")	1800mm (72")
Height	229mm (9")	235mm (9-1/4")	241mm (9-1/2")

- Free the area of previous system.** Remove material (idlers, etc.) from the area of desired installation. Loosen or remove skirting material for extra space. If available, use Flex-Lifters before and after the load zone to lift the belt out of the way.
- Visually locate the start of loading zone.** Determine the center of the load zone on the side of the structure and mark (Fig. 2). Measure from this mark to a fixed point on the structure, then transfer this dimension to the opposite side of the structure.

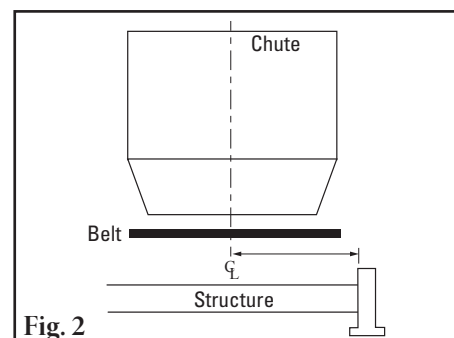
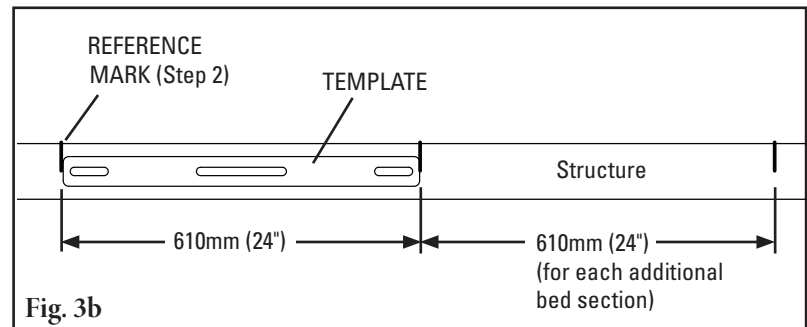
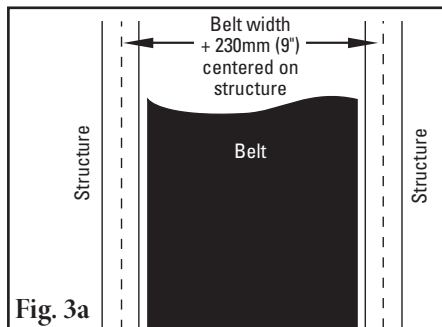


Fig. 2

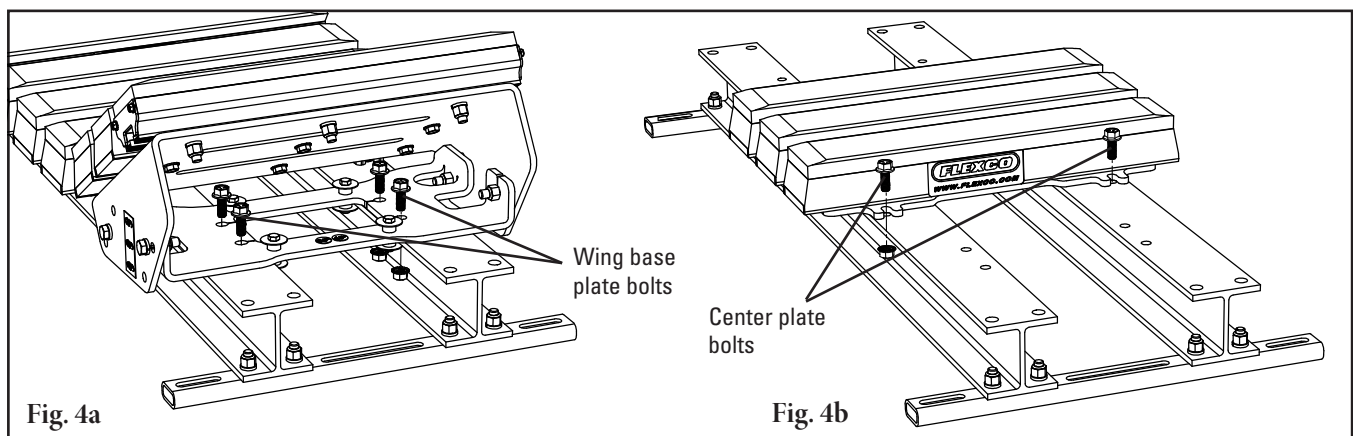
Section 4 - Installation Instructions

4.1 Modular Slider/Impact Beds (cont.)

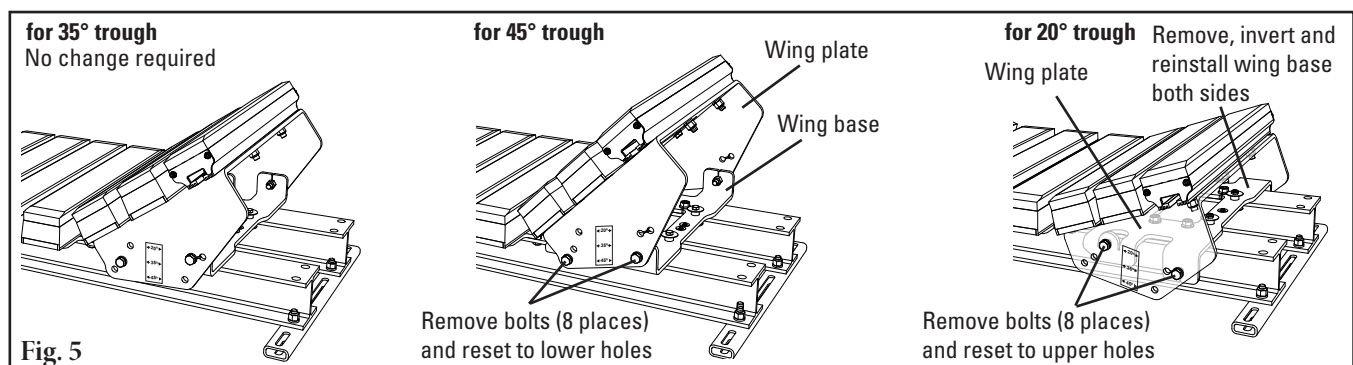
3. **Locate mounting templates.** Using the reference mark from Step 2, measure and mark every 610mm (24") for each modular bed section being installed. Confirm structure centers are belt width +230mm (9") (Fig. 3a). Align each end of the modular bed template on conveyor structure between the marks and identify a minimum of two existing holes from previous equipment or mark the structure to drill or torch new holes (Fig. 3b). Repeat this step on opposite side of conveyor structure. Included mounting bolts should fit freely through the holes. **TIP: You can confirm your other marks by measuring back to the fixed point to ensure everything is square to opposite side of the conveyor.**



4. **Prepare modular bed for installation.** Remove bolts securing wing base plates (Fig. 4a) and roller brackets or center plate (Fig. 4b) to the beam and set aside each module. Removing components will reduce the weight for lifting and installation of the main frame. **TIP: You do not need to remove the impact bars or roller—keep them assembled for easy reinstallation.**



5. **Set wing plate angle.** Modular beds arrive preset to 35° trough. If 35° trough is the correct setting for your conveyor, no change is required. For 45° trough, remove all bolts and reassemble the wing plate using the holes designated for 45° trough. For 20° trough, remove all bolts, flip the wing base so the formed parts are pointing downward, and reassemble to the wing plate using the holes designated for 20° trough. Reference images below for final assembly (Fig. 5).



Section 4 - Installation Instructions

4.1 Modular Slider/Impact Beds (cont.)

6. **Install modular bed main frame.** Position the main frame to align with the mounting holes from Step 3. Insert the mounting bolts and leave finger-tight (Fig. 6). Use shim under mounting feet if needed (Table 1). Verify the height of the center roller on leading and trailing idlers (Table 2).

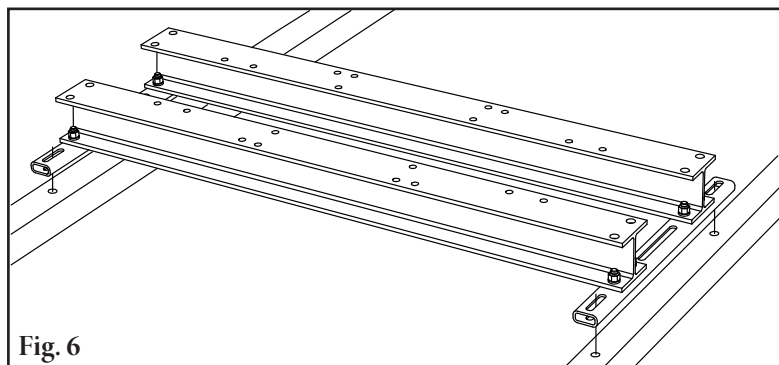


Fig. 6

Table 1: Shim Requirements

Idler Diameter (CEMA C or D)	600-900mm (24"-36") Belt Width	1050-1800mm (42"-72") Belt Width
125mm (5")	Idler up 13mm (1/2") 1 shim kit	No shim
150mm (6")	No shim	Bed up 13mm (1/2") 1 shim kit
Idler Diameter (CEMA E)	900-1500mm (36"-60") Belt Width	1800mm (72") Belt Width
150mm (6")	Bed up 38mm (1.5") 3 shim kits	Bed up 50mm (2") 4 shim kits
175mm (7")	Bed up 50mm (2") 4 shim kits	Bed up 64mm (2.5") 5 shim kits

Table 2: Nominal Center Roll Height

Belt Width	600-1200mm (24"- 48")	1350-1500mm (54"- 60")	1800mm (72")
Height	229mm (9")	235mm (9-1/4")	241mm (9-1/2")

7. **Square up main frame.** With a square, ensure the frame is perpendicular to the conveyor structure and belt, then tighten in place (Fig. 7). Each subsequent modular bed section will maintain square by butting up the mounting feet to the previous bed.

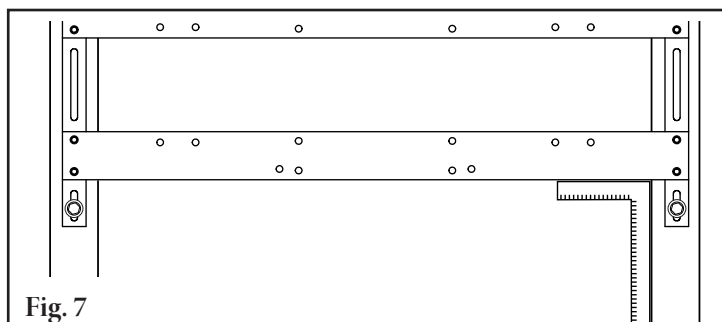


Fig. 7

8. **Reinstall center module.** Bolt roller brackets or center plate to the beams (Fig. 8). If the roller or impact bars were removed at any point during installation, reinstall now.

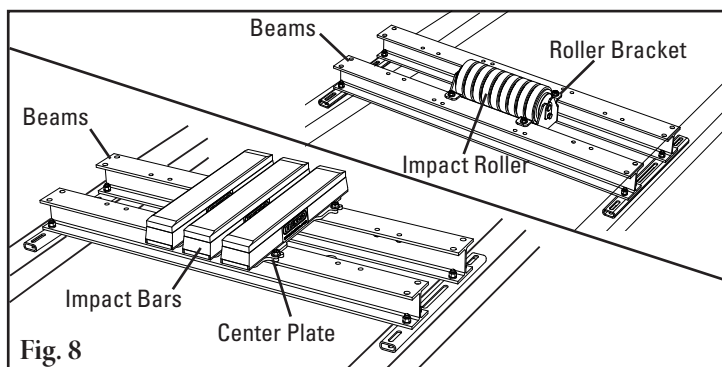


Fig. 8

9. **Install add-on roller center module (as needed).** For installations using consecutive roller beds, the add-on roller center module may be added to reduce the space between rollers from 610mm (24") to 305mm (912"). Bolt add-on roller brackets to the beam (Fig. 9).

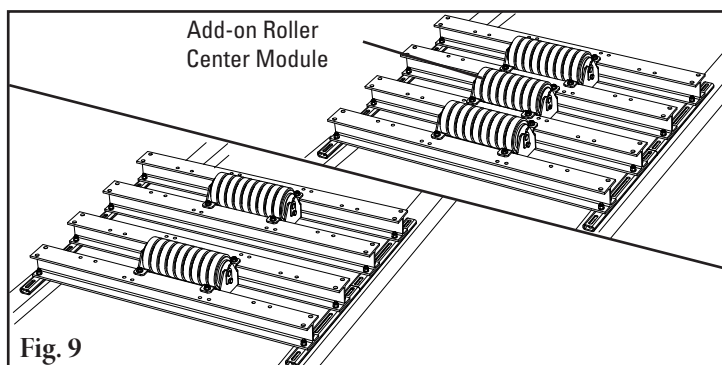
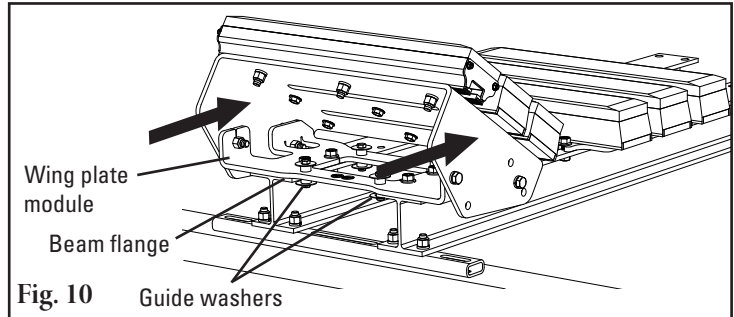


Fig. 9

Section 4 - Installation Instructions

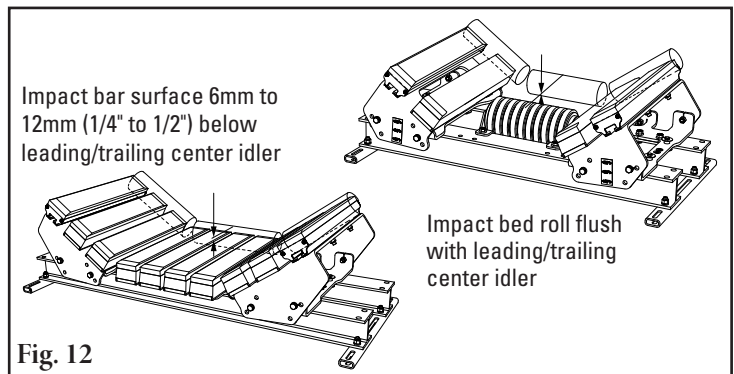
4.1 Modular Slider/Impact Beds (cont.)

10. Reinstall wing plate modules. Wing plates should be set to the correct trough; if not, refer to Step 5. Using the guides, slide the wing plate onto the beam. Ensure guide washers are below the beam flange before reassembling to the frame using provided hardware (Fig. 10). If impact bars were removed at any point during installation, reinstall now.



11. Check all hardware. Tighten all bolts to 81 N-m (60 ft-lb) torque.

12. Confirm correct clearance between impact bars and belt. Reference Table 2 (previous page) to confirm center roll height. On beds with full bars, this should provide a 6mm to 12mm (1/4" to 1/2") gap to lift the belt (Fig. 12a). On beds with rolls, this should align the idler with the rolls on the bed (Fig. 12b). If this gap or alignment is incorrect, shim idlers or bed accordingly.



13. Readjust skirt rubber to maintain a good seal against impact bed. Replace all protective guarding around load zone.

Section 5 - Pre-Operation Checklist and Testing

5.1 Pre-Op Checklist

- Recheck that all fasteners are tight
- Check that empty belt is 6mm to 12mm (1/4" to 1/2") above the impact bars or flush with the impact idlers
- Apply all supplied labels
- 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 the skirt rubber is properly sealing the transfer point. Adjust skirt rubber as needed.

Section 6 - Maintenance

Flexco impact beds are designed to operate with minimum maintenance. However, to maintain superior performance some service is required. When the impact bed is installed a regular maintenance program should be set up. This program will ensure that the impact bed operates at optimal efficiency, and problems can be identified and fixed before any damage is done to the belt, the bed, other conveyor components, or structure.

All safety procedures for inspection of equipment (stationary or operating) must be observed. The Modular Impact Bed operates in the loading zone of the conveyor system 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 impact bed has run for a few days a visual inspection should be made to ensure the bed is performing properly. Make adjustments as needed.

6.2 Routine Visual Inspection (every 2-4 weeks)

A visual inspection of the impact bed can determine:

- If the skirt rubber is adequately keeping the chute area sealed
- If the impact bars are worn out and need to be replaced
- If there are excessive materials building up around the impact bed
- If there is damage to the impact bed, belt or other conveyor components

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

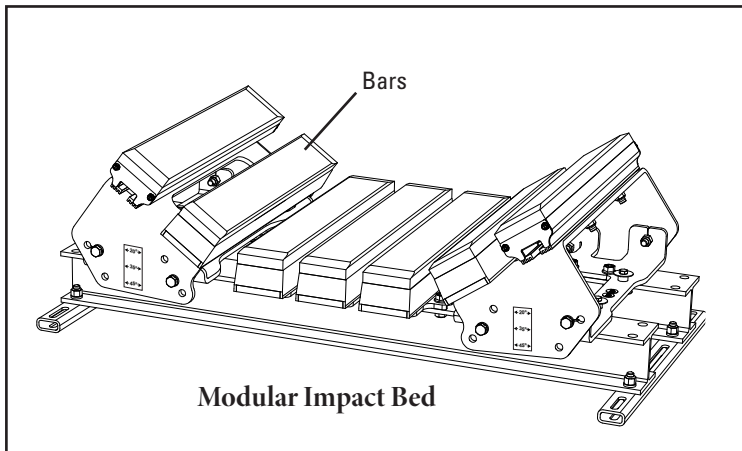
6.3 Routine Physical Inspection (every 6-8 weeks)

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

- Clean material buildup off the impact bed and conveyor structure.
- Closely inspect each impact bar for wear and damage. Bars are worn when the UHMW is worn down to or near the rubber. Replace if needed.
- Check the impact bed frame for damage.
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Inspect skirt rubber and adjust as needed to compensate for impact bar wear.
- When maintenance tasks are completed, test run the conveyor to ensure the impact bed is performing properly.

Section 6 - Maintenance

6.4 Bar Replacement Instructions

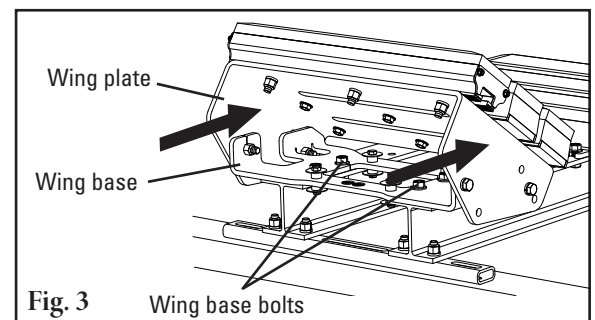
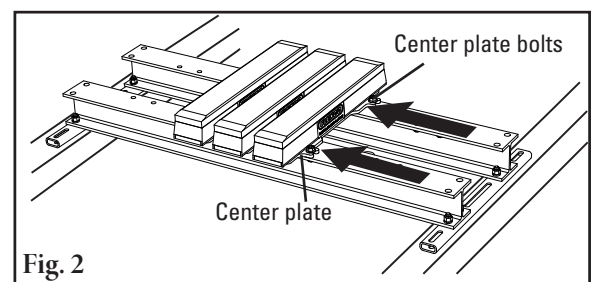
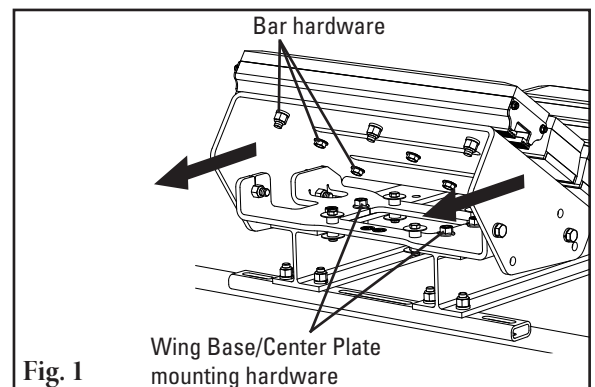


Tools Needed:

- 19mm (3/4") open-ended wrench
- 19mm (3/4") deep sockets with socket wrench or impact wrench
- Flex-Lifter™

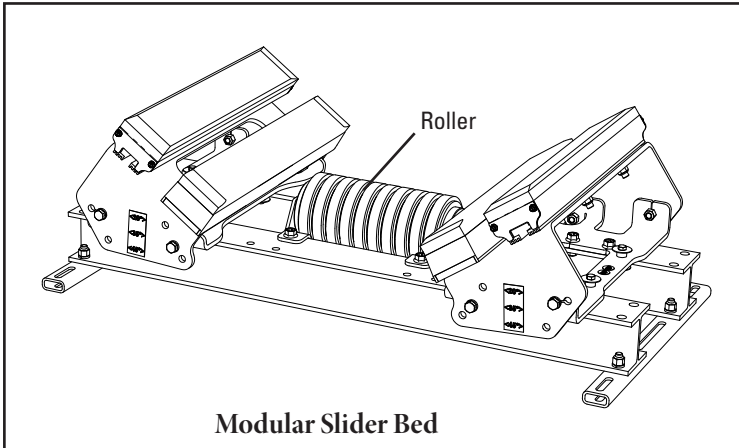
Physically lock out and tag the conveyor at the power source before you begin maintenance.

1. **Remove tension from belt.** Use a Flexco Flex-Lifter or other appropriate lifting equipment to lift the belt off the impact bed.
2. **Remove wing plate and center plate mounting hardware.** Slide sections out to side of conveyor if practical for inspection/removal of bars (Fig. 1).
3. **Inspect bars.** Check to see which bars are worn or damaged and need to be replaced.
4. **Remove worn bars.** Loosen and remove bar hardware (refer to Fig. 1) and remove the worn impact bars.
5. **Install new bars onto center plate.** Place the new bars onto the center plate. Line up bolts and tighten bars to center plate. Tighten to 81 N-m (60 ft-lb) torque. Slide center plate back into place (Fig. 2). Tighten center plate bolts to 81 N-m (60 ft-lb) torque.
6. **Install new bars onto wing plates.** Place the new bars onto the wing plates. Line up bolts and tighten bars to wing plates. Tighten to 81 N-m (60 ft-lb) torque. Slide wing plate modules back into place (Fig. 3). Tighten wing base bolts to 81 N-m (60 ft-lb) torque.
7. **Lower the belt.** Ensure the belt has 6mm to 12mm (1/4" to 1/2") gap over the impact bars. Tighten all bolts.
8. **Test run the conveyor.** Run the conveyor for a few minutes and inspect to ensure that the bed is performing properly. Make adjustments as necessary.



Section 6 - Maintenance

6.5 Roller Replacement Instructions

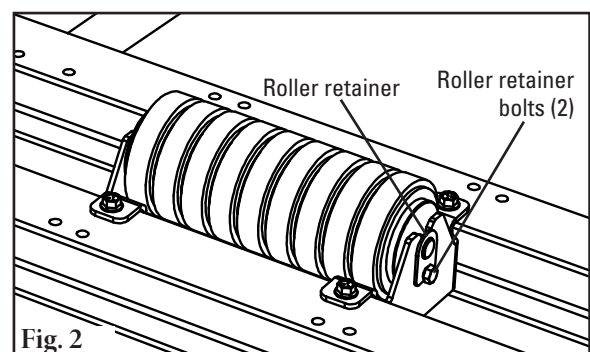
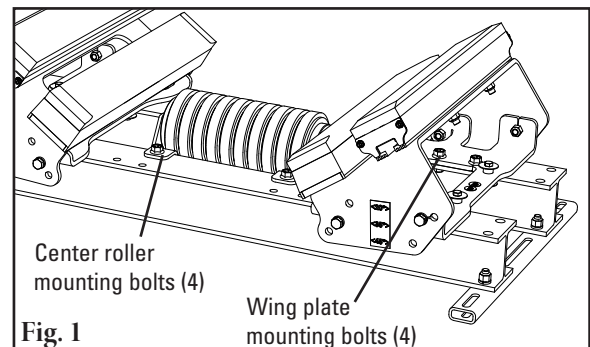


Tools Needed:

- 19mm (3/4") open-ended wrench
- 19mm (3/4") deep sockets with socket wrench or impact wrench
- Flex-Lifter™

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

1. **Remove tension from belt.** Use a Flexco Flex-Lifter or other appropriate lifting equipment to lift the belt off the impact bed.
2. **If roller is easily accessible, go to Step 3.** Otherwise, remove wing plate and center roller mounting hardware (Fig. 1). Slide sections out to one side of conveyor if practical for inspection/removal of roller.
3. **Remove roller** by unbolting roller retainers (Fig. 2).
4. **Install new roller** and re-bolt roller retainers (Fig. 2). Confirm roller turns smoothly. Slide center roller back into place. Tighten bolts to 81 N-m (60 ft-lb) of torque.
5. **Slide wing plate modules back into place.** Tighten wing base bolts to 81 N-m (60 ft-lb) torque.
6. **Lower the belt.** Ensure belt completely contacts rollers. Tighten all bolts.
7. **Test run the conveyor.** Run the conveyor for a few minutes and inspect to ensure that the bed is performing properly. Make adjustments as necessary.



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: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Section 6 - Maintenance

6.7 Modular Impact Bed Maintenance Checklist

Site: _____ Inspected by: _____ Date: _____

Impact Bed: _____ Serial Number: _____

Beltline Information:

Beltline Number: _____ Belt Condition: _____

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

Transition Distance (back of bed to center of tail pulley): _____ Belt Speed: _____ Belt Thickness: _____

Distance to Leading Idler: _____ Distance to Trailing Idler: _____

Vertical Distance between top of nearest idler and top surface of center impact bars: _____

Impact Bar Life:

Date bars installed: _____ Date bars inspected: _____ Estimated bar life: _____

Bar Condition: _____ inches of top cover remaining: _____

Roll Life:

Date rolls installed: _____ Date rolls inspected: _____ Estimated roll life: _____

Roll Condition: _____

Impact Bed Frame Condition:

☐ Good ☐ Bent ☐ Rusted

Overall Impact Bed 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
Bars wearing out too fast	Impact bars are not at 1/4" (6mm) below leading and trailing idlers	Adjust/shim as needed to correct dimension
	More than 10' (3M) of beds in a row without idler between	Add an idler between at least every 10' (3M) of beds to lift the belt back up
	Leading idler does not match troughing angle	Correct the angle of the leading idler to match the bed
Vibration or noise	Belt rubbing too hard on UHMW impact bar covers	Verify height of leading/trailing idlers
	Material buildup under bed	Clean up buildup, adjust skirting
	Skirt rubber pushing too hard on belt	Adjust skirt rubber
Bars deforming	Larger material than specified is flowing through transition (under-specified bed)	Replace with a heavier-duty version of impact bed or add additional bar supports
Bar damage	Mechanical splice damaging UHMW top covers	Repair, skive or replace splice

Section 8 - Specs and CAD Drawings

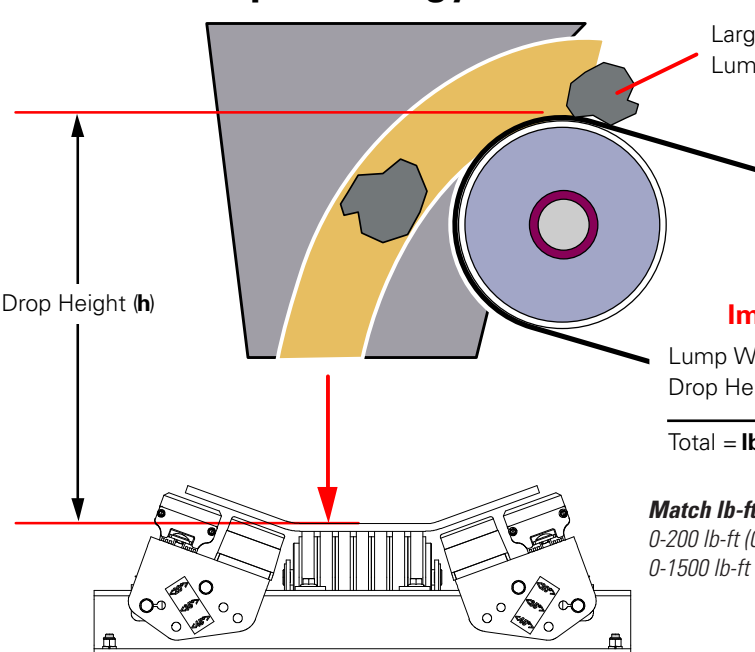
8.1 Specifications and Guidelines

Modular Impact beds are expressly designed to absorb energy from falling materials. The bed model should be spec'd to the needs of the conveyor application. To do this, the following data points are needed (Also see the Flexco Impact Bed Spec Sheet on Page 7).

1. **Belt Width** - This is typically a simple check and the only additional information that would be required is if belt width is inconsistent with structure width.
2. **Troughing Angle** - What is the angle of the current bed or troughing set?
3. **Roller Diameter and CEMA Rating** - Rollers are typically 125 or 150mm (5" or 6") and rated CEMA C, D or E.
4. **Bed Length** - 600mm (2'). For other lengths, combine multiple Modular Beds.
5. **Drop Height and Lump Size & Weight** - This is the critical information required.
 - a. **Drop Height** - The measurement from where the material leaves the feeding conveyor to where it makes contact with the receiving conveyor.
 - b. **Lump Size and Weight** - The lump size - The largest dimension of the material pieces dropping. The material weight is of the largest lump size found and weighed.
 - c. **Chart for Rough Calculations** - Weighing is always more accurate, but the chart values will give a rough weight estimate.

Material	kg/m ³
Coke	657
Fertilizer	961
Bauxite, crushed	1282
Potash	1282
Coal, Bituminous, Solid	1346
Coal, Anthracite, Solid	1506
Slag, Solid	2114
Chromium Ore	2163
Halite (Salt), Solid	2323
Phosphorus	2339
Stone (Common, Generic)	2515
Limestone, Solid	2611
Shale, Solid	2675
Granite, Solid	2691
Gypsum, Solid	2787
Trap Rock, Solid	2883
Dolomite, Solid	2899
Malachite (Copper Ore)	3860
Platinum Ore	4293
Hematite (Iron Ore)	5158

How to spec the correct modular impact bed for your conveyor transfer point



Impact Energy Calculation Chart

Drop Height (h)

Largest Material Lump Weight (w)

Impact Energy

Lump Weight (w) _____

Drop Height (h) x _____

Total = **lb-ft** See Below

Match lb-ft to bed rating:

0-200 lb-ft (0-25 kg-m) MSB

0-1500 lb-ft (0-200 kg-m) MIB

Roller Size and CEMA Rating

125mm (5") ☐ 150mm (6") ☐

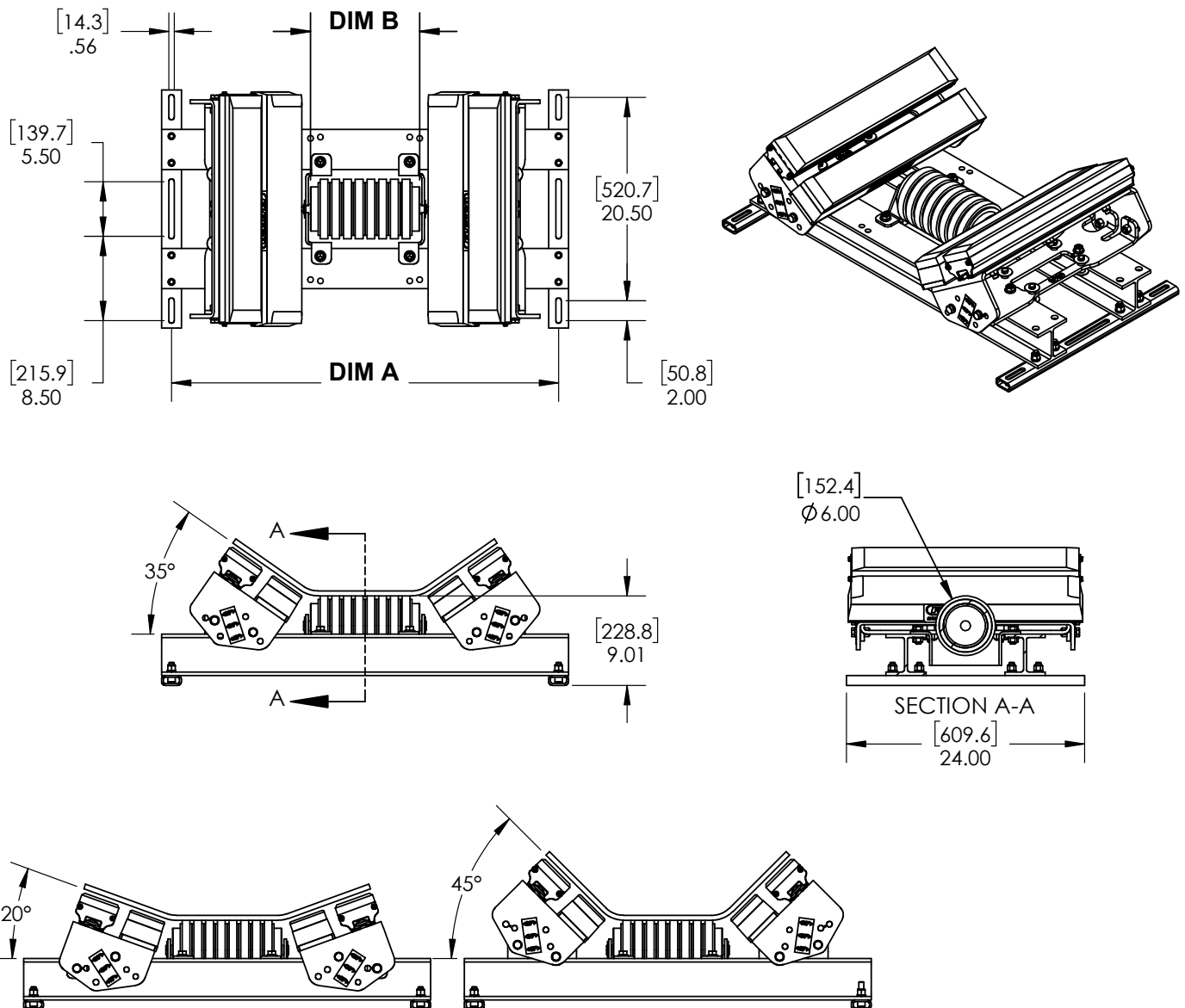
CEMA C ☐ D ☐ E ☐

Belt Width: _____

Bed Length: 1.2M (4') ☐ 1.5M (5') ☐

Section 8 - Specifications and CAD Drawings

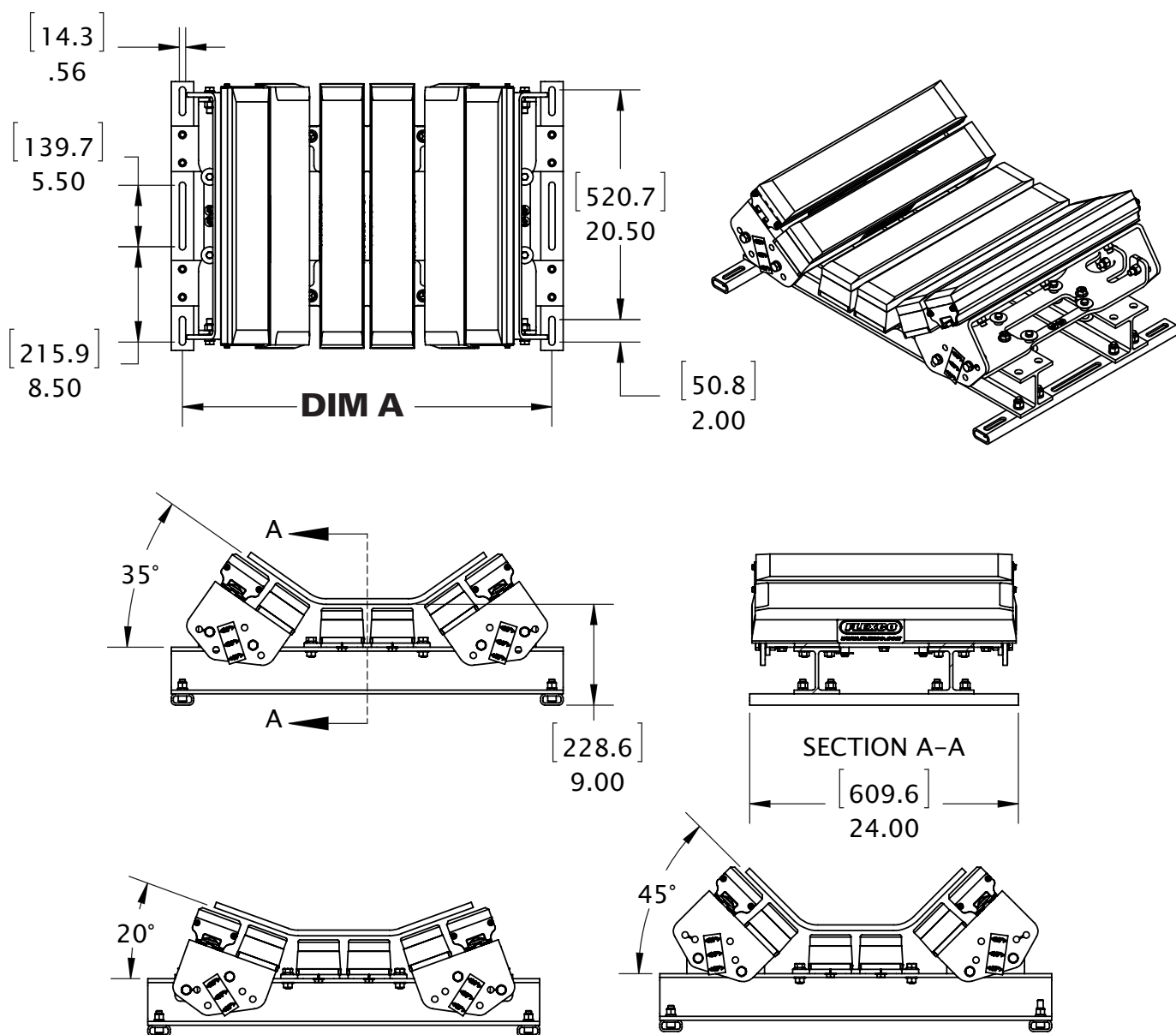
8.2 CAD Drawing - MSB Modular Slider Bed with Impact Roller



Bed Width	Dim A	Dim B
600mm (24")	838.2mm (33")	228.6mm (9")
750mm (30")	990.6mm (39")	279.4mm (11")
900mm (36")	1143mm (45")	330.2mm (13")
1050mm (42")	1295.4mm (51")	381mm (15")
1200mm (48")	1447.8mm (57")	431.8mm (17")
1350mm (54")	1600.2mm (63")	482.6mm (19")
1500mm (60")	1752.6mm (69")	533.4mm (21")
1800mm (72")	2057.4mm (81")	6354mm (25")

Section 8 - Specifications and CAD Drawings

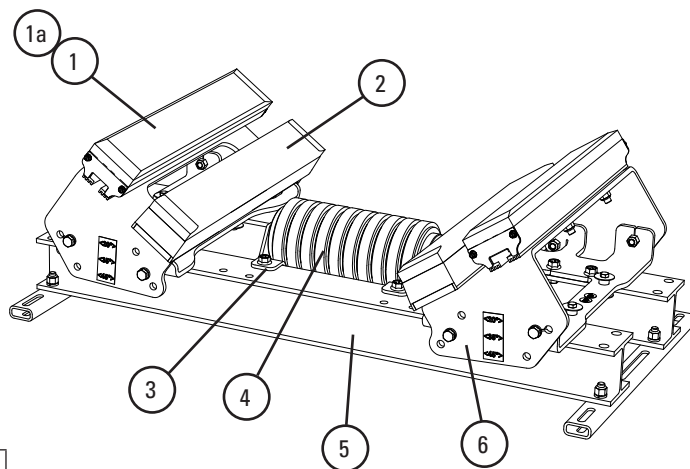
8.2 CAD Drawing - Modular Impact Bed



Bed Width	Dim A
600mm (24")	838.2mm (33")
750mm (30")	990.6mm (39")
900mm (36")	1143mm (45")
1050mm (42")	1295.4mm (51")
1200mm (48")	1447.8mm (57")
1350mm (54")	1600.2mm (63")
1500mm (60")	1752.6mm (69")
1800mm (72")	2057.4mm (81")

Section 9 - Replacement Parts

9.1 Replacement Parts List - Modular Slider Bed - MSB



Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. KG.
1	Slider Bar, 600mm (2')	SB2	79970	4.5
1a	Slider Bar with Hardware, 600mm (2')	SB2F	79988	4.9
2	Impact Bar, 600mm (2')	MIB2-1U	79379	8.9
2a	Impact Bar with Hardware, 600mm (2')	MIB2-1UF	79908	9.0
3	Roller Mount Kit*	MSBRMK	79987	3.6
4	Impact Roll 600mm (24")	RRTD6-24	79874	4.6
	Impact Roll 750mm (30")	RRTD6-30	79875	5.4
	Impact Roll 900mm (36")	RRTD6-36	79876	6.3
	Impact Roll 1050mm (42")	RRTD6-42	79877	7.3
	Impact Roll 1200mm (48")	RRTD6-48	79878	3.6
	Impact Roll 1350mm (54")	RRTD6-54	79879	9.0
	Impact Roll 1500mm (60")	RRTD6-60	79880	9.4
5	Impact Roll 1800mm (72")	RRTD6-72	79881	11.6
	Cross Stringer Kit 600mm (24")*	MIB24CSK	90237	39.3
	Cross Stringer Kit 750mm (30")*	MIB30CSK	90238	45.2
	Cross Stringer Kit 900mm (36")*	MIB36CSK	90239	51.0
	Cross Stringer Kit 1050mm (42")*	MIB42CSK	90240	56.9
	Cross Stringer Kit 1200mm (48")*	MIB48CSK	90241	62.8
	Cross Stringer Kit 1350mm (54")*	MIB54CSK	90242	69.7
	Cross Stringer Kit 1500mm (60")*	MIB60CSK	90243	75.6
6	Cross Stringer Kit 1800mm (72")*	MIB72CSK	90244	88.3
	Wing Plate Kit 600mm (24")*	MIB24WPK	90245	17.6
	Wing Plate Kit 750mm (30")*	MIB30WPK	90246	18.1
	Wing Plate Kit 900mm (36")*	MIB36WPK	90247	22.5
	Wing Plate Kit 1050mm (42")*	MIB42WPK	90248	27.1
	Wing Plate Kit 1200mm (48")*	MIB48WPK	90249	28.3
	Wing Plate Kit 1350mm (54")*	MIB54WPK	90250	38.0
	Wing Plate Kit 1500mm (60")*	MIB60WPK	90251	39.3
-	Wing Plate Kit 1800mm (72")*	MIB72WPK	90252	39.3
	Shim Kit (incl. 2 shims)	SHIM-KITMOD	79989	5.4

*Hardware Included

Table 1: Shim Requirements

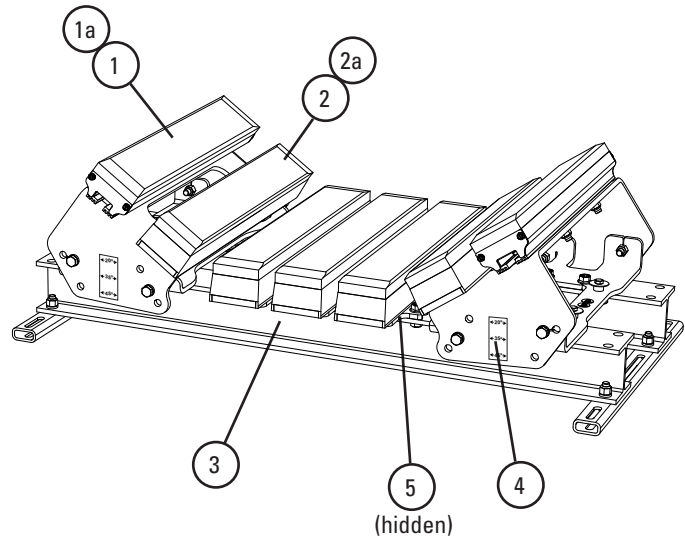
Idler Diameter (CEMA C or D)	600-900mm (24"-36") Belt Width	1050-1800mm (42"-72") Belt Width
125mm (5")	Idler up 13mm (1/2") 1 shim kit	No shim
150mm (6")	No shim	Bed up 13mm (1/2") 1 shim kit
Idler Diameter (CEMA E)	900-1500mm (36"-60") Belt Width	1800mm (72") Belt Width
150mm (6")	Bed up 38mm (1.5") 3 shim kits	Bed up 50mm (2") 4 shim kits
175mm (7")	Bed up 50mm (2") 4 shim kits	Bed up 64mm (2.5") 5 shim kits

Replacement Quantities for MSB

mm		600	750	900	1050	1200	1350	1500	1800
in.		24	30	36	42	48	54	60	72
BARS REQUIRED	SLIDER	2	2	2	2	2	2	2	2
	IMPACT	2	2	2	4	4	6	6	6

Section 9 - Replacement Parts

9.2 Replacement Parts List - Modular Impact Bed - MIB



Replacement Parts

REF	DESCRIPTION	ORDERING NUMBER	ITEM CODE	WT. LBS.
1	Slider Bar, 600mm (2')	SB2	79970	4.5
1a	Slider Bar with Hardware, 600mm (2')	SB2F	79988	4.9
2	Impact Bar, 600mm (2')	MIB2-1U	79379	8.9
2a	Impact Bar with Hardware, 600mm (2')	MIB2-1UF	79908	9.0
3	Cross Stringer Kit 600mm (24")*	MIB24CSK	90237	4.6
	Cross Stringer Kit 750mm (30")*	MIB30CSK	90238	5.4
	Cross Stringer Kit 900mm (36")*	MIB36CSK	90239	6.3
	Cross Stringer Kit 1050mm (42")*	MIB42CSK	90240	7.3
	Cross Stringer Kit 1200mm (48")*	MIB48CSK	90241	3.6
	Cross Stringer Kit 1350mm (54")*	MIB54CSK	90242	9.0
	Cross Stringer Kit 1500mm (60")*	MIB60CSK	90243	9.4
	Cross Stringer Kit 1800mm (72")*	MIB72CSK	90244	11.6
4	Wing Plate Kit 600mm (24")*	MIB24WPK	90245	39.3
	Wing Plate Kit 750mm (30")*	MIB30WPK	90246	45.2
	Wing Plate Kit 900mm (36")*	MIB36WPK	90247	51.0
	Wing Plate Kit 1050mm (42")*	MIB42WPK	90248	56.9
	Wing Plate Kit 1200mm (48")*	MIB48WPK	90249	62.8
	Wing Plate Kit 1350mm (54")*	MIB54WPK	90250	69.7
	Wing Plate Kit 1500mm (60")*	MIB60WPK	90251	75.6
	Wing Plate Kit 1800mm (72")*	MIB72WPK	90252	88.3
5	Center Plate Kit 600mm (24")*	MIB24CPK	90253	17.6
	Center Plate Kit 750mm (30")*	MIB30CPK	90254	18.1
	Center Plate Kit 900mm (36")*	MIB36CPK	90255	22.5
	Center Plate Kit 1050mm (42")*	MIB42CPK	90256	27.1
	Center Plate Kit 1200mm (48")*	MIB48CPK	90257	28.3
	Center Plate Kit 1350mm (54")*	MIB54CPK	90258	38.0
	Center Plate Kit 1500mm (60")*	MIB60CPK	90259	39.3
	Center Plate Kit 1800mm (72")*	MIB72CPK	90260	39.3
-	Shim Kit (incl. 2 shims)	SHIM-KITMOD	79989	5.4

*Hardware Included

Table 1: Shim Requirements

Idler Diameter (CEMA C or D)	600-900mm (24"-36") Belt Width	1050-1800mm (42"-72") Belt Width
125mm (5")	Idler up 13mm (1/2") 1 shim kit	No shim
150mm (6")	No shim	Bed up 13mm (1/2") 1 shim kit
Idler Diameter (CEMA E)	900-1500mm (36"-60") Belt Width	1800mm (72") Belt Width
150mm (6")	Bed up 38mm (1.5") 3 shim kits	Bed up 50mm (2") 4 shim kits
175mm (7")	Bed up 50mm (2") 4 shim kits	Bed up 64mm (2.5") 5 shim kits

Replacement Quantities for MIB

mm		600	750	900	1050	1200	1350	1500	1800
mm		600	750	900	1050	1200	1350	1500	1800
BARS REQUIRED	SLIDER	2	2	2	2	2	2	2	2
	IMPACT	4	4	5	7	8	10	11	12

Section 10 – Other Flexco Conveyor Products

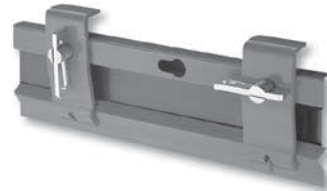
Flexco provides many conveyor products that help your conveyors to run more efficiently and safely. These components solve typical conveyor problems and improve productivity. Here is a quick overview on just a few of them:

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

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

EZS2 Secondary Cleaner



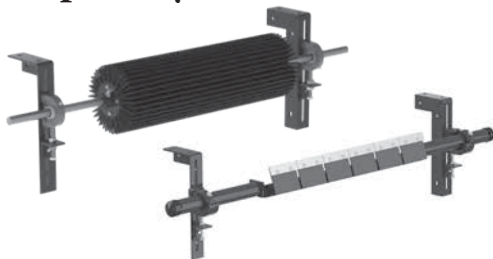
- Long-wearing tungsten carbide blades for superior cleaning efficiency
- Patented FormFlex™ cushions independently tension each blade to the belt for consistent, constant cleaning power
- Easy to install, simple to service
- Works with Flexco mechanical belt splices

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

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