



# BENETECH<sup>®</sup>

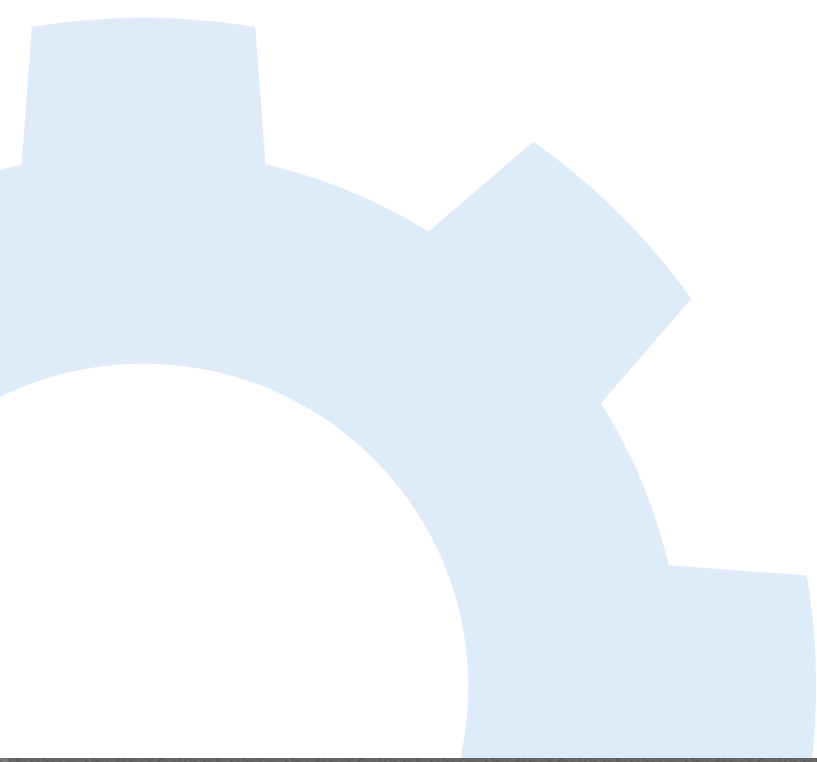
DUST MANAGEMENT AND MATERIAL HANDLING SOLUTIONS

**GOODYEAR**  
RUBBER PRODUCTS, INC.

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For over a quarter century, Benetech has been a global leader in comprehensive, performance-based solutions for bulk material handling, risk management and dust mitigation.

Our broad matrix of products includes intelligent, reliable solutions that enable customers to receive the best integration of technologies for their specific needs.

The Benetech team stands ready to assess your challenges, help prioritize your needs and recommend solutions that will ensure a safe operation and greater system efficiency.

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Untreated



Treated

## DUST SUPPRESSION

For over 25 years Benetech has been the leader in Dust Suppression products and chemical application to the utility, mining, steel, ports and terminals, cement and aggregate industries. Our effective, low cost solutions integrate customized levels of operational control while helping you meet governmental regulations, reduce housekeeping costs and increase operational efficiency.

### Product Offerings

- Chemical dust control systems-including BenePaks, CleanPaks, sheds, piping, spray manifolds, foam generators and controls
- Chemical dust control agents-including a wide assortment of foam, surfactants and residual agents developed for specific material applications
- Haul road dust control agents- for a wide array of road conditions
- Pile, rail car topper, truck top sealants- and slope encrusting agents and application systems



## WASHDOWN SYSTEMS

Benetech's in-house engineers have over 25 years of power plant housekeeping experience in fluid engineering and spray control. Our engineers have designed industry-leading Washdown Systems for the most demanding coal yard applications. After evaluating your facility, Benetech will provide a custom-designed solution that begins with approval and as-built drawings for review, followed by operational and maintenance manuals for continued support. With your specific needs in mind, Benetech will include solutions for unloading areas, reclaim tunnels, conveyor galleries, crusher houses, conditioning buildings, transfer towers, tripper rooms, cascade rooms and more.

### Benefits:

- Elevate worker safety and OSHA compliance
- Reduce fire and explosions risk
- Diminish housekeeping costs
- Customize design solutions
- Increase equipment performance and reliability



## WET DUST EXTRACTION

The Benetech Wet Dust Extraction System, featuring the Engart wet dust extractor unit, provides high efficiency dust collection with several benefits over traditional dry dust collection units. Engineered in a flexible custom package, this advanced technology supports a smaller footprint, lower installation costs relative to fabric filter systems and simplified maintenance.

With a bifurcated fan design, this system increases worker safety by removing the motor from the air stream and provides high volume capabilities in one compact unit. Additionally, the self-cleaning unit utilizes a safe water discharge.

Offered in multiple sizes for a wide performance range, Benetech's Wet Dust Extraction Systems provides a proven, common sense-solution that eliminates problems inherent to fabric filter collection systems.



## DRY DUST COLLECTION: REX-AIRE LP

An integral component of Benetech's unique Total Dust Management approach, the Rex-Aire LP Dust Collection System, combines advanced technology and custom engineering to offer these distinct features:

- **Superior Safety**  
Long life steel vents ensure safe venting and minimize air-in leakage which can affect collection performance. For ease of maintenance and to reduce risk, the drive motor and diaphragm valve are located outside of the collector.
- **Optimal Cleaning Action**  
To maximize air utilization and minimize dust recapture on the filter bags, controlled bursts of air are fired in a unique pattern to ensure that no two adjacent oval bags are cleaned in sequence.
- **Low Pressure Efficiency**  
Using less than 25% of the power needed by high pressure pulse-jet filter units, the LP design produces an air supply of 7-9 PSIG and eliminates the need for plant compressed air.

## Engineered Transfer Systems

Benetech's Engineered Transfer Systems are EDEM designed and tested to perform in the most demanding transfer applications.

To properly use any modeling program, a combination of experience and knowledge is necessary in order to understand correct data input. If this depth of knowledge is missing, the result can be a poorly designed chute. Our pre-installation computer modeling process is based on the assurance that BENETECH has the most experienced, educated and talented staff when it comes to using and applying information from modeling programs to actual chute design.

### ADVANCED TRANSFER

#### Streamlined Material Flow and Containment

When the industry standard is not an option, our expert design team will evaluate your processing needs, fabricate a customized system for your exact requirements and apply unique solutions to your transfer towers, cascade conveyors, post crusher load zones and more. The center loading device in the Advanced Transfer System keeps material moving at a consistent velocity and ensures smooth laminar flow throughout the chute without direct impact. This delivers greater efficiency and reduces turbulence, dusting and spillage.

- Reduced operating costs
- Improved material handling processes
- Reduced fugitive dust emissions

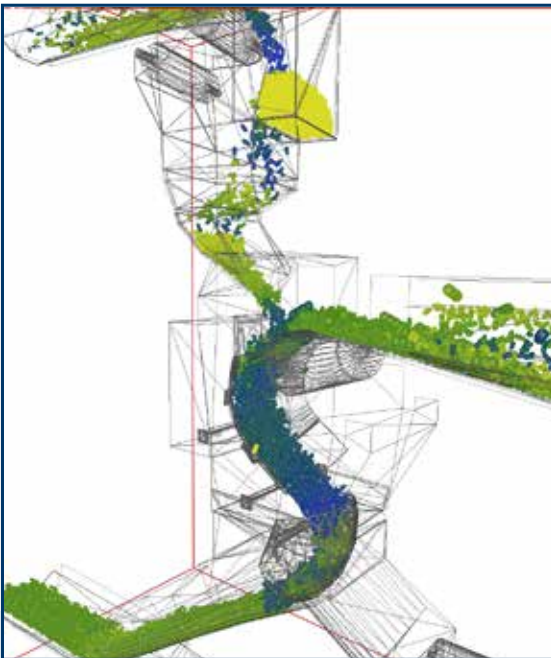
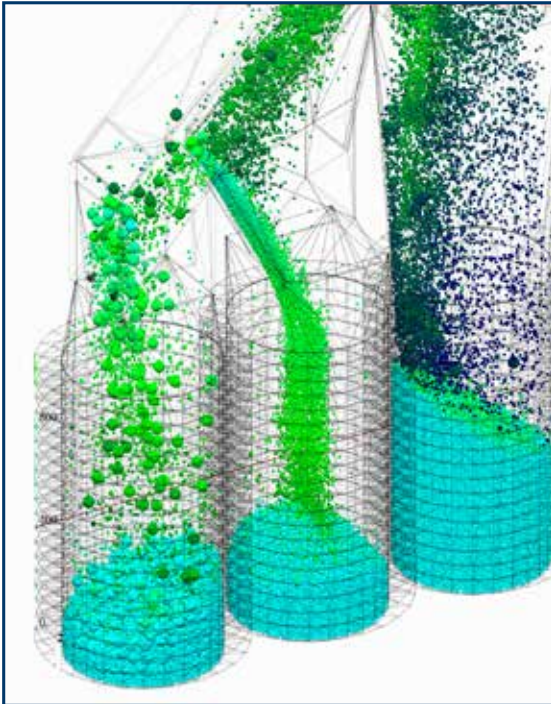
### INTELIFLO® - J-GLIDE®

#### A Proven, Pro-active, Innovative Dust Prevention Solution

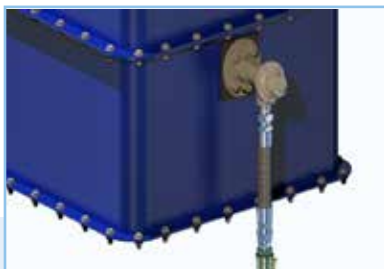
InteliFlo's unique rounded shape has replaced square corners of a traditional chute, maximizing material flow while preventing pluggage and build up. Its modular component design shortens lead times, lowers installation costs and reduces outage requirements.

The J-Glide feature allows for adjustable vertical loading and accommodates various materials and environmental conditions by changing material speed through the transfer.

- Enhanced safety
- Reduced O&M costs
- Less spillage and dust
- Minimized need for skirts, seals or belt support



Benetech's pre-installation computer modeling process anticipates your plant's potential downstream material flow problems and solves them before costly mistakes occur. Our team of engineers and material handling experts partner with you to define your facility's material transfer needs and then engineer a custom system to meet your specific requirements.



Hardened wear resistant nozzle head is flush with the chute wall



Opened radial nozzle omits airburst along the chute wall up to 24" for a tenth of a second



PACS is the only radial, pneumatic cleaning system specifically designed for bulk material handling and designed to not damage

## PNEUMATIC ACCUMULATION CONTROL SYSTEM PACS™

Specifically designed for bulk material, these automatic nozzle controls remove material accumulation before pluggage can occur. Buildup is eliminated at points of impact before it becomes large enough to break off and cause problems down the line.

### How it works

Using standard plant compressed air at 80 to 100 psig, PACS removes buildup of wet or frozen sticky materials from the walls of chutes, bins, hoppers, silos, and bunkers. Automatically, unsupervised, and without interfering with normal material handling operations, loss of material flow due to pluggage is virtually eliminated where PACS nozzles are correctly positioned.

The system's electronic controls trigger PACS nozzles, firing in a predetermined order. Each nozzle is supplied with a precise burst of plant air through a quick open/close air-operated solenoid as compressed air is delivered sequentially to the nozzles.

Each nozzle directs air 360° along the surface of the chute work for a distance of approximately, 2-3 feet. It means PACS does not allow material to crust or layer, dislodging and breaking up any potential accumulations so they can be easily carried away by gravity and flowing material.

### Simple to install and easy to maintain

PACS unique design includes a remote air tank and control station conveniently accessible at ground level. This means there is no need to worry about installation of large compressed air tanks on chutes, silos or bunkers. The PACS control system panel and sequence timers can be located in an area convenient to operations, making it easy to meet any changing air pressure and rate of sequencing adjustments needed. Timing sequence and firing rates can be expanded (supporting up to 45 different nozzles) to accommodate a variety of chute configuration changes.

### Automatic cleaning

Unlike air lancing, which can result in injury and insufficient cleaning, PACS clean automatically and do not require confined space permits.

### Large compressed air usage not required

PACS require standard 80 to 100 psig (15 SCFM, 0.1 sec.) plant compressed air and operates on 120 VAC single phase power.



## VIBRATORS

Benetech has partnered with Italvibras USA Inc. to bring you a superior line of vibrators.

### MVSI

The MVSI Electric Series stands as the standard reference line that all manufacturers of vibrating machines and plants refer to. The recognized reliability of Italian technology, the use of top quality parts, and the wide range of applications it is suited for make it an ideal choice. This state-of-the-art line of vibrating products guarantees optimal continual performance in all environments and conditions for many industrial sectors and ensures the flow of bulk material in applications such as bins, hoppers and silos. All MVSI series vibrators comply with the most recent IEC and EN international standards. For use in atmospheres with potentially explosive powders.



MVSI

### MVSS

The MVSS series has stainless steel casing and external components, ensuring total protection from liquids, dusts, aggressive substances and contaminants. This makes this line of vibrators ideal for use in chemical, petroleum chemistry, food pharmaceutical and all applications where the vibrator must be fully protected against aggressive substances.



MVSS

### CDX

CDX Explosion Proof Vibrators are designed for use in industrial processes involving potentially explosive atmospheres. The enclosure of the CDX Vibrator is thicker than average and has reinforced joints preventing the transmission of internal explosions to surrounding areas.



CDX

### MICRO

The MICRO series has been designed for continual industrial service in processes where a reduced centrifugal force and reduced overall vibrator size are required. MICRO vibrators are used in numerous applications in feeding, transport, screening, sizing, separation processes, compaction in the automatic machines used in the chemical industry, food industry, pharmaceuticals, packaging and automation in general.

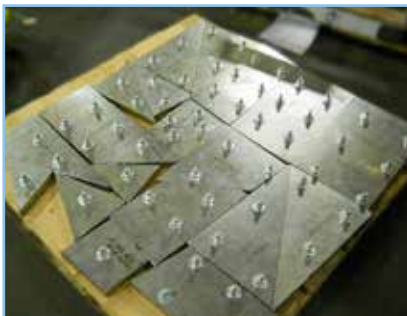


MICRO

### All Vibrators FM/ATEX Certified

Technical Consultations available for help in determining the correct vibrator for your application





## WEAR LINERS

Benetech offers a full line of wear resistant materials to handle all of the impact and abrasion challenges that come with handling bulk materials. Our years of material handling experience and technical expertise ensure that we engineer the right solution for you. Benetech is committed to helping you improve your material handling process and reduce your operating cost by providing optimal protection and superior wear life.

### Materials:

- Ceramic tile
- Stainless steel
- Chromium carbide
- UHMW tile
- AR-400
- White iron castings

### Applications:

- Chutes and hopper liners
- Fan housing liners
- Skirt liners
- Bunker liners
- Slider beds
- Screen plates
- Bucket liners
- Flop gate liners
- Fan cheek liners
- Storage bins
- Silo liners
- Wear strips
- Grizzly bars
- Truck bed strips

## MAGNA-PATCH

A fast, temporary patching solution for leaks and holes in steel, pipes and other processing equipment until a permanent repair can be made.

- Reusable- Comes with replaceable wear pads for repeated use
- Tension screw pushes the disposable wear pad tight against the leak
- Quick solution for spill containment
- Patented technology



- Magnets line the center of the pad, so you are able to utilize both sides



MP-611 (mini)- For use on smaller diameter piping and radii



MP-711- For use on larger steel surfaces such as bins and hoppers, chute



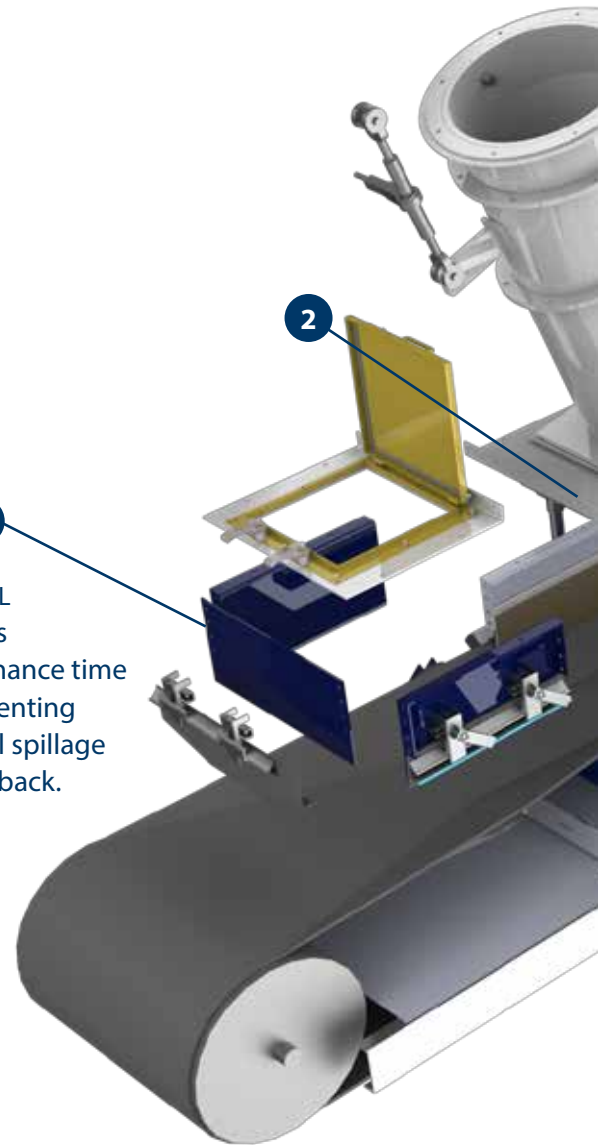
MP-811- For use on larger diameter piping and radii surfaces, tough holes in

# BENETECH MaxZone™

## MODULAR SKIRTBOARD SYSTEM

When budgets and time constraints do not allow for full system replacement, turn to the MaxZone Modular Skirtboard System-the economical solution for your transfer point needs. The modular design allows you to replace components without extended shutdowns. Installation is simple and affordable. This proven, innovative solution incorporates leading dust and spillage control technologies as standard components to help keep your operation clean, safe and efficient.

- Easy change out for all applications
- Simple installation
- No outage needed
- Minimal downtime
- Standard components include best-in-class spillage control technologies
- The system is available in standard sizes and lengths, based on the width and speed of your conveyor belt



**4**  
TAILSEAL  
Reduces maintenance time by preventing material spillage and rollback.

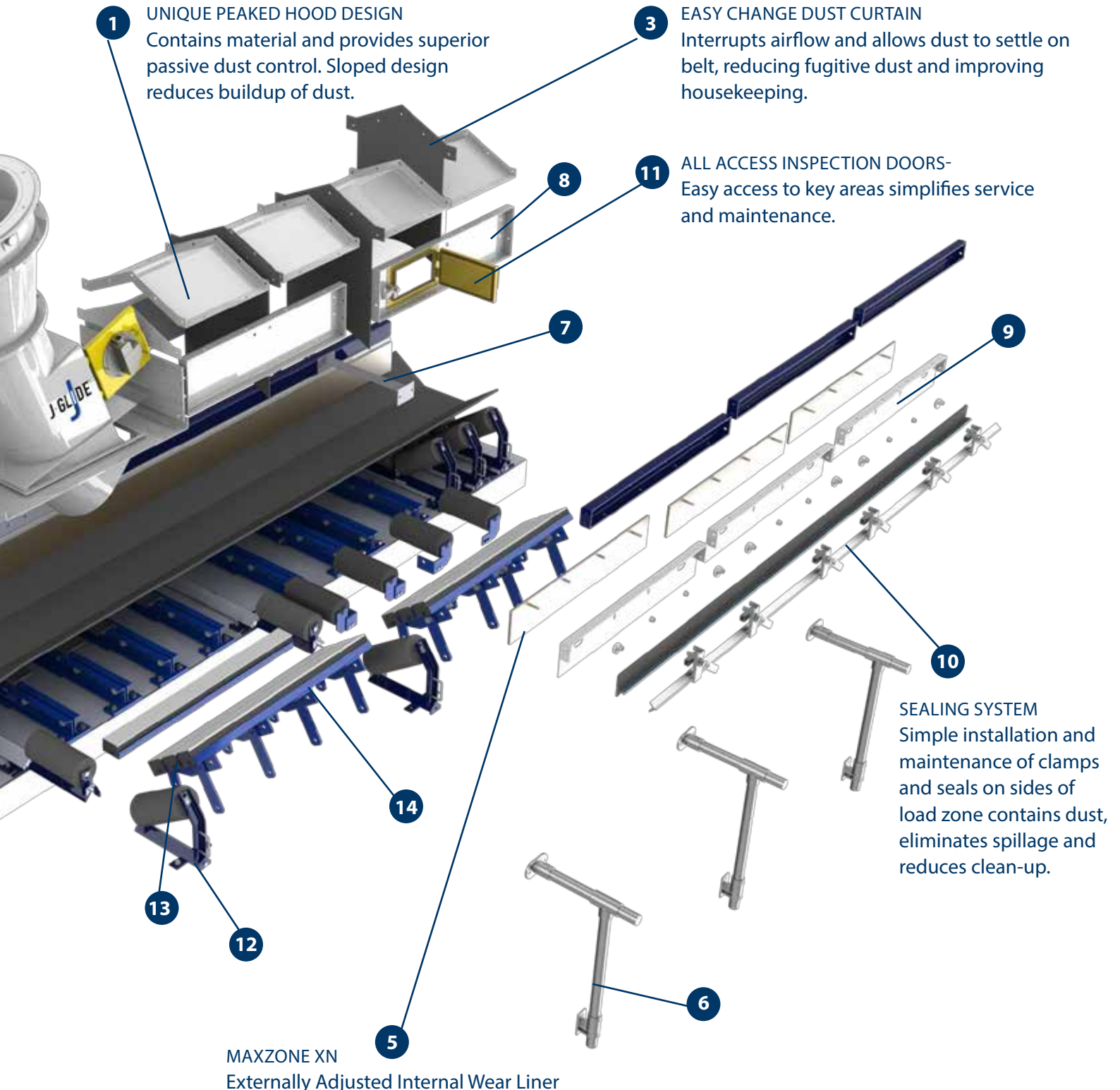
### Key

- |                              |                                       |
|------------------------------|---------------------------------------|
| 1 - Peaked Hoods             | 8 - Chute Extension                   |
| 2 - Flat Hood                | 9 - Chute Walls                       |
| 3 - Easy Change Dust Curtain | 10 - Clamps/Skirting Seal             |
| 4 - Tailseal                 | 11 - Inspection Door                  |
| 5 - Wear Liner               | 12 - Simple Slide Idlers              |
| 6 - Chute Supports           | 13 - Warrior Roll & Guide Support Bed |
| 7 - Center Supports          | 14 - Warrior Impact Bed               |

\*The MaxZone Modular Skirtboard System and all individual products that are part of its makeup are Patent Pending

## Economical Solution For Your Transfer Point Needs

Increase Plant Safety • Reduce Conveyor Maintenance • Increase Operating Efficiency

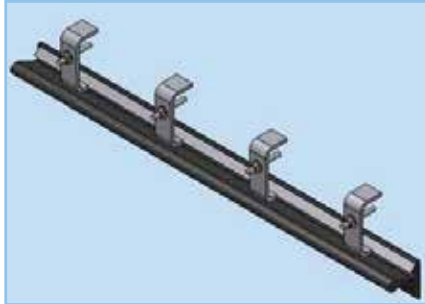


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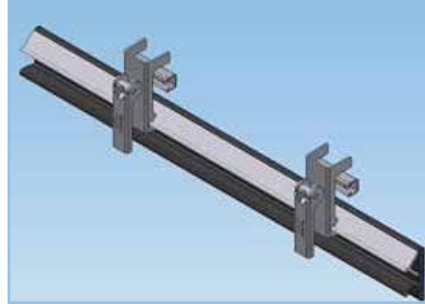
## Skirting System

### CLAMPS



#### Standard Clamp

- Designed to ensure skirt delivers consistent seal
- Economical solution for load point spillage
- Safe service access, long service life
- Bolt option comes in powder-coated, galvanized or stainless steel
- Swivel handle option comes in galvanized only
- Available in 4' and 6' modular sections



#### Quick Release Clamp

- Simple maintenance without the use of tools
- Skirting adjustments and replacements are quick and easy
- Comes in standard 1m and 4' modules
- Easy 4 step installation process
  1. Weld channel strut to skirt board
  2. Slide clamps through channel strut
  3. Slide on aluminum angle brackets
  4. Twist clamps to tighten, then pull down to lock

### SEALS

#### B-Seal



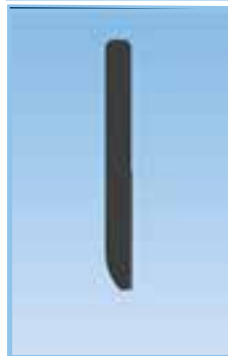
Superior seal with a great price

#### B-Plus Seal



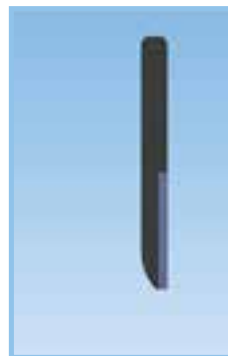
Polyurethane provides lower friction than rubber and lasts twice as long

#### Classic Seal



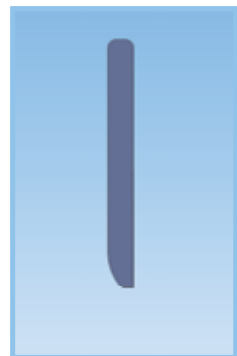
Simple seal to get the job done

#### Classic Plus Seal



Exceptional sealing when belt edge distance is minimal

#### Classic Poly Seal

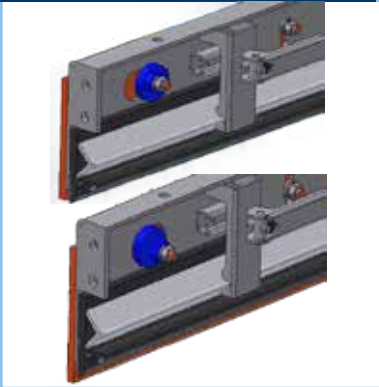


The solid polyurethane seal outlasts other products such as steel, UHMW and rubber

## Skirtboard Wear Liners

**X** External access:  
Easy maintenance & replacement

**N** Internal wear liner:  
Protects chute wall & sealing system



Simply turn the cams to adjust the wear liner

### THE MAXZONE XN

Externally adjusted internal wear liner

Installed in the conventional internal position, the MaxZone XN eliminates concern of material getting lodged between liner and chute wall. Economical cam upgrade allows for easy and precise adjustments. External access means there is never a need to enter the chute to remove liner or make adjustments.

- Simple and quick wearliner replacements
- No confined entry requirements
- Adjust liner in three easy steps:
  1. Loosen four liner bolts
  2. Turn cams until desired height of belt is met
  3. Re-tighten bolts

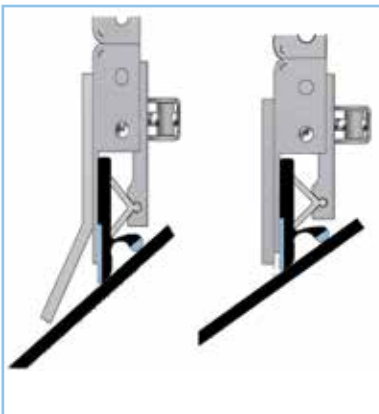
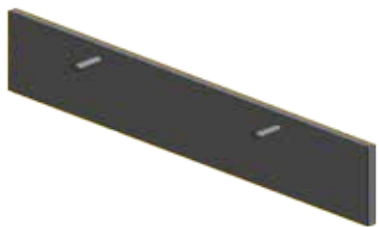
### THE MAXZONE SHIELD

Protective armor for your skirtboard. Our shields extend the life and efficiency of your chute work and seal your system. Since frictional and abrasive properties vary among bulk materials and operational requirements vary among belts, we offer different liner types and materials to meet your needs.

- Liners available in straight or deflector style
- 1/2" standard liner thickness
- Custom lengths and thicknesses available
- Plates available with factory-welded mounting studs for ease of installation

#### MaxZone Wear Liner Material Options

- AR 400
- UHMW
- Stainless
- Ceramic
- Chromium Carbide



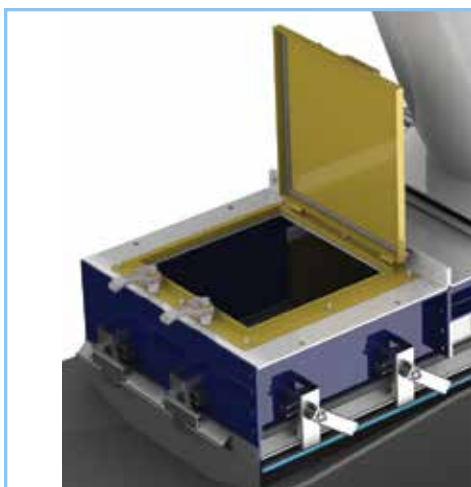
## Modular Skirtboard System



### EASY CHANGE DUST CURTAIN

The Easy Change Dust Curtain creates a banner to interrupt the airflow above the belt, allowing particles to settle on the belt. With fugitive dust emissions controlled, housekeeping is improved, your workplace is safer and your system runs more efficiently. Curtains are available in all belt widths and can be trimmed in the field for optimum fit.

- Easy to install
- 60 Duro-Rubber for longer wear life
- Minimizes airflow
- Allows dust to settle



### TAILSEAL

Tailseal prevents material from sliding off the loadzone by creating a seal at the end of the transfer point. The box is field-welded on the rear of the chute wall to match the transition angle.

- Can be retrofitted into existing transfer points
- Avoids "Belt Cleaner Effect"
- Installation is quick and easy
- Prevents material rollback
- Reduces maintenance time



### PEAKED HOOD

Benetech has a uniquely designed Peaked Hood assembly that replaces traditional skirtboards while providing superior passive dust control. The design provides multiple alternating inner baffles that don't seal off the chambers but slow down the air stream allowing dust to settle out. Other manufacturers seal each chamber which creates higher pressures for the skirt seal to handle.

Benetech's Peaked Hood design can incorporate the load chute of an engineered transfer system to provide the best available control technology; the "spoon" design. This will allow for center loading on the belt, better wear life of belt components and better flow.

Also available with flat or curved hood design

## Inspection Door



### Durable Technology to Fit Your Needs

Two ongoing concerns when it comes to maintaining your chutes and other equipment:

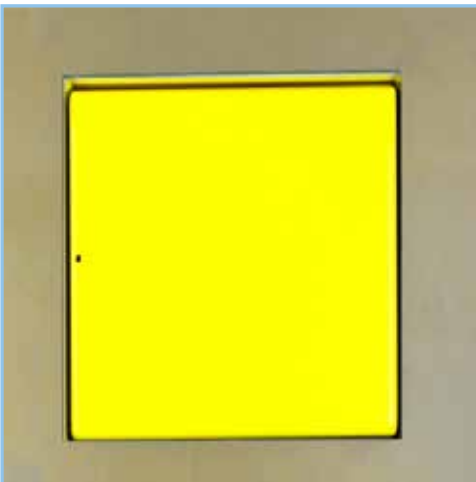
- Housekeeping to control buildup
- Servicing your belt cleaners and other components

Benetech's Inspection Doors allow you to tackle both of these necessary steps head on. These easy to install doors have a unique design that allows you to have full access for service and maintenance, while providing a dust tight seal. Benetech's Inspection Doors are a proven technology that help minimize airborne dust while providing easy access.



### Product Features

- Unique door deflector panel ensures material does not accumulate on door seal
- Grease fitting on pinned hinges that ensure no play or locking up
- Resilient door seals hidden in groove ensure long-lasting service
- Ergonomic cam-action, never seize closing latches, with adjustable tension to suit operation requirement
- Heavy duty handles that won't bend
- Easy to install, simple cut and weld or bolt on process



### Standard Sizes

- 7x14"
- 12x12"
- 12x18"
- 18x18"
- 18x24"
- 24x18"
- 24x24"

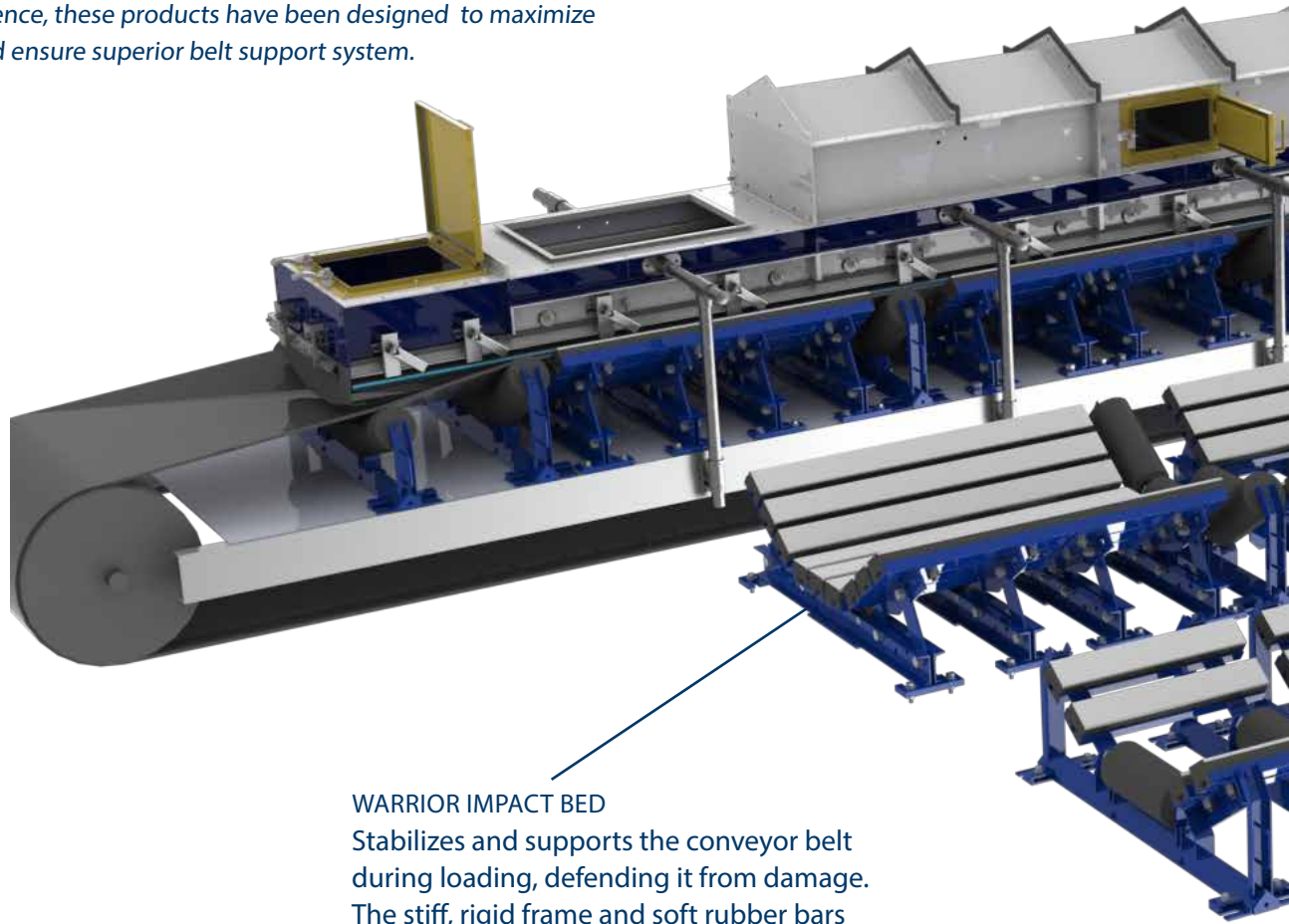
Custom sizes are also available

Benetech's standard door includes the patent pending Deflector pan which creates a flat interior surface when door is closed, ensuring less dust accumulation on seal.

# BENETECH MaxZone™

## BELT SUPPORT SYSTEM

*Without the proper belt support in place, optimum productivity is impossible to attain. Damaged belts, material spillage and increased downtime hurt your efficiency and make the job of moving material much harder than it needs to be. Turn to the MaxZone Belt Support System to take that worry away. Based on extensive knowledge and hands on experience, these products have been designed to maximize material flow and ensure superior belt support system.*



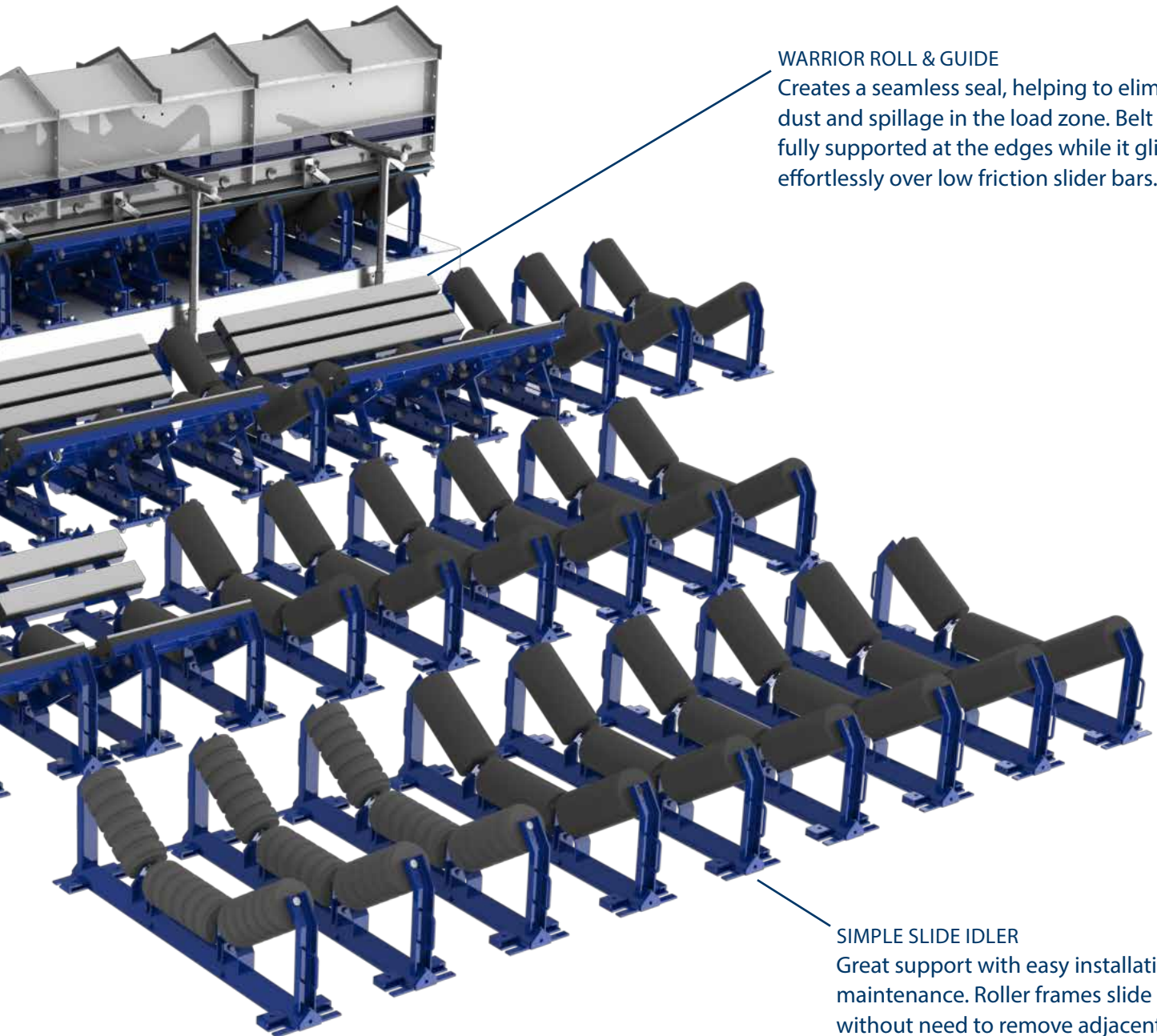
**WARRIOR IMPACT BED**  
Stabilizes and supports the conveyor belt during loading, defending it from damage. The stiff, rigid frame and soft rubber bars cushion the belt and absorb impact.

Every application is different. Our goal is to provide you with the most effective support system for your specific needs. Let a Benetech Application Engineer assess your load zone and determine the best support solution for you.



## Defend Your Load Zone and Maximize Efficiency

Eliminate Spillage • Decrease O&M Costs • Increase Belt Life



### WARRIOR ROLL & GUIDE

Creates a seamless seal, helping to eliminate dust and spillage in the load zone. Belt is fully supported at the edges while it glides effortlessly over low friction slider bars.

### SIMPLE SLIDE IDLER

Great support with easy installation and maintenance. Roller frames slide into place without need to remove adjacent idlers, resulting in ideal serviceability and improved safety.

## Warrior Impact & Roller Beds



### WARRIOR IMPACT BED

The Warrior Impact Bed stabilizes and supports the conveyor belt during loading, defending it from damage. The stiff, rigid frame and soft rubber bars of the Warrior cushion the belt and absorb impact. The end result is longer belt life, eliminated spillage and decreased O&M costs.

- Rubber bars absorb impact to protect conveyor belt
- Durable frame of steel supports impact on the bars
- “Fine-Tune” wing adjustment for optimum sealing
- Wings and center sections slide in and out for easy access
- Impact bar change outs are quick, keeping downtime to a minimum
- Meets CEMA design standards: No.502-1998 & 575-2000



### WARRIOR ROLL & GUIDE SUPPORT BED

The Warrior Roll & Guide Support Bed creates a seamless seal helping to eliminate dust and spillage in the loadzone. The effective design of the Roll & Guide Bed utilizes low friction, UHMW top cover slider bars on the wing sections and rollers in the center. As a result, the conveyor drag is minimized while the belt is fully supported at the edges- right where it is needed. The adjustable wing sections ensure a flat level surface for the conveyor belt and the loadzone giving the sealing system the ability to achieve optimal performance.

#### Benefits

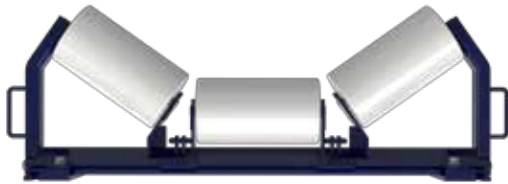
- Easy to install and maintain
- Increases skirtboard life
- Removes gaps between skirtboard and seal
- Eliminates crimping of interior skirt liners

#### Features

- Adjusts to fit trough angles
- Low friction bars
- Center standard or impact rollers



## Idlers



### SIMPLE SLIDE IDLER

Installation and maintenance are easy when you use Benetech's Simple Slide Idlers. Roller frames slide into place without the need to remove adjacent idlers, resulting in ideal serviceability and improved safety. The compact size of the frames allows for placement even in confined spaces, assuring that you are getting the belt support you need.

#### Great in Confined Spaces

- Roller Frames only need 8" (200mm) of width when using 6" (150mm) rollers

#### Easy Installation and Service

- No need to raise belt or remove adjacent idlers

#### Improved Safety

- Slide-out/slide-in roller frames allow for safe maintenance
- Available with standard or wide base frames
- Come in any belt width and troughing angle
- Utilize impact or steel rolls
- CEMA class A, B,C,D,E or F

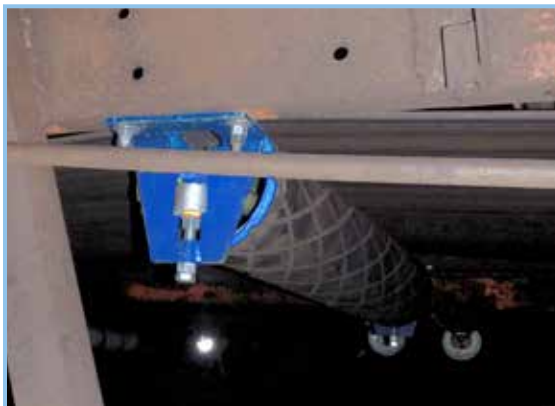


### SUREGUIDE® TRAINING IDLER

Widely used in the mining industry and other conveyor related industries, the SureGuide responds instantly to the misalignment of the belt and does so without special modifications to the structure.

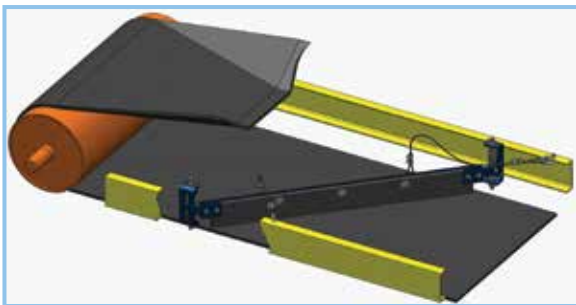
Frame and guide rollers are often the cause of belt damage, which reduces the lifetime of the belt. The SureGuide requires no maintenance and fits into a standard drop bracket. The SureGuide belt return training idler can be manufactured to suit all belt sizes in operation. Special design requirements, such as specific shaft dimensions and lengths are possible at little or no additional charge.

- Saves money
- Prevents belt and structural damage
- Reduces downtime



Adjustable tension brackets assure proper tension for maximum belt

## Specialty Cleaners



### DIAGONAL PLOW

#### **Tough and Efficient**

Benetech's Diagonal Plow is an economical way of keeping the tail pulley and bottom cover of the belt free of stray material. This design can be used to discharge fugitive material from either side of the conveyor and is built of a tough steel structure to hold up in even the harshest conditions. This simple mechanism ensures that all potentially damaging material is removed, keeping your operation up and running with minimal maintenance and inspection.

#### **Features and Benefits**

- Rugged, reliable and efficient
- Blades available in rubber or polyurethane
- Versatile, with easy installation and minimal maintenance
- Equipped with double steel cables for extra safety
- Blades lightly pressed by spring tensioner onto the belt
- Keeps the return pulley and the internal face of the belt free from fugitive material
- Prevents material from being pulled through the return pulley, keeping your operation up and running

#### **Blade is available in different heights:**

- 4.5"
- 6.5"
- 8.5"

## Specialty Cleaners



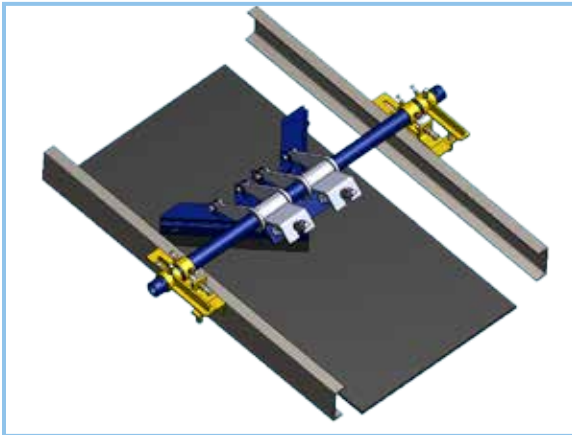
### V-PLOW

#### Effective design. Simple installation

Conventional V-Plow designs are tensioned as one section, leaving room for material to buildup between the tail and the pulley. Benetech's V-Plow design has overlapping blades with dual tensioners to ensure an optimal cleaning performance on even the most challenging belts.

#### Features and Benefits

- Dual overlapping blades available in rubber or polyurethane in 6" or 8" heights
- Easy two-pin blade replacement, no bolts or tools needed
- Individually pressurized for a gentle ride on the undercarriage of the conveyor
- External mount/adjustment brackets are mounted to the stringer so all the adjustments can be made simply and safely from the side of the conveyor
- Symmetric design keeps belt drag even, preventing belt mis-tracking in the tail section of the conveyor



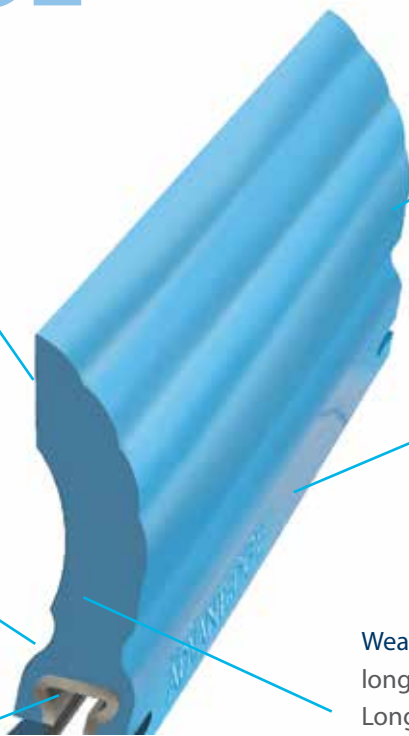
#### Blade is available in different heights:

- 6"
- 8"

A Harder, stiffer urethane formulation - provides cleaning efficiency and extended wear-life of a metal blade without the disadvantages.

Flex Arcs- Provides blade flexibility for better belt contact, higher wear resistances and lower friction.

Retrofits to competitive brands -Sizes available to refit any major brand cleaner with the benefits of the AdvantEdge blade.



Wave Profile - Ensures a variable attack angle to prevent tip bull-nosing and smoothes out pressure changes from the spring tensioner. Visual wear indication - 25/50/75/100%.

Worn out blade check - When the bubbles are gone the blade is ready to change out. Patent-pending design uses more of the blade's urethane than any blade on the market. Results: less waste, less service.

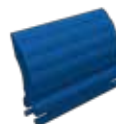
Wear length - Our centerline wear path is longer than the competition. Longer life line = Longer life.

## REPLACEMENT BLADES OPTIONS



### Hot Pink High Temperature Urethane:

- For exposure to intermittent temperatures up to 450° F (232° C)
- Materials: Clinker
- Temperature Rating: -40° to 375° F (-40° to 190° C)



### Navy Blue Chemical-Resistant Urethane

- Materials: Limestone
- Temperature Rating: -40° to 160° F (-40° to 70° C)



### Baby Blue Standard

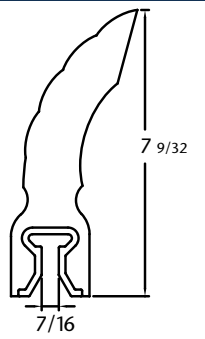
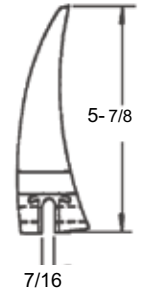
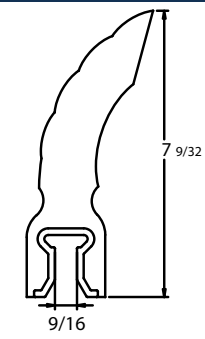
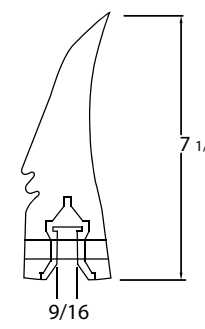
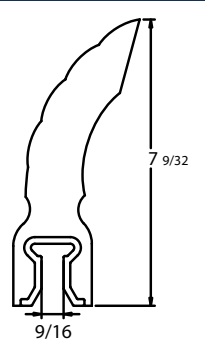
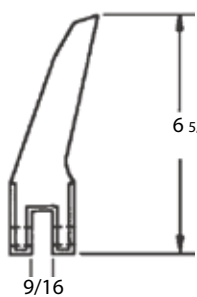
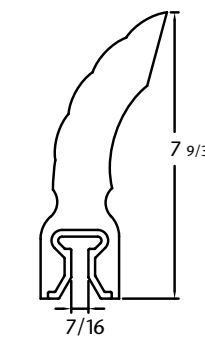
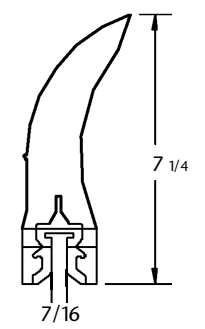
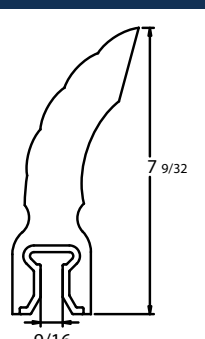
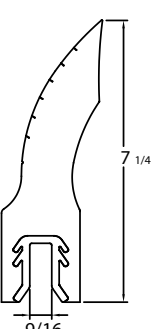
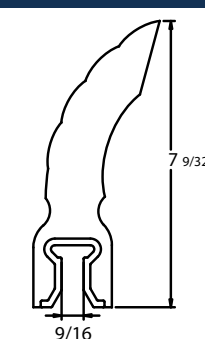
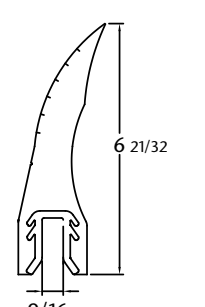
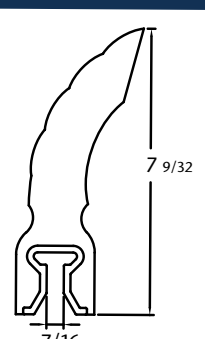
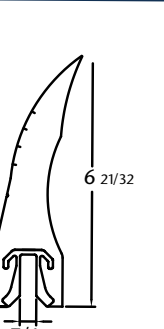
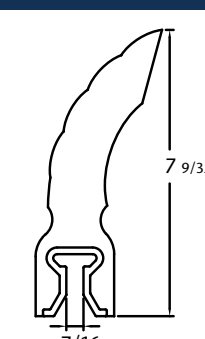
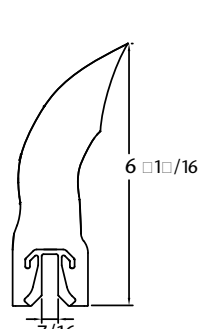
- Appropriate for 90% of applications
- Acid Resistant
- Materials: Coke, Coal, Steel/Ore.
- Temperature Rating: -20° to 160° F (-30° to 70° C)



### Yellow Economical

- Materials: Gravel, Dry Sand
- Temperature Rating: -20° to 160° F (-30° to 70° C)

Replacement Blades Available for Other Manufacturers

<p>AdvantEdge Blade</p> 	<p>Arch Gordon Saber®</p> 	<p>AdvantEdge Blade</p> 	<p>Argonics Raptor</p> 
<p>AdvantEdge Blade</p> 	<p>ASGCO®Skalper®IV</p> 	<p>AdvantEdge Blade</p> 	<p>Flexco Conshear</p> 
<p>AdvantEdge Blade</p> 	<p>Martin®HD QC #1</p> 	<p>AdvantEdge Blade</p> 	<p>Martin®MD QC1</p> 
<p>AdvantEdge Blade</p> 	<p>Martin®QC #1</p> 	<p>AdvantEdge Blade</p> 	<p>Martin®PitViper</p> 

# MAXCLEAN PRIMARY BELT CLEANERS

## BEP1



### Compact Design

- Mounts easily in tight chute applications
- Easy to install and maintain with one pin removal
- Blade can be positioned on the head pulley in a range of locations

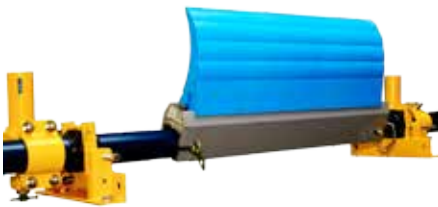
### AdvantEdge Blade Technology

- Unique wave profile creates a varying attack angle reducing blade edge bull-noising
- Our proprietary urethane formulation and hardness provides “best-in-class” cleaning using a hard edge, while the design and formulation ensure long blade life
- Blades easily retrofit to other cleaner brands

### Self-Contained Torsion Tensioner

- Simple to retension
- Self adjusting to maintain consistent cleaning as the blade wears

## BEP2



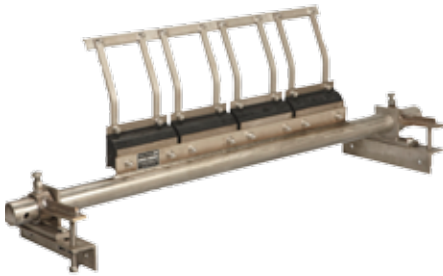
### Heavy Duty, Urethane Blades

- Blades are 6”w x 13”h to work with the contours of the belt for better cleaning performance
- Two piece blade cartridge splits for easy blade removal/replacement
- Blades can be pre-installed in the cartridge for easy installation on the cleaner
- Cartridge can be quickly and safely removed for blade replacement from either side of cleaner

### Dual Spring Tensioners

- Dual mechanical springs provide consistent force across the width of the blades
- Reduces the need for frequent blade re-tensioning maintenance
- A visual tension check allows easy inspection to see when blade tension is low

## BXP1



### Stainless Steel Construction

- Corrosion resistant 304 Stainless Steel construction for long service life and performance in harsh applications
- Excellent for chemical, higher temperature and high performance applications

### Tungsten Carbide Blades

- 8” blades and rubber cushions can move easily to conform to the changes in the belt cover/surface

### Cleaner Location

- Multiple suspension arm sizes allow the cleaner to be custom fit in the optimum location on the pulley and can fit in applications where space is limited
- Install one on each pulley and the cleaners will work when the belt is running in either direction

**BENETECH**  
**MaxClean**

The Benetech MaxClean product line is designed to maximize user benefits and extend the life of your belt conveyors.

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# MAXCLEAN SECONDARY BELT CLEANERS

## BES1



### Unparalleled Blade Holder Keeps the Center of the Blade on the Belt

- Blade arcs into the center as it wears to maintain continuous blade-to-belt contact
- Blade pivots and bends around central pivot, following and conforming to uneven worn belts

### One-Piece Rubber Blade with Tungsten Carbide Tips

- Blade flaps ensure carryback slides away from the blade and doesn't build up on the blade or frame
- Also available in solid rubber for effective water removal
- Rosta joint tensioner to absorb sever impacts

### Low Profile Cleaner Design

- Works great in confined space chutes
- Overall height is just 5"

## BES2



### Special Blade Cartridge Design

- Secondary cleaner for one direction or reversing belts
- Allows blade to move down and over to reversing position
- Tungsten carbide blades are mounted in SBR rubber cushions for independent movement on the belt
- Three inch wide cushions and blades
- Cushions are individually actuated; allows each blade to self-adjust to the belt as it wears

### Safe to Service

- All blade tensioning can be done safely from the sides of the conveyor
- Pull-out blade cartridge design ensures worn blades can be easily removed

## BXS1



### Patented Floating Cushions on a Fluid-Filled Tube

- Segmented cushions/blades automatically adjust to the contour of the belt for uniform cleaning
- Pressure equilibrating center chamber moves blades up and down during operation to provide optimum blade/belt contact

### Can be Mounted Directly Under Head Pulley

- Fits in confined space and drops carryback directly into the chute

### Stainless Steel Construction

- Holds up to high acidity applications
- Long service life

### UHMW Cushion/Blade Shields

- Sheds carryback quickly away from the cleaner
- Protects cushions from material buildup

## BXS2



### 4" Blade with Built-In Torsion Arm Segments

- Arm segment allows blade movement to clean even worn belts
- 4" width allows blades to independently flow on contours of the belt
- Built-in shields keep blades free of material buildup

### Exclusive Dual Torsion System

- Segments in each blade keep blade pressure consistent and allow blades to respond/react individually
- Tensioners provide extra shock absorption when needed
- Unique blade designs for one direction and reversing belts

## BXS3



### High Efficiency Secondary Cleaner

- Compact enough to fit in most chute applications
- Sits close enough to the pulley to ensure the material fines are directed back into the regular material flow
- Superior wear resistance
- Equipped with stainless or carbon steel individual blades
- Durable tungsten carbide inserts
- Dual tensioning for better pressure distribution



## PRIMARY BELT CLEANERS

	BEP1				BEP2		BXP1	
<b>Belt Speed (fpm)</b>	1000				1200		1000	
Head Pulley Diameter	in	mm	in	mm	in	mm		
*Includes pulley, lagging & belt	12 to 15	305-378	18-36	457-962	0-47	0 to 1200		
<b>Tensioner Options</b>								
Dual Rosta Joint	YES				NO		NO	
Dual Spring	YES				YES		NO	
Dual Linear Mount Block	NO				NO		YES	
Dual Rotational Block Mount	NO				NO		YES	
Temperature Rating	°F	°C	°F	°C	°F	°C		
	-40 to 180	-40 to 82	-40 to 180	-40 to 82	-30 to 180	35 to 82		
Durometer	87A				90A		N/A	
<b>Blade Material</b>								
Blade Element	POLYURETHANE				POLYURETHANE		RUBBER	
Blade Tip	POLYURETHANE				POLYURETHANE		TUNGSTEN CARBIDE	
Belt Clip Compatible	YES				YES		NO	
Optimal Belt Segmented Industry	CFP/SM/CMT				SM/P/M		ALL	
CFP-Coal Fired-Power								
SM- Steel Mills								
CMT- Cement								
P- Port Facilities								
M- Mining								

## PRIMARY AND SECONDARY TENSIONER OPTIONS



### Dual Rosta Joint

- Self-contained Tensioner
- Easy to set up at installation
- Simple to retension
- Self-adjusting to maintain
- Provides consistent cleaning pressure as the blade wears



### Dual Spring

- Provide consistent force across the width of blades
- Reduce the need for frequent blade retensioning
- Unaffected by extreme temperatures
- Available in two sizes



### Dual Rotational Block Mount

- Preload tension to the individual blades for consistent blade pressure
- Requires minimum blade retensioning maintenance
- Simple to adjust threaded rods set optimum blade tension
- Tensioning maintenance can be done safely from the sides of the chute

SECONDARY BELT CLEANERS

BES1		BES2		BXS1		BXS2		BXS3		BXS3	
1000		800		800		1000		1000		1200	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
YES	NO	NO	YES	NO	YES	YES	NO	NO	YES	NO	NO
NO	YES	NO	NO	YES	NO	NO	YES	NO	NO	YES	NO
NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
-30 to 180	-35 to 82	-30 to 180	-35 to 82	-30 to 180	-35 to 82	-30 to 180	-35 to 82	-30 to 180	-35 to 82	-30 to 180	-35 to 82
65A (Rev)		N/A		N/A		N/A		N/A		N/A	

RUBBER	*RUBBER / TUNGSTEN CARBIDE	RUBBER/FLUID	RUBBER	RUBBER	RUBBER
TUNGSTEN CARBIDE/ RUBBER	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
YES	NO	YES	YES	YES	YES
CFP/SM/CMT	SM/P/M	ALL	ALL	ALL	ALL



**Dual Rosta Arm Tensioner**

- Allow the blade to conform to the belt and move away for obstructions
- Threaded rods easily move the cleaner up to the belt or down for maintenance



**Dual Linear Spring Tensioner**

- Automatically provide self-adjusting blade tension
- Can be retensioned with a few turns of the adjuster nuts
- Provide shock absorption for the blades if needed



**Dual Linear Block Mount**

- Easy to install, setup and inspect
- Requires minimal maintenance
- Any work on the tensioner can be safely done from the sides of the conveyor
- Available in two sizes



## PLANT SERVICES & ASSESSMENTS

Our Plant Services program is designed to assist customers in keeping critical equipment running effectively and safely while minimizing down time. Improper maintenance is a leading cause for spillage, material waste, fires, explosions and unscheduled outages which all have a large impact on plants and personnel. At the same time, governmental regulations are demanding more than ever to ensure safe practices are in place to reduce combustible dust and protect employees. The Benetech assessment team offers comprehensive site and operational assessments with the capability to assure direction related to improving productivity and safety.

A partnership with Benetech Plant Services Team can be enormous help. Utilizing Benetech's field experts for clean up and maintenance is cost-effective and can mean the difference between governmental compliance and non-compliance. Our professionals are fully trained on installing and maintaining conveyor components and belt cleaning products to ensure your systems run effectively. Benetech's Plant Services Team can help plants operate with minimal dust and spillage creating a safer, more efficient work environment for all.

Benetech's Plant Services program is designed to assist customers in maintaining and keeping critical equipment running effectively and safely while minimizing down time. As your partner, our complete material handling services include:

- Belt Cleaners
- Conveyor Components
- Belt Support
- Chutes
- Pulleys
- Idlers
- Wear Liners
- Skirtboards
- Belt Trackers
- Dust Suppression
- Dust Collectors
- Safety Systems
- Complete Conveyor Audits
- Air/Dust Seals
- Training/Installation

## ENGINEERING SERVICES

Benetech's engineering department supports the design and application of systems and equipment associated with our core dust mitigation product line. In addition, Benetech can provide associated "balance-of-plant" and specialty engineering services in support of our clients' project requirements. Benetech designs are developed in accordance with the latest safety standards and most current version of CEMA guidelines.

### Bulk Material Transfer Systems

- Material flow analysis (Discrete Element Modeling)
- Modeled (3D) material transfer system designs
- Dust containment (sealing) system designs

### Dust Suppression Systems

- Process
- Mechanical
- Instrumentation & controls
- Commissioning & start-up assistance

### Dust Collection Systems

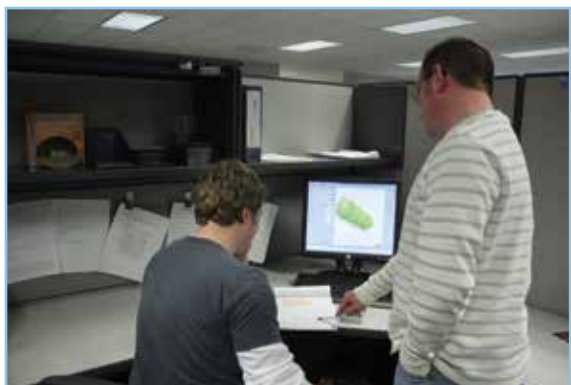
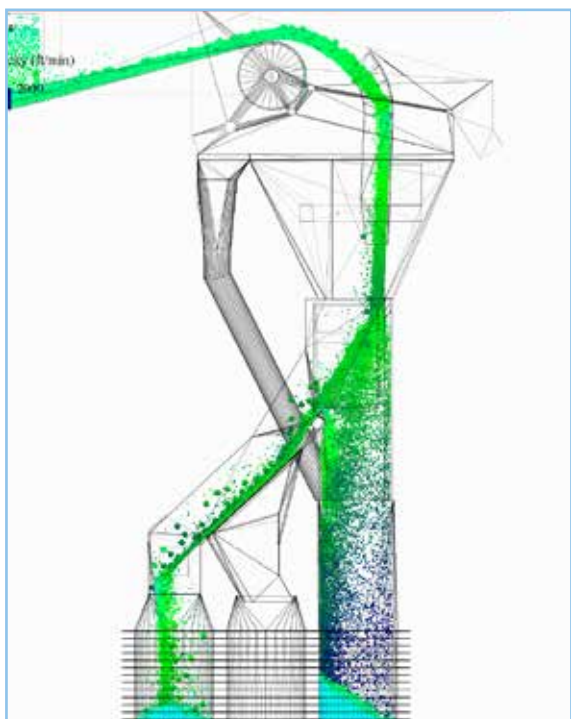
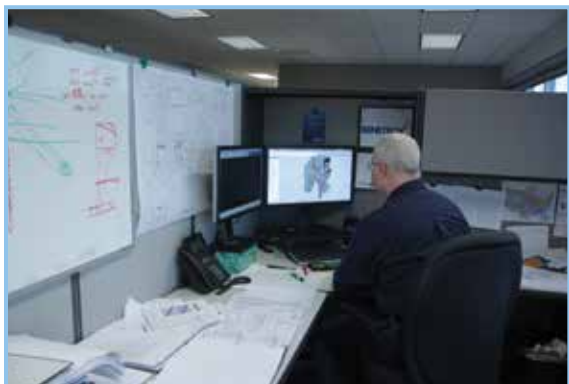
- Process
- Mechanical
- Instrumentation & controls
- Commissioning & start-up assistance

### Engineered Washdown Systems

- Process/application
- Mechanical/hydraulic/piping
- Instrumentation & controls
- Commissioning & start-up assistance

### Balance-of-Plant/ Speciality Services

- Optimized integration of various dust mitigation strategies
- Plant-life-cycle analysis
- Structural evaluations/analysis
- Structure/equipment foundation designs
- Instrumentation & control designs
- Network and PLC programming
- Electrical classification review



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