



# BELT CONVEYOR PRODUCTS

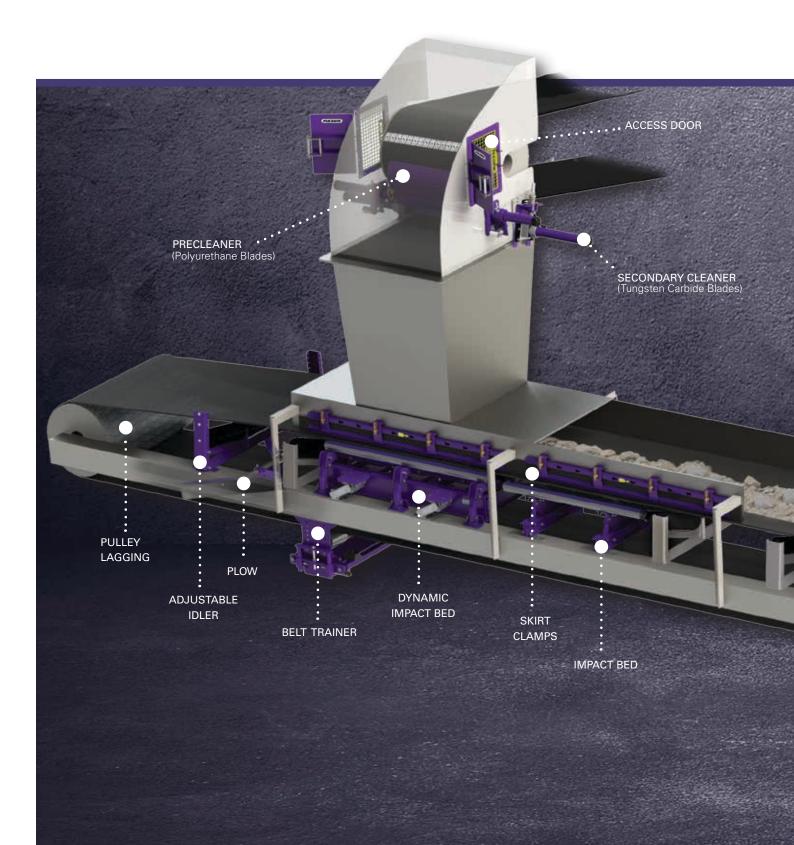


*Keep your line up and running.* 



Partners in Productivity

# SOLUTIONS FOR EVERY ISSUE ALONG THE BELT LINE



With over 100 years of experience in the belt conveyor industry, Flexco knows that keeping your line running smoothly is essential to the success of your operation. That's why we've developed a comprehensive line of innovative belt conveyor products that address the key issues you face.

## Carryback

Material that sticks to the belt after it leaves the transfer point and continues falling off along the conveyor's return side. To address carryback, we offer:

- Belt Cleaners
- Belt Plows
- Cleaner Blades

## **Belt Slip**

Occurs when the head pulley is not adequately gripping the belt due to a loss of friction. To combat slippage, we offer:

- Ceramic Pulley Lagging
- Rubber Pulley Lagging

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## Mistracking

Belt drifts to one side or the other, resulting in material spillage, uneven belt wear, and possible system damage. To inhibit mistracking, we offer:

- Belt Trainers
- Belt Positioners

## Spillage

Material that spills off the belt, typically at transfer and load points. To curb spillage, we offer:

- Skirt Clamps
- Impact Beds
- Belt Plows

BELTTRAINER

SECONDARY CLEANER (Tungsten Carbide Blades) PRECLEANER (Tungsten Carbide Blades)



### Innovative Designs, Superior Engineering, Industry Expertise

Since 1907, we've been dedicated to improving belt performance and productivity. That's meant spending a lot of time in the field, working alongside customers and learning about their everyday challenges—first-hand.

We use that hard-won knowledge to design belt conveyor products that work better and last longer. In fact, we pioneered many of the advanced features that have since become industry standards.



#### **Cleaner Innovations**

- Patented, Faceted Blade Profile—These blades continually renew their edges, creating more efficient cleaning
- Better-Performing Tungsten Carbide Cleaner Blades—After years of testing and research, we've created blades that last longer and wear more evenly
- Heavy-Duty Spring Tensioning Systems—An important part of our cleaning systems, our tensioners enable easy visual inspection and maintain proper tension
- "Material Path" Cleaning—This unique option lets you match your cleaner width to your actual material path, reducing differential blade wear
- Larger Diameter Poles—Our poles are designed to resist the powerful twisting forces caused by continuous belt motion



#### **Belt Tracking Innovations**

• Pivot-and-Tilt technology—Special sensors detect belt wander, then guide the belt back to the correct path

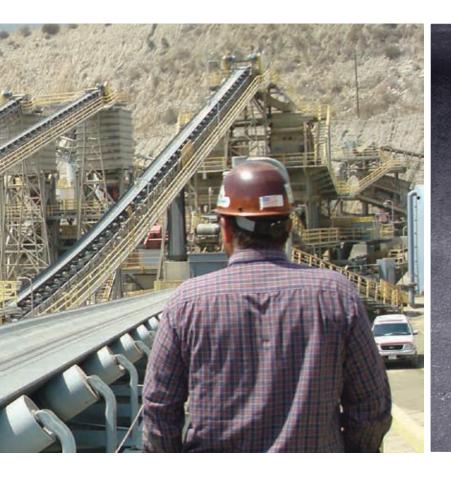
### Impact Bed Innovations

- Velocity Reduction Technology<sup>™</sup> —An exclusive feature of our impact beds, this technology deadens impact energy for less rebound and material degradation
- Slide-Out Service<sup>™</sup> —Designed for fast and safe complete bar change-outs



#### Lagging Innovations

- An 80%-Ceramic Solution—We were the first to market with this option
- Incredibly Fast Installation—Our weld-on lagging is 50% faster to install than other lagging products



## Mineline<sup>®</sup> – When "standard" products just won't do.

Flexco Mineline<sup>®</sup> products have been designed and engineered to work—day in and day out—in some of the toughest applications in the world. Regardless of the application, whether it be underground coal mining, port loading facilities, or other heavy tonnage applications that test the strength and durability of your conveyor system, Mineline is the answer. Customers have come to expect a Flexco cleaner, impact bed or tracker with the Mineline brand by its name to excel—even in situations where other

products have failed. Next to Mineline endorsed products, you'll find this mark:

#### Flexco Belt Conveyor Products Deliver Benefits for Your Belt—And Your Bottom Line



#### **Budget Savings**

- Flexco cleaners and other belt conveyor products increase the life of the belt by reducing wear from carryback, mistracking, and other issues. Given the cost of belting, being able to keep your belts longer can mean substantial savings.
- Our products also help reduce wear on other key conveyor components, like rollers, pulleys, splices, and more. That saves you even more money.
- By cutting down on carryback, spillage, and other belt problems, our products also reduce safety hazards. And as you know, accidents can be costly—in terms of lost productivity and possible fines.



### Lower Maintenance Costs

- Because they reduce carryback and spillage, our belt conveyor products cut down on time-consuming cleanup.
- When your belt and other important conveyor components are protected from damage, you can spend less time making repairs and less money buying replacement components. In fact, studies show that reducing carryback from 3 percent to 1 percent can result in a 67 percent reduction in maintenance costs.



### **Consistent, Efficient Performance**

• Unscheduled shutdowns for maintenance or repairs mean serious production losses. Our belt conveyor products help you maximize uptime by correcting the issues—such as mistracking and carryback that typically cause system damage.



### **Greater Safety**

• Studies show that approximately 42 percent of conveyor-related accidents occur during maintenance activities. Our cleaners and other belt conveyor products minimize the need for maintenance and reduce the risk of accidents.



### Serviceability

- Proper servicing of products, such as belt cleaners and impact beds, is key to ensuring effective and long-lasting performance. That's why all Flexco products are designed with features that make regular servicing easy.
- We are continually enhancing our already servicefriendly products, making them even easier to maintain. For example, we've added an easy-toreplace blade cartridge to our MHS Heavy-Duty Secondary Cleaner, and Slide-Out Service<sup>™</sup> bars to our DRX<sup>™</sup> Impact Beds.

## YOUR ISSUE: CARRYBACK OUR SOLUTION: ADVANCED CLEANING SYSTEMS

#### Step 1 Understand Your Options

#### **BELT CLEANERS**

#### Precleaners

- Mounted to the head pulley and below the material flow
- Ideal for removing large pieces of material typically about 60–70 percent of initial carryback
- Blade width/material path options

#### **Secondary cleaners**

- Located just past where the belt leaves the head pulley—and anywhere else down the beltline
- Especially good at removing fines, increasing cleaning efficiency to 90+ percent

#### **BLADE OPTIONS**

#### Polyurethane

- Easier on the belt
- · Works well with mechanical splices
- Economical
- Specialty formulations for high heat, chemical resistance, or water removal

#### Tungsten carbide:

- Superior cleaning efficiency
- Long wear



### Step 2 10 Key Criteria for Analyzing Your Conveyor System

- 1 Your belt speed and belt width\*
- 2 What types of splices are present and their condition\*
- **3** Any unusual characteristics of your load or environment (extreme heat, abrasiveness, mud, etc.)—a specialty cleaner that can withstand these conditions may be necessary\*
- 4 Whether the belt reverses
- 5 Your conveyor structure width
- 6 Your pulley diameter—typically, the larger the pulley, the larger the required cleaner
- 7 Your pulley condition—if the pulley is worn or not perfectly round, a segmented blade may clean more effectively
- 8 Where you plan to position the cleaner and how much room there is to accommodate it
- **9** The material's path on the belt—matching the cleaner to the material path reduces differential blade wear
- 10 Your desired level of performance and upkeep
- \* **Note:** CEMA has created an application classification guide that addresses these three criteria. Further explanation of this is found on Page 7.

### Step 3 Determine Whether You Need a Complete Solution

Some operators want their belts as clean as possible; others are comfortable with a certain amount of renegade material.

To achieve maximum cleaning efficiency, it's best to bring

together a precleaner and one or more secondary cleaners to form a comprehensive system. If you only want to install a single cleaner, try to target the area such as the head pulley—where it will have the greatest effect.



# APPLICATION CLASSIFICATION GUIDE

CEMA (Conveyor Equipment Manufacturers Association) publishes a guide with the explicit goal of providing *"a uniform method for determining the application class of any individual belt cleaner."* This is meant as a way to assist in the selection of the correct belt cleaner or belt cleaner system. The complete guide, titled **"Classification of Applications for Bulk Material Conveyor Belt Cleaning,"** or CEMA Standard 576, is available from CEMA.

The classification is built on a points system based on five key criteria. While others play a role as noted on Page 6, these five were chosen as the key elements in selecting the appropriate cleaner or cleaning system. The five criteria are:

- 1. belt width
- 2. belt speed
- 3. splice type
- 4. material abrasiveness
- 5. material stickiness/moisture content

Each of these criteria score points; points increase based on the impact it would have on the required cleaner. Wider belt widths, faster belt speeds, introduction of mechanical splices, increase in material abrasiveness (using CEMA Standard 550), and increasing the moisture content of the material all add to the point totals when scoring an application.

The results of scoring the application created five classes:

Score	Class
<6	1
7-10	2
11-15	3
16-23	4
>24	5

In accordance with this classification, you will find class ratings for Flexco's belt cleaners throughout this guide as another resource to assist you in choosing the correct cleaning system for your application, while keeping in mind the full criteria found on Page 6. For more detailed info on each cleaner, log on to www.flexco.com.sg.



Shown: H-Type V-Tip Precleaner



Shown: MHS HD Secondary Cleaner



Shown: MDWS Secondary Cleaner



## **FLEXCO PRECLEANERS**

FEATURES & APPLICATIONS



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#### EZP-LS "Limited Space" Precleaner

- Compact design with shorter pole length
- Standard-duty, solid-blade design
- Visual tension check
- Do-it-yourself installation and minimal maintenance

Maximum Belt Speed\*: 2.5 m/sec (500 fpm) Pulley Diameter from 150–550 mm (6"–22")

Applications: Brick/Block Plants, Ready Mix Plants, Road/Mobile Equipment CEMA Class 2



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#### **EZP-LS Stainless Steel Food Grade Precleaner**

- Stainless steel components for superior corrosion resistance
- Standard-duty, solid-blade design
- Visual tension check
- White food-grade, chemical-resistant ConShear™ blade

Maximum Belt Speed\*: 2.5 m/sec (500 fpm) Pulley Diameter from 150–550 mm (6\*–22\*) Applications: Fermentation Byproducts, Pre-processed Foods CEMA Class 2



#### EZP-LS High-Temp Precleaner

- Compact design with shorter pole length
- Standard-duty, solid-blade design rated up to 135° C (275° F)

WET

STICKY

- Can handle temperature spikes to 163° C (325° F)
- Visual tension check
- Do-it-yourself installation and minimal maintenance

Maximum Belt Speed\*: 2.5 m/sec (500 fpm) Pulley Diameter from 150–550 mm (6"–22") Applications: Coke, Clinker, Cement, Asphalt CEMA Class 2



#### EZP1 Precleaner

- Standard-duty, with 60 mm (2 3/8") diameter pole
- Visual tension check

DRY

- Requires just 100 mm (4") of horizontal clearance
- Do-it-yourself installation and minimal maintenance

HIGH TEMPERATURE

CORROSIVE

Maximum Belt Speed\*: 3.5 m/sec (700 fpm) Pulley Diameter from 250–900 mm (10"–36") Applications: Aggregate, Sand & Gravel, Cement, Wood Processing, Recycling CEMA Class 3

#### Cleaner Key:

ey:

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## FLEXCO PRECLEANERS Continued



#### EZP1 High-Temp Precleaner

- Standard-duty, solid-blade design rated up to 135° C (275° F)
- Can handle temperature spikes to 163° C (325° F)
- Visual tension check
- Requires just 100 mm (4") of horizontal clearance
- Do-it-yourself installation and minimal maintenance

Maximum Belt Speed\*: 3.5 m/sec (700 fpm) Pulley Diameter from 250–900 mm (10"–36") Applications: Coke, Clinker, Cement, Asphalt CEMA Class 3



#### EZP1 Stainless Steel Food Grade Precleaner

- Stainless steel components for superior corrosion resistance
  - Standard-duty, solid-blade design
  - Visual tension check
  - White food-grade, chemical-resistant ConShear™ blade

Maximum Belt Speed\*: 3.5 m/sec (700 fpm)

Pulley Diameter from 1250–900 mm (10"–36")

Applications: Fermentation Byproducts, Pre-processed Foods CEMA Class 3



#### EZP1 Twist Tensioner Precleaner

- Standard-duty, solid-blade design
- Compact torsion twist tensioner allows for measurable and verifiable tension
- Tensioner compatible to mount on either end of pole
- Do-it-yourself installation and minimal maintenance

Maximum Belt Speed\*: 3.5 m/sec (700 fpm)

Pulley Diameter from 150–900 mm (10"–36")

Applications: Aggregate, Sand & Gravel, Cement, Wood Processing, Recycling CEMA Class 3



#### **MSP Standard Mine-Duty Precleaner**

- Standard Mine-Duty, with 73 mm (2<sup>7</sup>/<sub>8</sub>") diameter rugged pole design
- Do-it-yourself installation and easy maintenance
- Visual tension check
- Highly effective cleaning

Maximum Belt Speed\*: 3.5 m/sec (700 fpm) Pulley Diameter from 400–1050 mm (16°–42°) Applications: Aggregate, Sand & Gravel, Cement, Wood Processing, Recycling

#### CEMA Class 3

\*Belt speeds can be higher in vulcanized applications.



#### EZP1 Precleaner with White ConShear<sup>™</sup> Blade

- Standard-duty, with 60 mm (2 3/8") diameter pole
- Visual tension check
- Requires just 100 mm4" () of horizontal clearance
- Do-it-yourself installation and minimal maintenance
- White food-grade, chemical-resistant ConShear blade

Maximum Belt Speed\*: 3.5 m/sec (700 fpm)

Pulley Diameter from 50–900 mm (10"–36")

Applications: Fermentation Byproducts, Pre-processed Foods CEMA Class 3



#### Stainless Steel MSP Standard Mine-Duty Precleaner

- Stainless steel components for superior corrosion resistance
- Mine-duty, solid-blade design
- Do-it-yourself installation and easy maintenance
- Visual tension check

Maximum Belt Speed\*: 3.5 m/sec (700 fpm) Pulley Diameter from 400–1050 mm (16"–42") Applications: Phosphate, Potash, Salt CEMA Class 3

To learn more about Flexco precleaners, visit www.flexco.com.sg.

## FLEXCO PRECLEANERS Continued



#### **MMP Medium Mine-Duty Precleaner**

- Medium-duty mining precleaner with TuffShear™ blade
- Heavy-duty, 3-piece design pole with dual tensioners
- Visual tension check

Maximum Belt Speed\*: 5.0 m/sec (1000 fpm)

Pulley Diameter from 400–1200 mm (16"–48")

Applications: Underground Mining, Hard Rock Mining, Steel Mills, Iron Ore, Metal Mining, Aggregate, Coal Fired Power Plants, Load-out Facilities CEMA Class 4



#### Stainless Steel MMP Medium-Duty Precleaner

- Stainless steel components for superior corrosion resistance
- Medium-duty mining precleaner
- Heavy-duty, 3-piece design, corrosion-resistant pole with dual tensioners
- Visual tension check

Maximum Belt Speed\*: 5.0 m/sec (1000 fpm)

Pulley Diameter from 400–1200 mm (16"–48")

Applications: Phosphate, Potash, Copper/Gold Mining, Salt, Load-out Facilities Near Salt Water CEMA Class 4



#### **MHP Heavy-Duty Precleaner**

- Heavy-duty, solid blade precleaner
- Heavy 3-piece pole design with rugged, dual-spring tensioners
- Abrasion-resistant, XL solid polyurethane MegaShear<sup>™</sup> blade

Maximum Belt Speed\*: 7.5 m/sec (1500 fpm)

Pulley Diameter from 500–2100 mm (20"– 84")

Applications: Underground Mining, Hard Rock Mining, Metal Mining, Longwall Coal Mining, Steel Mills, Iron Ore CEMA Class 5



#### MHCP Heavy-Duty Cartridge Precleaner

- One of the most rugged precleaners available
- Engineered for abusive conditions
- Telescoping, 3-piece pole that resists twisting/bowing/bending
- Quick-change SuperShear<sup>™</sup> blade cartridge for fast, easy maintenance

Maximum Belt Speed\*: 7.5 m/sec (1500 fpm) Pulley Diameter from 500–1200 mm(20"–48")

Applications: Underground Mining, Hard Rock Mining, Metal Mining, Longwall Coal Mining, Steel Mills, Iron Ore CEMA Class 5



## FLEXCO PRECLEANERS Continued



#### **HV2 Precleaner**

- Tungsten carbide tip provides superior cleaning efficiency (vulcanized belts only)
- 6" (150mm) segmented blades work independently
- Adjustable cushions allow for enhanced pulley conformance
  Visual tension check

Maximum Belt Speed\*: 7.5 m/sec (1500 fpm)

Pulley Diameter from 250–1675 mm(10"–67")

Applications: Power Plants, Port Facilities, Hard Rock Mining, Iron Ore, Steel Mills

CEMA Class 4



#### H-Type<sup>®</sup> HV/HVP Precleaner

- Tungsten carbide tip provides superior cleaning efficiency (vulcanized belts only)
- Segmented blades work independently
- Visual tension check

Maximum Belt Speed\*: 7.5 m/sec (1500 fpm) Pulley Diameter from 250–1575 mm(10"–63") Applications: Power Plants, Port Facilities, Hard Rock Mining, Iron Ore, Steel Mills CEMA Class 4



#### H-Type<sup>®</sup> High-Temp HV Precleaner

- Tungsten carbide tips provide superior cleaning efficiency (vulcanized belts only)
- Segmented blades work independently
- Visual tension check

Maximum Belt Speed\*: 5.0 m/sec (1000 fpm)

Pulley Diameter from 250– 575 mm(10"–63" )

Applications: Power Plants, Port Facilities, Iron Ore, Steel Mills CEMA Class 3



#### H-Type<sup>®</sup> HXF2 Precleaner

- Suitable as a stand-alone cleaner in standard and medium duty applications
- Available with polyurethane

Maximum Belt Speed\*: 5.0 m/sec (1000 fpm) Pulley Diameter from 250– 325 mm10° – 53° (10° – 53° ) Applications: Underground Mining, Hard Rock Mining, Metal Mining, Aggregate CEMA Class 4

Applications listed are intended to identify where each cleaner is commonly and most effectively utilized. Belt conditions, belt speeds, and pulley diameters should all be considered before making a final product selection. Consult Flexco to assess specific applications and recommendations.



## **FLEXCO SECONDARY CLEANERS**



#### Y-Type Secondary Cleaner–Polyurethane

- Available in standard duty (belt widths 450-1200mm (18"-48") and heavy duty (belt widths 900-1800mm (36"-72")
- Segmented tips easily serviced utilizing a removable cartridge Spring tensioned to deliver optimal cleaning performance and • blade life
- Food grade/chemical resistant polyurethane option available • Compatible with reversing belts
- Maximum Belt Speed\*: SD 3 m/sec (600 fpm); HD 3.75 m/sec (750 fpm)

Applications: Aggregate, Sand & Gravel, Cement CEMA Class 2 (Y-Type Standard-Duty Polyurethane) CEMA Class 3 (Y-Type Heavy-Duty Polyurethane)



#### EZS2 Secondary Cleaner

- Segmented tungsten carbide blades •
- Patented FormFlex<sup>™</sup> cushions that maintain optimal • belt contact
- Do-it-yourself installation
- Bolt-up tensioning system

Maximum Belt Speed\*: 3.5 m/sec (700 fpm) Applications: Aggregate, Sand & Gravel, Cement CEMA Class 3

SD Blade HD Blade

#### Y-Type Secondary Cleaner–Tungsten Carbide

- Available in standard duty (belt widths 450-1200mm (18"-48") and heavy duty (belt widths 900-1800mm (36"-72")
- Segmented tungsten carbide blades compatible with mechanical fastener applications are easily serviced utilizing a removable cartridge
- Spring tensioned to deliver optimal cleaning performance and blade life
- · Compatible with reversing belts

Maximum Belt Speed\*: SD 3 m/sec (600 fpm); HD 3.75 m/sec (750 fpm) Applications: Aggregate, Sand & Gravel, Cement, Mining CEMA Class 3



#### High-Temp EZS2 Secondary Cleaner

- Temperature range to up to 205° C (400° F)
- Segmented tungsten carbide blades
- Patented FormFlex<sup>™</sup> cushions maintain optimal belt contact
- Do-it-yourself installation
- Bolt-up tensioning system

Maximum Belt Speed\*: 3.5 m/sec (700 fpm) Applications: Cement, Asphalt CEMA Class 3

To learn more about Flexco secondary cleaners, visit www.flexco.com.sq.

## FLEXCO SECONDARY CLEANERS Continued



#### P-Type<sup>®</sup> Secondary Cleaner

- Available with C-tips for mechanical fastener applications or V-tips for vulcanized applications
- Segmented, tungsten carbide blades
- Bolt-up tensioning system
- Limited space model option for telescoping, stacking, or portable conveyors

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Aggregate, Sand & Gravel, Cement, Wood Processing, Recycling, Light Mining, Power Plants with Vulcanized Belts CEMA Class 4



#### **R-Type<sup>®</sup>** Reversing Secondary Cleaner

- Available with C-tips for mechanical fastener applications or V-tips for vulcanized applications
- Two-way cushions that accommodate reversing belts
- Do-it-yourself installation
- Bolt-up tensioning system

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Aggregate, Sand & Gravel, Cement, Wood Processing, Recycling, Light Mining, Power Plants with Vulcanized Belts CEMA Class 4



#### FMS Flexco Medium-Duty Secondary Cleaner

- Available with C-tips for mechanical fastener applications or V-tips for vulcanized applications
- Cleaning efficiency of segmented tungsten carbide blades
  Compact MST spring tensioning system
- Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm)

V-Tip: 6.0 m/sec (1200 fpm)

Applications: Underground Mining, Hard Rock Mining, Metal Mining, Aggregate, Load-out Facilities, Iron Ore, Steel Mills, Power Plants CEMA Class 4



#### P-Type® Cartridge Secondary Cleaner

- Available with C-tips for mechanical fastener applications or V-tips for vulcanized applications
- Bolt-up tensioning system
- Service Advantage Cartridge feature allows for easy service and inspection

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Aggregate, Sand & Gravel, Cement, Wood Processing, Recycling, Light Mining, Ideal for Power Plants with Vulcanized Belts CEMA Class 4



#### **R-Type<sup>®</sup> Cartridge Secondary Cleaner**

- Available with C-tips for mechanical fastener applications or V-tips for vulcanized applications
- Two-way cushions that accommodate reversing belts
- Bolt-up tensioning system
- Service Advantage Cartridge feature allows for easy service and inspection

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Aggregate, Sand & Gravel, Cement, Wood Processing, Recycling, Light Mining, Ideal for Power Plants with Vulcanized Belts CEMA Class 4



#### MHS Heavy-Duty and Reversing Secondary Cleaner

- Segmented blades with choices of tungsten carbide tips
- Patented PowerFlex<sup>™</sup> cushions that maintain optimal belt contact
  Tensioners and cushion create 4 points of relief, making the
- cleaner fastener-friendly
  Two-way cushions available for reversing applications on shuttle conveyors, conveyors that roll back, or tripper and stacker applications

Maximum Belt Speed: C-Tip: 6.0 m/sec (1200 fpm) V-Tip: 7.5 m/sec (1500 fpm)

Applications: Underground Mining, Hard Rock Mining, Metal Mining, Aggregate, Load-out Facilities, Iron Ore, Steel Mills, Power Plants CEMA Class 5

**Cleaner Key:** 



DRY

## FLEXCO SECONDARY CLEANERS Continued



#### Stainless Steel MHS Heavy-Duty Secondary Cleaner

- Stainless steel components for extra corrosion resistance
- Segmented blades with choices of tungsten carbide tips
- Patented PowerFlex<sup>™</sup> cushions maintain optimal belt contact
- Tensioners and cushion create 4 points of relief, making the cleaner fastener-friendly

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Salt, Copper/Gold Mining, Phosphate, Potash, Load-out Facilities CEMA Class 5



#### MHS Secondary Cleaner with Service Advantage Cartridge™

- Segmented blades with choices of tungsten carbide tips
- Patented PowerFlex<sup>™</sup> cushions maintain optimal belt contact
  Tensioners and cushion create 4 points of relief, making the
- cleaner fastener-friendly
- Service Advantage Cartridge feature allows for easy service and inspection

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Underground Mining, Hard Rock Mining, Metal Mining, Aggregate, Load-out Facilities, Iron Ore, Steel Mills, Power Plants CEMA Class 5



#### **U-Type<sup>®</sup> Secondary Cleaner**

- U-shaped blade and offset pole that intensify cleaning power
- Blade tips that scrape off stubborn carryback, while rubber
- backers "squeegee" wet material
- Best for cupped belts and belts with worn centersChoice of tungsten carbide, impact-resistant tungsten
- carbide, or polyurethane blade tips
- Works best in wet applications

Blade replacement made easy with removable front plate

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Cement, Coal Mining, Coal Prep Plants, Power Plants, Load-out Facilities CEMA Class 5



#### Stainless Steel U-Type<sup>®</sup> Secondary Cleaner

- Stainless steel components for extra corrosion resistance
- U-shaped blade and offset pole that intensify cleaning power
  Blade tips that scrape off stubborn carryback, while rubber
- backers "squeegee" wet material
- Best for cupped belts and belts with worn centersChoice of tungsten carbide, impact-resistant tungsten
- carbide, or polyurethane blade tips

HIGH TEMPERATURE

CORROSIVE

• Blade replacement made easy with removable front plate

Maximum Belt Speed: C-Tip: 5.0 m/sec (1000 fpm) V-Tip: 6.0 m/sec (1200 fpm)

Applications: Load-out Facilities, Power Plants CEMA Class 5

Applications listed are intended to identify where each cleaner is commonly and most effectively utilized. Belt conditions, belt speeds, and pulley diameters should all be considered before making a final product selection. Consult Flexco to assess specific applications and recommendations.

STICKY

DRY

Cleaner Key:

WET

## FLEXCO SECONDARY CLEANERS Continued



#### **Chevron Secondary Cleaner**

- For raised top, chevron, or grooved belts
- Hundreds of rubber fingers that flick off carryback
- Free-rotating design that works only when the belt runs
- Do-it-yourself installation and quick drum replacement

Maximum Belt Speed: 2.5 m/sec (500 fpm) Applications: Wood Chipping, Sand CEMA Class 3



#### **Motorized Brush Cleaner**

- Uniquely patterned bristles aid in reducing material buildup and clogging
- Adjustable tensioners allow easy brush-to-belt adjustment as the bristles wear
- Spins opposite the belt direction for optimal cleaning
- Do-it-yourself installation and quick drum replacement

Maximum Belt Speed: 3.5 m/sec (700 fpm)

Applications: Wood Chipping, Sand

CEMA Class 4



#### **MDWS Dry Wipe Secondary Cleaner**

- Removes excess water to ensure a dry return trip down the belt line
- Ideal for systems using a water spray pole
- Do-it-yourself installation and minimal maintenance

Maximum Belt Speed: 5.0 m/sec (1000 fpm)

Applications: Underground Mining CEMA Class 4

## FLEXCO CLEANERS AND FASTENERS: BETTER, TOGETHER

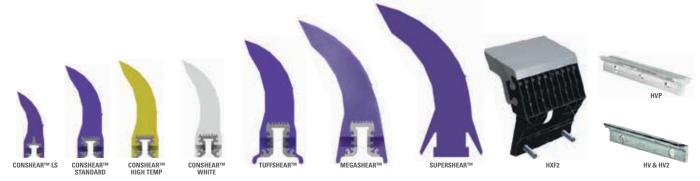
Many of our cleaning systems have special features that allow them to interface seamlessly with our mechanical belt fasteners.

Shown: MHS Secondary Cleaner with Service Advantage Cartridge 4<sup>TH</sup> POINT OF RELIEF FOUND IN THE POLE TORSION MOUNTING SYSTEM

SPRING TENSIONING SYSTEM ADDS 3<sup>RD</sup> POINT OF RELIEF PATENTED POWERFLEX™ CUSHION PROVIDES 2 OF THE 4 POINTS OF RELIEF, ALLOWING FOR SEAMLESS INTERFACE WITH FASTENERS

To learn more about Flexco secondary cleaners, visit www.flexco.com.sg.

## BLADE AND CLEANER OPTIONS

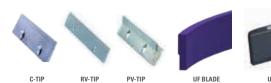


#### **Precleaner Options**

Application Description	EZP-LS	EZP1	EZP1 High Temp	MSP	ММР	МНР	МНСР	H-Type® (XF2 & XF)	H-Type® (HV & HV2)	High Temp V-Tip
Belt Width*	300 – 1500 mm 12" – 60"	300 – 1800 mm 12" – 72"	300 – 1800 mm 12" – 72"	600 – 2100 mm 24" – 84"	600 – 2400 mm 24" – 96"	600 – 2400 mm 24" – 96"	600 – 2400 mm 24" – 96"	450 – 1800 mm 18" – 72"	50 – 1800 mm 18" – 72"	450 – 1200 mm 18" – 48"
Belt Speed**	<2.5 m/sec <3.5 m/sec 500 fpm 700 fpm		<3.5 m/sec 700 fpm	<3.5 m/sec 700 fpm	<5.0 m/sec 1000 fpm	<7.5 m/sec 1500 fpm	<6.0 m/sec 1200 fpm	<5.0 m/sec 1000 fpm	<7.5 m/sec 1500 fpm	<5.0 m/sec 1000 fpm
Head Pulley Diameter	150 – 550 mm 6" – 22"	250 – 900 mm 10" – 36"	250 – 900 mm 10" – 36"	400 – 1050 mm 16" – 42"	400 – 1200 mm 16" – 48"	500 – 2100 mm 20" – 84"	500 – 1200 mm 20" – 48"	250 – 1175 mm 10" – 47"	250 — 1675 mm 10" — 67"	200 – 875 mm 8" – 35"
Temperature Range	-35 to 82°C -30 to 180°F	-35 to 82°C -30 to 180°F	up to 135°C (275°F) with spikes to 163°C (325°F)	-35 to 82°C -30 to 180°F	up to 204°C (400°F) with spikes to 232°C (450°F)					
Blade	ConShear LS	ConShear	ConShear	ConShear	TuffShear	MegaShear	SuperShear	HXF, HXF2	HV	HV
Reversing Belts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Mechanical Fasteners</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No

\*Special sizes available upon request.

\*\*Belt speeds can be higher in vulcanized applications.









#### **Secondary Cleaner Options**

Application	EZS2	FMS	FMS	MHS	MDWS	P-Type®	P-Type	P-Type LS	U-Type®	U-Type	U-Type
Description	(C-Tip)	(V-Tip)	(C-Tip)	(V-Tip)		(C-Tip)	(V-Tip)	(C-Tip)	(F-Blade)	(C-Blade)	(V-Blade)
Belt Width*	450 – 1800 mm	600 – 2100 mm	600 – 2400 mm	600 – 2400 mm	600 – 2400 mm	450 – 1800 mm	450 – 1800 mm	450 – 1350 mm	450 – 2100 mm	450 – 2100 mm	450 - 2100 mm
	18" – 72"	24" – 84"	24" – 96"	24" – 96"	24" – 96"	18" – 72"	18" – 72"	18" – 54"	18" – 84"	18" – 84"	18" - 84"
Belt Speed**	<3.5 m/sec	<6.0 m/sec	<5.0 m/sec	<7.5 m/sec	<5.0 m/sec	<5.0 m/sec	<6.0 m/sec	<5.0 m/sec	<5.0 m/sec	<6.0 m/sec	<7.5 m/sec
	700 fpm	1200 fpm	1000 fpm	1500 fpm	1000 fpm	1000 fpm	1200 fpm	1000 fpm	1000 fpm	1200 fpm	1500 fpm
Temperature Range	-35 to 93°C	35 to 82°C	-35 to 82°C	-35 to 82°C	-35 to 82°C	-35 to 82°C	-35 to 82°C	-35 to 82°C	-35 to 82°C	-35 to 82°C	-35 to 82°C
	-30 to 200°F	-30 to 180°F									
Reversing Belts	No	No	No	Yes	Yes	No	No	No	No	No	No
Work with Mechanical Fasteners	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No

Application	R-Type®	R-Type	EZS2	Y-Type SD	Y-Type HD	Y-Type SD	Y-Type HD	Chevron	Motorized
Description	(C-Tip)	(V-Tip)	High Temp	Polyurethane	Polyurethane	Carbide	Carbide		Brush Cleaner
Belt Width*	450 – 1800 mm	450 – 1800 mm	1450 – 1800 mm	450 – 1200 mm	900 – 1800 mm	450 – 1200 mm	900 – 1800 mm	450 – 1500 mm	450 – 2100 mm
	18" – 72"	18" – 72"	18" – 72"	18" – 48"	36" – 72"	18" – 48"	36" – 72"	18" – 60"	18" – 84"
Belt Speed**	<5.0 m/sec	<6.0 m/sec	<3.5 m/sec	<3.0 m/sec	<3.8 m/sec	<3.0 m/sec	<3.8 m/sec	<2.5 m/sec	<3.5 m/sec
	1000 fpm	1200 fpm	700 fpm	600 fpm	750 fpm	600 fpm	750 fpm	500 fpm	700 fpm
Temperature Range	35 to 82°C -30 to 180°F	35 to 82°C -30 to 180°F	up to 204°C (400°F) with spikes to 232°C (450°F)	35 to 82°C -30 to 180°F	-29 to 82°C -20 to 180°F				
Reversing Belts	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Work with Mechanical Fasteners	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*Special sizes available upon request. \*\*Belt speeds can be higher in vulcanized applications.

## FLEXCO BELT CLEANER ACCESSORIES



#### **Mounting Plate Kit**

incl. 2 plates, 400 x 800 mm (16" x 32")
For use with Mounting Bars to mount cleaners on open head pulleys

• For use with MSP, MMP, MHP, MHCP



#### SST Mounting Bracket Kit

- For MHS or MDWS secondary cleaner installs requiring additional mounting versatility
- Long mounting bracket kit also available for installations that require extra length legs



#### **Optional Mounting Bar Kit**

- incl. 8 bolts, nuts and washers
- For mounting precleaners on open head pulleys
- Weld on both sides of pulley and bolt on steel plates
- For use with MSP, MMP, MHP, MHCP



#### **MST Mounting Bracket Kit**

• For FMS secondary cleaner installs requiring additional mounting versatility



#### **Optional Top Angle Kit**

 Used with both Standard and Long SST Mounting Bracket Kits (below left) for additional mounting options



#### **YST Mounting Bracket Kit**

• For Y-Type secondary cleaner installs requiring additional mounting versatility



#### **Inspection Door**

- Lockable design
- Dust-tight seal
- Available in 304mm x 304mm, 304mm x 457mm, 457mm x 610mm, and 610mm x 610mm (12"x12", 12"x18", 18"x24" and 24"x24")
- Available with or without screen



#### **Stabilizing Rollers**

- For use in applications with belt cup or belt flapBy preventing these issues secondary cleaner
- performance and blade/tip life is enhanced



#### Water Spray Pole Kit

- Stainless steel pole with powder coated steel clamp brackets
- For use with secondary cleaners for an exceptionally clean belt
- Typical pressure setting is 276-414 kPa (40-60 psi)





#### **Spring Covers and Tensioner Locks**

- (for Precleaners and Secondaries)
  Spring Covers protect spring and threaded rod from contamination and material buildup
- Tensioner Lock prevents unauthorized cleaner retensioning

## YOUR ISSUE: BELT MISTRACKING OUR SOLUTION: BELT TRAINERS

#### To select the right belt trainer, you need to consider whether:

- The belt is wandering to one or both sides
- The top or return side of the belt is affected
- The mistracking is happening consistently or occasionally
- The belt has a low, medium, or high running tension

Use the following	chart to identify th	e best Flexco	belt trainer for	vour needs.
eee and renorming				

Conveyor Criteria	Belt Positioner™	PT Smart <sup>™</sup>	PT Pro <sup>™</sup> Return Side	PT Max <sup>™</sup>	PT Max <sup>™</sup> Heavy Duty	PT Max™ Super Duty
Top side mistracking	No	No	No	Yes	Yes	Yes
Return side mistracking	Yes	Yes	Yes	Yes	Yes	Yes
Reversing belts	Yes	No	Yes	No	No	No
Belt mistracking to one side	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Belt mistracking to both sides	Poor	Excellent	Excellent	Excellent	Excellent	Excellent
Inconsistent tracking problem	Good	Excellent	Excellent	Excellent	Excellent	Excellent
Belt is cupped (heavy)	Good	Good	Good	Excellent	Excellent	Excellent
Belt has low running tension	Poor	Excellent	Good	Good	Good	Good
Belt has medium running tension	Good	Excellent	Excellent	Excellent	Excellent	Excellent
Belt has high running tension	Good	Good	Good	Excellent	Excellent	Excellent
Approx. "upstream" effect*	15 M (50')	6 M (20')	6 M (20')	6 M (20')	6 M (20')	6 M (20')
Approx. "downstream" effect*	15 M (50')	36 – 45 M (120' – 150')	30 M (100')	45 – 61 M (150' – 200')	45 – 61 M (150' – 200')	45 – 61 M (150' – 200')

\*Typical results; actual results may vary

## FLEXCO BELT TRAINERS

FEATURES & APPLICATIONS



#### **Belt Positioner**<sup>™</sup>

- Simple solution for belts wandering to a single side
- Fixed, angled rollers "funnel" the belt onto the correct path
- Return-side installation only
- Easy to install and maintain

Maximum Belt Tension: Small, Medium and Large: 900 PIW Extra-Large: 1200 PIW

Belt Dimensions: From 450–2400 mm (18–96") wide

#### FLEXCO BELT TRAINERS Continued



#### **PT Smart**<sup>™</sup>

- Sensor rollers detect wander, then "pivot and tilt" belt into place
- Economical solution for medium-tension belts
- · Effectively prevents belt from damaging structure
- Easy to install
- · Specially designed to fit underground conveyors

#### Maximum Belt Tension: 1600 PIW

Belt Dimensions: For belt width + 75 mm (3") roller and up to 25 mm (1") thick



#### **PT Pro**<sup>™</sup>

- Tapered rolls activate the "pivot and tilt" motion to track the belt
- Works on single direction or reversing belts
- · Simple mounting brackets for easy installation, plus adjustment screw to fine-tune for optimal performance
- Ideal for belts with edge damage

Maximum Belt Tension: Standard Duty 1600 PIW Heavy Duty 1200–2400 PIW

Belt Dimensions: Standard Duty 450–1800mm(18"–72" ) Heavy Duty 1200-2400mm (48"-96")



#### PT Max<sup>™</sup> Return Side

- Sensor rollers detect wander, then "pivot and tilt" belt into place
- Ideal solution for cupped and high-tension belts
- Performs in wet and dry conditions
- Return-side installation only

Maximum Belt Tension: 3000 PIW

Belt Dimensions: 600-1500 mm (24"-60") wide Up to 19 mm (3/4") thick

#### Heavy Duty PT Max<sup>™</sup> Return Side

- Ideal for high tension belts
- Sensor rollers detect wander, then "pivot and tilt" belt into place
- Performs in wet and dry conditions
- Return-side installation only

Maximum Belt Tension: 6000 PIW

Belt Dimensions: 1200-2100 mm (48"-84") wide 19–25 mm (3/4" –1") thick

#### Super Duty PT Max<sup>™</sup> Return Side

- For highest tension applications
- Sensor rollers detect wander, then "pivot and tilt" belt into place
- Performs in wet and dry conditions
- Return-side installation only

Maximum Belt Tension: 10,000 PIW

Belt Dimensions: 1800–3000 mm (72"–120") wide 25 mm (1") thick and higher



- **PT Max<sup>™</sup> Top Side**  Sensor rollers detect wander, then "pivot and tilt" belt into place
- · Ideal solution for cupped and high-tension belts
- Performs in wet and dry conditions
- Top-side installation only

Maximum Belt Tension: 3000 PIW Belt Dimensions: 600–1500 mm (24"–60") wide Up to 19 mm (3/4") thick

#### Heavy Duty PT Max<sup>™</sup> Top Side

- Ideal for high tension belts
- Sensor rollers detect wander, then "pivot and tilt" belt into place
- Performs in wet and dry conditions
- Top-side installation only

Maximum Belt Tension: 6000 PIW

elt Dimensions: 1200–2100 mm (48"–84") wide 19–25 mm (3/4" –1") thick

#### Super Duty PT Max<sup>™</sup> Top Side

- For highest tension applications
- Sensor rollers detect wander, then "pivot and tilt" belt into place
- Performs in wet and dry conditions
- Top-side installation only

Maximum Belt Tension: 10,000 PIW Belt Dimensions: 1800–3000 mm (72"–120") wide 25 mm (1") thick and higher

To learn more about Flexco belt training systems, visit www.flexco.com.sg.

## YOUR ISSUE: LOAD-POINT SPILLAGE OUR SOLUTION: IMPACT BEDS, SLIDER BEDS, SKIRTING SYSTEMS, PLOWS & MORE

## Set Up an Appropriate Transition Distance

- Often compromised to save space, but short transition can lead to premature belt, lagging, and idler wear or failure.
- Using your idlers or Flexco adjustable idlers, follow CEMA recommendations based on your trough angle, belt tension and belt carcass construction.

## Divert Material to Avoid • Damaging Tail Pulley or Belt

- Material trapped between the pulley and belt can cause significant damage to both.
- Use a plow before the tail pulley to remove material from the belt: Diagonal Plow for one-side discharge V-Plow for two-side discharge

## Protect Belt in Impact Area

- Just like the belt, impact beds see every ounce of every ton of product. Careful consideration should be made to account for the worst-case impact your system may ever see.
- Find your drop height and material lump weight to select the proper bed. Never pick a bed with a lower impact rating.
- Flexco offers beds for numerous impact ratings: Up to 25 kg-m (200 ft-lbs): EZSB-I, EZIB-L, DRX-200 25 to 100 kg-m (200 to 750 ft-lbs): EZIB-M, DRX-750 100 to 200 kg-m (750 to 1500 ft-lbs): DRX-1500 200 to 400 kg-m (1500 - 3000 ft-lbs): DRX-3000

When it comes to load zones, our impact beds deliver the highest level of material containment and belt protection. They've been specially designed to control acceleration, deaden impact energy, reduce damaging vibrations, and extend belt life.

## .Ultimate Performance – Flexco Transfer Chute Solutions

We have over 25 years of experience in designing and implementing superior transfer-point solutions. We offer:

- Tasman Warajay Technology the original "controlled flow" solution
- Greater throughput with virtually no plugging
- Custom engineering to meet your needs
- Advanced diversion capabilities

## Seal the Load Zone

- Clamps and skirting provide the final—and very important assurance against spillage.
- Clamps should be durable yet easy to use when skirting needs adjustment or replacement.

## Track Belt in Load-Point

ТЕСНМОІ

• If belt is mistracking before the load zone it will mistrack through the load zone, causing spillage.

 Prevent mistracking by installing a Belt Positioner, PT Smart<sup>™</sup>, or PT Max<sup>™</sup> before the tail pulley.

### Support Belt as Material Settles

- Most conveyors feature an extended area where material settles after the impact area.
- Idlers often used but sealing with idlers is difficult due to belt sag. Impact beds can be used to help with sealing but are expensive and cause belt drag.
- EZSB-C provides the best of both: idlers in center to reduce drag, and UHMW bars on trough to provide constant sealing.

#### How to Select the Right Impact Bed Step 1:

#### **Calculate Your Impact Energy**

Identify the weight of your largest lump size and multiply this number by your drop height. The result, expressed in lb-ft, will be your estimated impact energy.

#### Material Reference Table

	Material	kg/m³	
	Coke	657	axe can
	Fertilizer	961	CLASSING -
	Bauxite, crushed	1281	
	Potash	1281	
	Coal, Bituminous, Solid	1346	
	Coal, Anthracite, Solid	1506	
	Slag, Solid	2114	
	Chromium Ore	2162	
	Halite (Salt), Solid	2323	
	Phosphorus	2339	
	Stone (Common, Generic)	2515	And in the second
	Limestone, Solid	2611	
	Shale, Solid	2675	
	Granite, Solid	2691	
	Gypsum, Solid	2787	
140	Trap Rock, Solid	2883	
	Dolomite, Solid	2899	
	Malachite (Copper Ore)	3860	
	Platinum Ore	4293	
	Hematite (Iron Ore)	5158	

#### Step 2:

#### Match the Result to the Bed Rating

No Impact — EZSB-C Up to 25 kg-m (200 lb-ft.) — DRX200, EZSB-I, EZIB-L 25 to 100 kg-m (200 to 750 lb-ft.) — DRX750, EZIB-M 100 to 200 kg-m (750 to 1500 lb-ft.) — DRX1500 200 to 400 kg-m (1500 to 3000 lb-ft.) — DRX3000

#### Sample Calculation Gather data for your Impact Energy Calculation:

- **Q:** What size material are you running?
- A: I'm running 203 mm (8") minus limestone.
- **Q:** Is that the largest piece you've seen or could a larger piece get through that 203 mm (8") crusher setting?
- A: Yes, that's the crusher setting; the largest rock I've seen is 203mm x 406mm x 406mm (8"x16"x16").

#### Lump Weight (W)

Limestone Material Density =  $2611 \text{ kg/m}^3$  (163 lb/ft<sup>3</sup>) Volume =  $200/1000 \times 400/1000 \times 400/1000 = 0.032 \text{ m}^3$ (8/12 x 16/12 x 16/12 =  $1.185 \text{ ft}^3$ ) W =  $2611 \times 0.032 = 83.5 \text{ kg}$  (163 x 1.185 = 193 lb)

- **Q:** What's the fall height from the top of the feeding conveyor to the receiving belt?
- **A:** There's a 2m drop from the feeding conveyor to a rock box, then another 2m drop to the receiving belt.

**Drop Height (H)** H = 2 m + 2 m = 4 m (H = 5 ft + 4 ft = 9 ft)

#### Impact Energy Calculation:

#### **Lump Weight (W) x Drop Height (H) = Impact Energy** 83.5 kg x 4 m = 334 kg-m (193 lb x 9 ft = 1737 lb-ft) This impact scenario would require a DRX 3000.

## FLEXCO IMPACT BEDS

FEATURES & APPLICATIONS



#### Flexco Slider Bed (EZSB-C)

- Uses Flexco CoreTech<sup>™</sup> idlers in center section
- Features adustable trough frames for use on 20°, 35° or 45°
- Recommended for non-impact sealing areas
- Available with short lead time

Bed Rating: No impact

Maximum Belt Speed: 5.0 m/sec (1000 fpm) Applications: Sealing of extended load zone



#### Flexco Slider Impact Bed (EZSB-I)

- Uses Flexco CoreTech impact idlers in center section
- + Features adustable trough frames for use on 20°, 35° or  $45^\circ$
- For light-impact applications
- Recommended for -100 to -150 mm (-4" to -6") materials
- Available with short lead time

Bed Rating: Up to 25 kg-m (200 lb-ft) Maximum Belt Speed: 5.0 m/sec (1000 fpm) Applications: Sand and Gravel

## FLEXCO IMPACT BEDS Continued



#### Flexco Standard-Duty Impact Bed (EZIB-L)

- Features adustable trough frames for use on 20°, 35° or 45°
- Recommended for light-impact applications
- Recommended for -100 to -150mm (-4" to -6") materials
- Available with short lead time

Bed Rating: Up to 25kg-m (200 lb-ft) Maximum Belt Speed: 5.0 m/sec (1000 fpm) Applications: Sand and Gravel



#### Flexco Medium-Duty Impact Bed (EZIB-M)

- Features adustable trough frames for use on 20°, 35° or 45°
- For medium-impact applications
- Recommended for -203mm to -254mm (-8" to -10") materials
- Available with short lead time

Bed Rating: 25 to 100kg-m (200 to 750 lb-ft) Maximum Belt Speed: 5.0 m/sec (1000 fpm) Applications: Hard Rock Mining, Limestone Quarrying

#### **DRX200 Impact Bed**

- Exclusive Velocity Reduction Technology™ that deadens rebound forces for reduced spillage and material degradation
- Recommended for 100-150 mm (-4" to -6") materials
- Slide-Out Service<sup>™</sup> for easy maintenance

Bed Rating: Up to 25kg-m (200 lb-ft) Maximum Belt Speed: 5.0 m/sec (1000 fpm) Applications: Sand and Gravel



#### **DRX750 Impact Bed**

- Exclusive Velocity Reduction Technology™ that deadens rebound forces for reduced spillage and material degradation
- For medium-impact applications
- Recommended for 200-250 mm (-8" to -10") materials
- Provides a unique second level of impact relief

Bed Rating: 25 to 100kg-m (200 to 750 lb-ft) Maximum Belt Speed: 5.0 m/sec (1000 fpm) Applications: Hard Rock Mining, Limestone Quarrying



#### **DRX1500 Impact Bed**

- Exclusive Velocity Reduction Technology<sup>™</sup> that deadens rebound forces for reduced spillage and material degradation
- For high-impact applications
- Recommended for -305mm (-12") materials
- Isolation Mounts ensure a second level of impact force reduction

Bed Rating: 100 to 200kg-m (750 to 1500 lb-ft)

Maximum Belt Speed: 5.0 m/sec (1000 fpm)

Applications: Coal-Fired Power Plants, Coal Prep Plants, Load-out Facilities



Applications listed are intended to identify where each impact bed is commonly and most effectively utilized. Material size, lump weight and drop height should all be considered before making a final product selection. Consult Flexco to assess specific applications and recommendations.

To learn more about Flexco load-point solutions, visit www.flexco.com.sg.

## FLEXCO IMPACT BEDS Continued

#### DRX3000 Impact Bed

- Exclusive Velocity Reduction Technology<sup>™</sup> that deadens rebound forces for reduced spillage and material degradation
- For extreme-impact applications requiring the highest energy absorption
- Impact Energy Absorbers disperse an immense amount of impact energy
- Stationary skirt support bar system helps ensure a positive seal with the skirt rubber

Bed Rating: 200 to 400kg-m (1500 to 3000 lb-ft) Maximum Belt Speed: 5.0 m/sec (1000 fpm) Applications: Any operation that combines large material size and extreme height





## **Adjustable Idler Frame** • Uses Flexco CoreTech<sup>™</sup> idlers

- For use around load zone to lift belt off beds
- Features adjustable trough frames in 5° increments

Idler Rating: CoreTech roll - No impact CoreTech Impact roll - 25kg-m (200 ft-lb) Applications: For use between every two Flexco beds, transitions

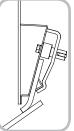
Applications listed are intended to identify where each impact bed is commonly and most effectively utilized. Material size, lump weight and drop height should all be considered before making a final product selection. Consult Flexco to assess specific applications and recommendations.



## FLEXCO SKIRTING SYSTEMS

Specially designed to create an effective seal at load points without damaging the top cover of your belt, our skirting systems are a smart way to improve throughput.



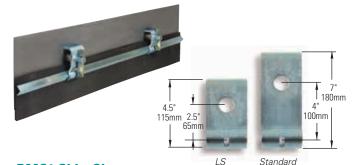


#### Flex-Seal <sup>™</sup> Skirting System

- Dynamic containment unit that fully seals the loading zone
- Sturdy, corrosion-resistant components that deliver long
- service life
- Easy to install and maintain

Module Sizes: 1200 mm (4')

Skirting Sizes: For skirt rubber 150 mm (6") wide and from 8–19 mm (5/16"–3/4") thick



#### RMC1 Skirt Clamps

- Simple installation, no-hassle maintenanceVersatile design that can be installed on vertical or
- perpendicular skirt boards
- Anti-vibration clamp pin
- Interlocking clamp plates and 1200 mm (4') clamp bar
- Limited Space (LS) option available

Module Sizes: 1200 mm (4')

Skirting Sizes: For a range of skirt rubber heights; for thicknesses from 8–19 mm (5/16"–3/4") thick





#### Flex-Lok<sup>™</sup> Skirt Clamps

- Heavy-duty applications
- Strong restraining bar that is held in place by clamp plates to allow easy adjustment of skirt rubber
- Anti-vibration clamp pin can be unlocked with a
- rubber hammer • Easy to install and maintain
- Mini Flex-Lok™ option available—overall height of 40mm (5½")
   Module Sizes: 1800 mm (6')

Skirting Sizes: For skirt rubber from 8–25 mm (5/16"–1") thick





Bolt-on PAL Pak

#### Weld-on PAL Pak

#### PAL Paks

- Safe, easy-to-install skirt clamps
- Clamp pins bolt or weld directly to skirt board
- Bolt-on version provides no-weld solution to eliminate sparking risks
- Limited Space (LS) option available
- Clamp plates are 180mm/7" high (LS version 115mm/4½" high) Skirting Sizes: For a range of skirt rubber heights; for thicknesses from 8–19 mm (5/16"–3/4") thick

Simply tap loose the locking pin to reposition or replace skirt rubber and then tap to re-lock in place.



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### How to Select the Right Belt Plow

When choosing a plow to prevent fugitive material from finding its way into your tail pulley, you need to consider where you want to discharge any debris.

To discharge material to a single side of the belt: Choose the RDP1 Diagonal Plow.

To discharge material to both sides of the belt: Choose the V-Plow.

## **FLEXCO PLOWS**

Flexco offers two advanced plows that prevent costly damage to tail pulleys and gravity take-ups, while cleaning the inside of the belt.



#### **RDP1** Diagonal Plow

- Discharges debris to one side of belt
- Unique angled blade that creates effective "spiral" action
- Fixed position eliminates bouncing and vibration problems
- Appropriate for use at any point along inside of return belt · Simple and quick installation and blade replacement

Maximum belt speed: 3.5 m/sec (700 fpm) Belt Widths: From 450–2100 mm (18"–84")

#### **V-Plow**

- Simultaneously discharges debris to both sides of belt
- Angled blade design "spirals" away debris and water
- Easy to install and maintain
- Fits virtually any conveyor structure
- Turnbuckle at nose allows for fine-tuning at installation

Maximum belt speed: 5 m/sec (1000 fpm)

Belt Widths: From 450–2400 mm (18"–96")



models) quickly spirals material off the belt, preventing it from working its way under the blade and providing a superior and more efficient cleaning.



To learn more about Flexco load-point solutions, visit www.flexco.com.sg.

# YOUR ISSUE: SLIPPAGE OUR SOLUTION: PULLEY LAGGING

#### How to Select the Right Lagging Product

To select the right pulley lagging, be sure to consider the environmental conditions around the pulley:

• Belt condition, i.e., wet or dry

• The service required for bonded lagging versus weld-on

• The expected wear life of the lagging

Use the following chart to identify the best Flexco lagging for your needs.

92004-01201702029-0253.00000		lex-Lag® Rubbe	r	Fle	ex-Lag® Ceramic		Flex-Lag® Weld-On™			
Criteria	Light Duty	Plain	Diamond	Diamond Pattern	Medium Ceramic	Full Ceramic	Rubber Diamond	Full Ceramic		
Total Thickness*	6 mm (1/4")	10–25 mm (3/8"–1")	10–25 mm (3/8"–1")	12 mm (1/2")	15 mm (5/8")	12 mm (1/2")	14 mm (9/16")	15 mm (5/8")		
Belt Width*	Any Width	Any Width	Any Width	Any Width	450–2100 mm (18"–84")	450–2100 mm (18"–84")	450–1800 mm (18"–72")	450–1800 mm (18"–72")		
Minimum Pulley Diameter	50 mm (2")	300 mm (12") 300 mm (12")		300 mm (12")	300 mm (12")	300 mm (12")	400 mm (16")	400 mm (16")		
Dry Friction	Very Good	Excellent Very Good		Very Good	Excellent	Excellent	Very Good	Excellent		
Wet Friction	Average	Average	Average Good		Excellent	Excellent	Good	Excellent		
Wet/Muddy Friction	—	Average	Average	Good	Very Good	Very Good	Average	Very Good		
Wear Life	Good	Good	Good	Very Good	Excellent	Best	Good	Best		
Ease of Installation	Good	Good	Good	Good	Good	Good	Best	Best		
Drainage Grooves	No				Yes					
FRAS (Fire Resistant Anti-Static)	No				Available					
Rubber Compound				SI	3R					
Hardness (Shore A)				68 +	-/- 3					
Ceramic Compound	—	_	—	Al <sub>2</sub> 0 <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>	_	Al <sub>2</sub> O <sub>3</sub>		
Ceramic Coverage	_	_	_	13%	39%	80%	_	74%		
Operating Temperature				-15° (5° 1						

\*Additional thicknesses and widths available as special orders. For weld-on lagging, thickness includes the backing plate.

		l	Flex-Lag® Rubb	er	Fle	ex-Lag® Cerami	C	Flex-Lag® Weld-On™			
Criteria		Light Duty	Plain	Diamond	Diamond Pattern	Medium Ceramic	Full Ceramic	Rubber Diamond	Full Ceramic		
	<500 mm (<20")	OK	10 mm 3/8"		12 mm 1/2"	15 mm 5/8"	12 mm 1/2"	OK	ОК		
Pulley	500–800 mm (20"–32")	Non-Drive Only	10 mm–12 mm 3/8"–1/2"	10 mm–12 mm 3/8"–1/2"			12 mm 1/2"	ОК	ОК		
Diameter	800–1200 mm (32"–48")	_	12 mm–20 mm 1/2"–3/4"	12 mm–20 mm 1/2"–3/4"	12 mm— <mark>15 mm</mark> 1/2"— <mark>5/8</mark> "	15 mm 5/8"	2 mm–15 mm 1/2"–5/8"	ОК	ОК		
	>1200 mm (>48")	-	15 mm–25 mm 5/8"–1"	15 mm–25 mm 5/8"–1"	15 mm–25 mm 5/8"–1"	15 mm <mark>–25 mm</mark> 5/8" <b>–</b> 1"	15 mm–25 mm 5/8"–1"	ОК	ОК		
	Low (<500 PIW)	OK	10 mm–12 mm 3/8"–1/2"	10 mm–12 mm 3/8"–1/2"	12 mm 1/2"	15 mm 5/8"	12 mm 1/2"	ОК	ОК		
Fabric Belts	Medium (500–1000 PIW)	Non-Drive Only	12 mm–15 mm 1/2"–5/8"	12 mm–15 mm 1/2"–5/8"	12 mm 1/2"	15 mm 5/8"	12 mm 1/2"	OK	ОК		
	High (1000–2000 PIW) –		15 mm–20 mm 5/8"–3/4"	15 mm–20 mm 5/8"–3/4"	15 mm–25 mm 5/8"–1"	15 mm <mark>–25 mm</mark> 5/8"–1"	15 mm–25 mm 5/8"–1"	_	_		
iteel Cord	Medium (ST500–ST3150)	-	12 mm–20 mm 1/2"–3/4"	12 mm–20 mm 1/2"–3/4"	12 mm– <mark>20 mm</mark> 1/2"– <mark>3/4</mark> "	15 mm <mark>–20 mm</mark> 5/8" <b>–</b> 3/4"	12 mm– <mark>20 mm</mark> 1/2"– <mark>3/4</mark> "	_	-		
Belts	High (ST3500–ST5400)	_	20 mm <b>30 mm</b> 3/4"1-1/4"	20 mm <b>-30 mm</b> 3/4"-1-1/4"	15 mm–30 mm 5/8"–1-1/4"	15 mm <u>–30 mm</u> 5/8"–1-1/4"	15 mm–30 mm 5/8"–1-1/4"	_	_		

Red items available as specials.

## FLEXCO PULLEY LAGGING



#### Light-Duty Rubber Lagging

- Specially designed for pulleys with diameters as small as 50mm (2").
- Moisture is channeled between small raised buttons that support and grip the belt and deliver superior traction.
- Available in SBR and White Nitrile

Belt Width: Any Width



#### Plain-Pattern Rubber Lagging

- Helps prevent belt slippage in dry environments.
- Proveds larger surface contact area relative to other patterned lagging.
- Horizontal grooves channel water and debris while providing a better dynamic interaction with the belt compared to sheet lagging.

Belt Width: Any Width



#### **Diamond-Pattern Rubber Lagging**

- Diamond pattern features a bidirectional design for superior water-shedding characteristics.
- Horizontal grooves provide a second method to disperse water and debris off the lagging and prevent hydroplaning.
- Performs well in both dry and wet applications.

Belt Width: Any Width



#### Diamond-Pattern Ceramic Lagging (13% tile coverage)

- Large ceramic tile is molded into the diamond section, providing an increased coefficient of friction vs. Diamond-Pattern Rubber.
- Also features a bidirectional design for superior water-shedding characteristics.
- Uses the advantages of a ceramic product at a more affordable cost in light or medium duty applications.

Belt Width: Any Width



#### *Medium Ceramic Lagging (39% tile coverage)*

- Constructed from individual ceramic tiles molded into a high-durometer rubber for excellent abrasion resistance.
- Excellent performance in dry or wet applications and very good performance in muddy applications.
- Molded ceramic buttons grip the belt's underside for positive traction.
- Excellent friction for mid-range tension belts. Belt Width: from 450–2100 mm (18"–84")



#### Full Ceramic Lagging (80% tile coverage)

- Constructed from hundreds of individual ceramic tiles molded into a durable rubber backing with a higher coverage than Medium Ceramic for best-in-class abrasion resistance.
- Most consistant performance in dry, wet or muddy applications.
- Molded ceramic buttons grip the belt's underside for positive traction.
- Best for high-tension belts.

Belt Width: from 450-2100 mm (18"-84")



#### Weld-On Rubber Lagging

- Weld-On design allows for quick, in-situ installation.
  Gear-tooth layout protects cleaners on pulley from
- experiencing "chatter" and premature wear.
- Diamond-Pattern features a bidirectional design for superior water-shedding characteristics.
- Performs well in both dry and wet applications.

Minimum Pulley Diameter: 16" (400 mm) Belt Width: from 18"–72" (450–1800 mm)



#### Weld-On Ceramic Lagging (74% tile coverage)

- Weld-On design allows for quick, in-situ installation.
- Gear-tooth layout protects cleaners on pulley from experiencing "chatter" and premature wear.
- Constructed from hundreds of individual ceramic tiles molded into a durable rubber backing.
- Most consistant performance in dry, wet or muddy applications.
- Molded ceramic buttons grip the belt's underside for positive traction.

Minimum Pulley Diameter: 16" (400 mm) Belt Width: from 18"–72" (450–1800 mm)

For proper quantities by pulley size, use the lagging calculator at www.flexco.com.sg.

## FLEXCO PULLEY LAGGING ADHESIVES

Flex-Lag® Adhesives are a two-part cold bonding system designed specifically for use with rubber-to-rubber and rubber-to-metal adhesion. Flex-Lag Adhesives are also produced without using chlorofluorocarbons (CFCs). An excellent bond is achieved while using the minimal amount of cement and primer thanks to high adhesion during installation and after curing.

**Primer specifically paired with the adhesive** for optimal bonding strength

Flex-Log' Adh

Adhesive and activator mix on a 1 can : 1 bottle ratio for simplified ordering, stocking and preparation

#### **Excellent Bonding Strength**

- Simple to order, easy to use
- Environmentally friendly, free of chlorofluorocarbons (CFC)
- Works with all Flexco cold-bond lagging products

## Use the following charts to determine correct order quantities for your pulley size.

Each Flex-Lag Adhesive is mixed with one Flex-Lag Activator. Refer to the usage chart below to calculate the number of cans required for your pulley. For sizes not included in the chart please contact Flexco Customer Service for assistance.

ADHESIVE 0.8L / ACTIVATOR 40g (1 can : 1 bottle mix ratio)

	Face Width																						
	mm		254	356	457	559	660	762	864	965	1067	1168	1270	1372	1473	1575	1676	1778	1880	1981	2083	2184	2286
		in	10	14	18	22	26	30	34	38	42	46	50	54	58	62	66	70	74	78	82	86	90
	203	8	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3
	305	12	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4
	406	16	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	5	5	5
	508	20	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
er	610	24	1	2	2	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7
Diameter	711	28	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6	7	7	7	8	8	8
)iar	813	32	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7	8	8	8	9	9	10
	914	36	2	2	3	3	3	4	4	5	5	6	6	7	7	8	8	8	9	9	10	10	11
Pulley	1016	40	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
<u> </u>	1118	44	2	2	3	4	4	5	5	6	6	7	7	8	9	9	10	10	11	11	12	12	13
	1219	48	2	3	3	4	4	5	6	6	7	7	8	9	9	10	10	11	12	12	13	13	14
	1321	52	2	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	14	15	15
	1422	56	2	3	4	4	5	6	6	7	8	9	9	10	11	11	12	13	14	14	15	16	16
	1524	60	2	3	4	5	5	6	7	8	8	9	10	11	11	12	13	14	14	15	16	17	17
		-										-											

PRIMER .75L

1...

	Face Width																						
	mm		254	356	457	559	660	762	864	965	1067	1168	1270	1372	1473	1575	1676	1778	1880	1981	2083	2184	2286
		in	10	14	18	22	26	30	34	38	42	46	50	54	58	62	66	70	74	78	82	86	90
	203	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	305	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	406	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	508	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
er	610	24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
net	711	28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Diameter	813	32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
۲D ۲	914	36	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Pulley	1016	40	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
4	1118	44	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	1219	48	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	1321	52	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	1422	56	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	1524	60	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2

# FLEXCO SERVICES



## Inspection, Installation and Maintenance

Around the world, Flexco has your operation covered. Whether it be with our factorytrained and certified Flexco resources or our trained distributor partners, we're there to ensure you maximize the return on your investment by making sure Flexco's products are properly specified, installed, or maintained.

Ensuring the product is installed correctly and maintained is critical to provide the optimal results our products are engineered to deliver. Flexco takes pride in making sure you have access to the resources that make certain the products exceed your expectations.

Having a third party review your conveyor system can prove to be an effective way to identify performance, maintenance and safety concerns that can be critical to

Flexco's assessment program allows you to proactively address belt conveyor concerns before they lead to costly repairs and unscheduled downtime. Focusing on issues such as spillage, carryback, belt slippage, and mistracking, Flexco specialists will record their findings and return to your operation with a complete recommendation on

the system, identifying immediate needs and suggesting future fixes.





### Training

Flexco offers training programs around the world that are flexible to meet your needs and requirements. Our programs range from coming to your site to train a maintenance team to hosting you at one of our Flexco training centers at 10 locations around the world. Our comprehensive Flexco University program delivers the knowledge and skills required to ensure you keep your belts running effectively and efficiently, balancing both classroom and field instruction to deliver a detailed, thorough education program. We utilize a variety of tools, from mobile showrooms to demonstration conveyors to provide the most value.



**Conveyor Assessments** 

minimizing downtime and maximizing your productivity.





FLEXCO

Partners **Plus** 

## TRUST YOUR PARTNERS IN PRODUCTIVITY

Flexco's *Partners Plus* distributors are strategic partners that have been certified to provide unsurpassed quality installations and service to complement the industry's leading products. Partners Plus Distributors are also certified by Flexco to diagnose problems, recommend solutions, and share advanced knowledge that will help operations maintain their belt conveyor systems and maximize efficiency and output.

Fewer than 5% of all Flexco distributors are Authorized Partners Plus distributors, making this a special distinction given to distributors who have committed to providing the skills required to earn this title. To obtain this certification, employees from our distributor partners undergo extensive training, learning to properly specify, install, maintain, and troubleshoot Flexco products. Continual training is offered throughout the year to ensure they are fully up to speed on Flexco's offerings and latest innovations. Each partner is recertified each year they are in the program.

Our Partners Plus distributors are easily identified by looking for this logo  $\checkmark$  on our website's distributor locator. With over 30 partners in over 15 countries, this growing program that partners Flexco with local experts and the operations in their regions allows us to work together to address their productivity needs.

## We work with you to determine the best solution.

Partners Plus distributors are trained to be experts on specifying, installing, and troubleshooting Flexco products, to ensure you receive the optimal performance from your investment.

## We have extensive industry knowledge.

Our hands-on industry experience gives us deep insights into your productivity demands, maintenance challenges, safety requirements, and more. We serve operations all over the world in the coal, aggregate, bulk material, and mining industries. Our global presence balanced with the expertise of our local Partners Plus distributors allows us to enhance the service you receive, actively working toward addressing your specific concerns and needs that may be unique to your operation or industry.

## We're committed to safety and quality.

At Flexco, we won't settle for anything less than the best, most durable products around, and we aim to have the services and support to match. That is why we developed the Partners Plus program—to deliver a quality and consistent service program capable of matching the quality of our products.

Just as our products are designed with safety in mind, our training with our Partners Plus distributors always makes safety a top priority.

## We offer a wide range of compatible products.

In addition to high-quality belt conveyor products, through our Partners Plus program we also deliver high quality support and service that matches those products.

FLEXCO

Partner with Flexco on all your belt conveyor needs. Call +65-6484-1533 or visit www.flexco.com.sg.



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

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