BENETECH®

SAFE MATERIAL HANDLING SOLUTIONS

Belt Cleaners

Dust and spillage mitigation solutions for your industry.

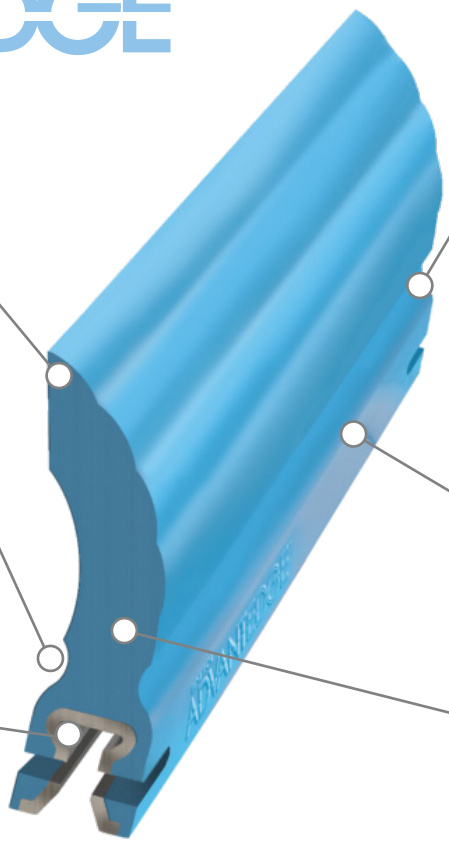
Belt Cleaners

BENETECH ADVANTEDGE™

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. This patented 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.

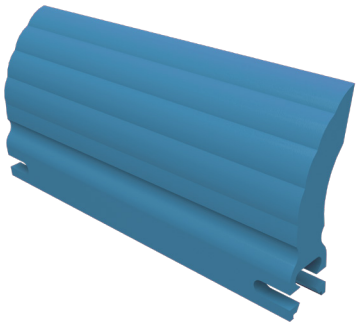
Retro Fit Blades

We use only premium urethane resins along with specific additives to achieve a superior blade product. Our replacement blades are specifically engineered to eliminate carryback by removing debris from the belt's surface. They are field tested and proven to withstand the most severe conveying environments. Blades are offered for the full line of belt cleaners.

Our AdvantEdge blade system will match any competitors' blades:

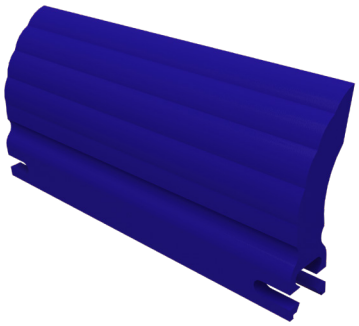
- Arch Gordon Saber
- Argonics Raptor
- ASGCO Skalper IV
- Flexco Conshear
- Martin MD QC1
- Martin HD
- Martin HD QC1
- Martin QC1
- Martin Pit Viper
- Superior Exterra

Belt Cleaners



Standard Acid-Resistant

- Material: Coke, Coal, Steel/Ore, Refuse, Bauxite
- Temperature: -20˚ to 160˚F (-30˚ to 70˚C)
- Acid Resistant
- Appropriate for 90% of applications

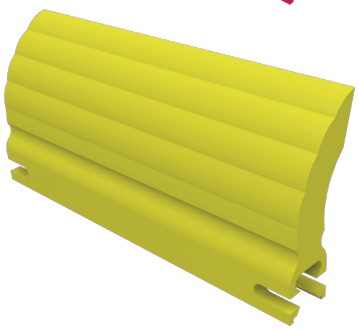


Chemical Resistant

- Material: Limestone
- Temperature: -40˚ to 160˚F (-40˚ to 70˚C)
- Chemical Resistant

High-Temperature

- Material: Clinker
- Temperature: -40˚ to 375˚F (-40˚ to 190˚C)
- Acid Resistant
- Intermittent Temperatures up to 450˚F (232˚C)



Abrasion Resistant

- Material: Aggregate, Rock, Stone, Glass, Wood Chips, Gravel, Sand
- Temperature: -20˚ to 160˚F (-30˚ to 70˚C)

Belt Cleaners

Primary Cleaners

The primary belt cleaning system is installed on the face of the head pulley to aid in the removal of material sticking to the belt after the main material stream has been discharged from the belt. Any remaining material sticking to the belt can be carried by the return side of the belt to other areas of the conveyor.

This "carry-back" is then deposited in piles under the conveyor, sticks to return idlers, sticks to take-up pulleys, sticks to bend pulleys, and sticks to or covers anything else it comes into contact with.

Problems arising from this carry-back can range from mistracking of belts due to uneven buildup of material on idlers, to premature belt wear from the belt being dragged through material piles and into conveyor structural members, and belt fires from the belt being dragged through material piles and even complete catastrophic belt failure from pulleys seizing.

BEP1 Primary

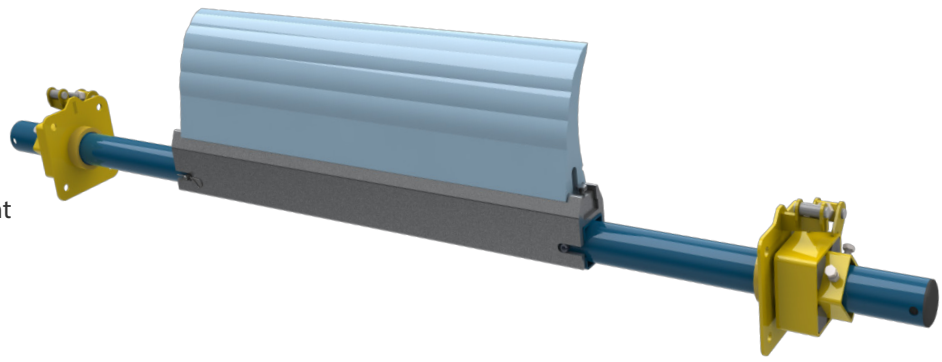
- Compact Design
- Easy Installation
- Simple Re-tension

Data
Belt Speed: 1000 ft/min
Head Pulley: 12"-15"
Tensioners: Rosta, Spring, Pneumatic

BEP2 Primary

- Compact Design
- Easy Installation
- Simple Re-tension

Data
Belt Speed: 1200 ft/min
Head Pulley: 18"-36" (457-962 mm)
Tensioners: Spring
Application: Heavy Duty, 13" Blade Height



Why Use Benetech Primary Belt Cleaners?

BEP1

Blade thickness and curvature allow the blade to belt contact to remain at about one inch throughout the blade's life. This minimum blade to belt contact allows better cleaning efficiency throughout the blade life. Conversely, our competitor's blade to belt contact is significantly thicker as the edge wears and reduces cleaning efficiency, and as these blades wear, more blade to belt contact causes more heat and decreases blade life.

Flex-Arcs on our blade give our blade flexibility for a couple of reasons. First, most head pulleys are not exactly round and wobble a bit. Belt cleaners need to have the flexibility to account for this wobbling and account for anything on the belt. Second, because of where these Flex-Arcs are located on our blade, the blade tip stays in constant contact with the belt, increasing the cleaning effectiveness of the blade. Competitors' flexibility is built into their blades by starting the tip of the blades thinner and getting thicker toward the bottom of the useable blade, thus more blade to belt contact and reducing cleaning efficiency.

Benetech blade urethane is harder than most blades on the market. More rigid urethane gives you a slippery urethane, reducing the friction to the belt when properly tensioned and giving a better cleaning efficiency.

The wave profile of the blade keeps a sharp edge on the blade throughout the blade's life. As a result, the cleaning edge stays the same throughout the blade's life to help with cleaning efficiency.

Benetech provides dual tensioners for all primary belt cleaners, no matter the belt width. The use of dual tensioning provides even blade to belt contact across the entire blade, preventing the "smiley face" effect seen by competitors' blades. Simple physics shows why dual tensioning should be used on all belt cleaners.

Belt Cleaners

Secondary Cleaners

Typical belt cleaning systems include one primary belt cleaner and more than one secondary belt cleaners. The secondary belt cleaner is installed on the return side of the drive pulley. It is used to remove the remaining material left from the primary cleaner of the carry-back sticking to the conveyor and return the fugitive material into the product flow.

This carry-back is then deposited in piles under the conveyor, sticks to return idlers, sticks gravity take-up pulleys, sticks to bend pulleys, and sticks to or covers anything else it comes in contact with. Secondary belt cleaners can be installed anywhere on the return side of the conveyor but are typically installed immediately after the belt leaves contact with the drive pulley. This keeps the material removed by the secondary belt cleaner in the dribble chute area of the transfer point chute work, where it can still be reintroduced back into the main flow of material.

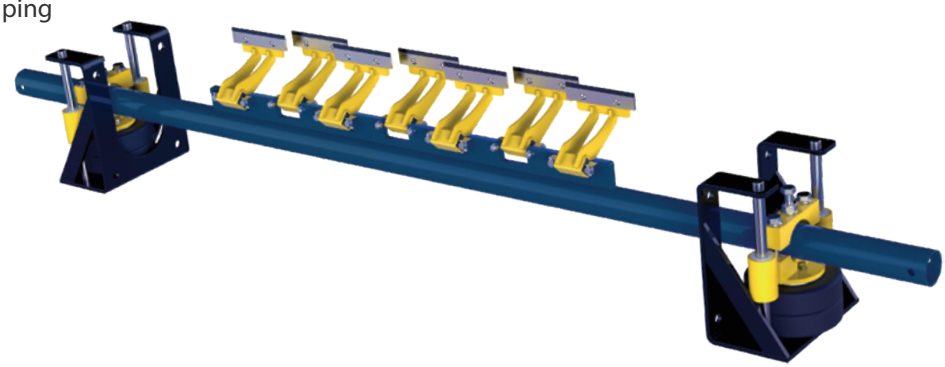
Secondary cleaners should be installed where the conveyor belt is under reasonably high tension, providing a level/taut surface for the secondary belt cleaner to be in contact with.

BES1

- Excellent for cupped or worn belts
- Equal pressure across belt
- Continuous Belt-to-Blade Contact
- Blade Options: Rubber, Tungsten
- Belt Speed: 1000 ft/min
- Tensioners: Rosta, Pneumatic

BXS5

- Superior wear resistance
- Maintains belt-to-blade contact
- Overlapping blades for efficient scraping
- Blade Options: Tungsten, Ceramic
- Belt Speed: 1200 ft/min
- Tensioners: Rosta, Pneumatic



Why Use Benetech Secondary Cleaners?

BES1

- Easy blade replacement
- Simple tensioning system
- The lowest profile of all of our secondary cleaners
- Allows for installation in very tight spaces.

The one-piece blade makes for easier blade replacement. There is a center pin that is removable to replace the blade. This also gives better cleaning efficiency, no spaces between blades. The center pin holds the blade onto the shaft; the blade will conform to some irregularities in the belt and minor belt cupping. With a simple tensioning system, the Dual Rosta Arm tensioner will allow clips to pass through as long as whatever is on the belt isn't protruding excessively high. Simple linear tensioning by a threaded rod is tensioned once for the blade's life.

BXS5

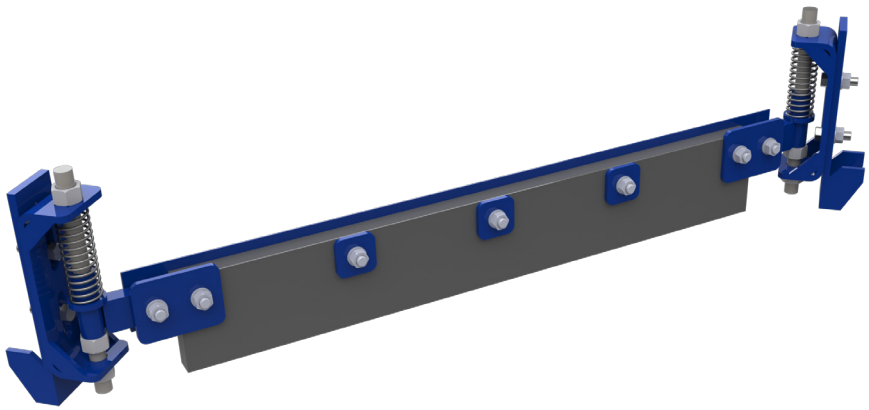
- Aggressive heavy duty cleaner
- Several blade options are available
- Blades overlap for cleaning efficiency
- Simple linear tensioning system

Individual blades mounted on Rosta joints to adapt to worn belts and allow belt clips to pass through. The high-efficiency blades with superior wear resistance maintain blade-to-belt contact. Double tensioning equipment gives better pressure distribution. Ideal for use on spliced belts.

Specialty Cleaners

Diagonal Plow

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 of conditions. This simple mechanism ensures that all potentially damaging material is removed, keeping your operation up and running with minimal maintenance and inspection.



V-Plow

The Benetech V-Plow is a simple and reliable design. Its sturdy "V" frame attaches to the mounting pole at two points, with a third point attached to an adjustable arm. This arm allows the Plow to be height adjusted in small increments to fine-tune the installation.

Specialty Cleaners

Washbox

The Wash Box is designed to provide cleaning efficiency by washing and cleaning the conveyor belt. Where contaminated products or regulations are of concern, the Wash Box will remove carry-back while cleaning the conveyor belt of any residual material.

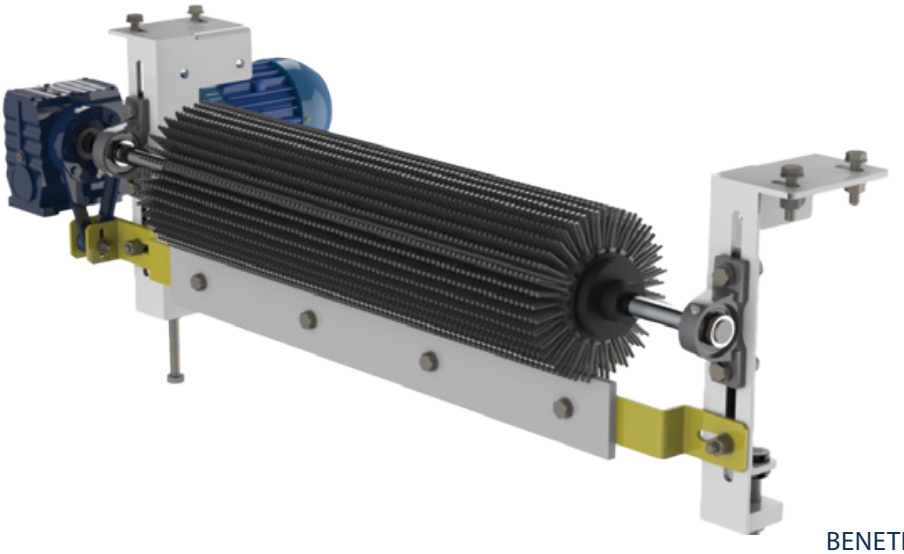
The Wash Box is built with stainless steel, guaranteeing a longer life of the product by reducing rusting or oxidation, equipped with two of Benetech's best-in-class BXS5 secondary cleaners, high-pressure spray nozzles for removing waste, and rollers to remove excess water and to dry the belt.

The purpose of the Wash Box is to guarantee the cleanliness of the Conveyor Belt. As soon as the equipment enters the cleaning system, the belt passes through the spray nozzles to moisten all residual material, as the secondary cleaners get to work removing the excess material and disposing of any waste through the funnel drainage basins. The conveyor belt returns washed and free of residual material.

Motorized Brush Cleaner

Typical plain conveyor belt cleaning systems include a blade-type belt cleaner. When a chevron conveyor belt is used, transient debris is trapped in the recessed areas and cannot be reached by a blade type cleaner. This debris, known as carry-back, is then deposited in piles under the conveyor, sticks to return idlers, gravity take-up pulleys, bend pulleys and covers, or anything else it comes in contact with.

The Benetech Motorized Brush Cleaner is one solution to reducing this transient debris. Rotary brush cleaners can be installed anywhere on the return side of the conveyor but are typically installed immediately after the belt leaves contact with the drive pulley. This keeps the material removed by the rotary brush cleaner in the dribble chute area of the transfer point chute work, where it can be reintroduced back into the main flow of material.



Belt Cleaner Tensioners

A tensioner is used on primary or secondary cleaners. The tensioners maintain precise and consistent tensioning on the blade, resulting in a constant cleaning pressure throughout the entire lifespan of the blade. Make sure that your conveyor belt has the proper tension for accurate tracking. Proper tension and tracking ensure your conveyor's life and lead to less downtime. Tensioners take up slack and allow you to adjust the tension on your conveyor belt. The most effective approach is achieved through a combination of cleaner and tensioner designs.

The investment for effective belt cleaning is justifiable on direct cost reduction for clean-up costs and extended component life. Two styles of tensioners are available for use on a pre-cleaner:

Rosta Tensioner

- Small footprint for easier installation around head pulleys
- Easy for installation, the design allows the tensioner to be rotated for ease of access/tensioning
- Four rubber Rosta's on each tensioner for blade pre-load gives constant tension throughout blade life
- The simplicity of the tensioner, one adjusting bolt to tension blade

Spring Tensioner

- The simple design allows ease of installation
- Typically used in cold weather climates
- One bolt tensioning for ease of use

Rosta Tensioner

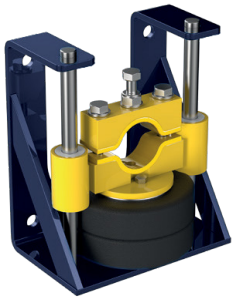
- Self-contained tensioner
- Easy to set up at installation
- Simple to re-tension
- Self-adjusting to maintain
- Provides consistent cleaning pressure as the blade wear

Spring Tensioner

- Provides consistent force across the width of blades
- Reduces the need for frequent blade re-tensioning
- Unaffected by extreme temperatures
- Available in two sizes

Self-Adjusting Pneumatic Tensioner

- Maintains precise and consistent tensioning on the blade, resulting in a constant cleaning pressure throughout the entire lifespan of the blade
- Automated via the control panel
- Reduces maintenance hours and labor often required to maintain optimum blade position and pressure with other tensioner types
- Extends life of both the belt and the cleaner



Self-Cleaning Conveyor Capsule (SC3™)

The Benetech Self-Cleaning Conveyor Capsule (SC3™) is a revolutionary technology developed by Benetech for Total Dust Management (TDM®). The innovative SC3™ system provides a highly favorable life-cycle cost compared to other enclosed conveyor options through extended belt life, readily available standard components, reduced maintenance frequency, ease of service, reduced risk, and greater personnel safety.

Dust-tight inspection doors are easy to access with lubricated hinges, easy-open handle clamps, and separate handles for opening and closing are employed. Surface coatings are corrosion resistant for long life in extreme conditions. Simple Slide idler frames allow for tight spacing where it is needed for load support and easy access for maintenance. Dust inside the enclosure is washed down with fine spray on a return pan as necessary to remove any particulate accumulation. That material can then be disposed of with normal wastewater disposal flow. No fan or outside air source is required.

Features

- Controls dust and fugitive material
- Material is contained inside the enclosure with no roller-to-pan transitions required
- No internal ledges for the dust to buildup
- The conveyor is fully enclosed on all sides so no dust can escape
- Increases personnel safety
- Exceeds environmental and regulatory compliance guidelines

Benefits

- Reduces housekeeping & maintenance requirements
- Fewer replacement costs
- Extends belt life
- Reduces unscheduled downtime
- Reduces material & production losses

BENETECH
2245 Sequoia Dr. #300
Aurora, IL 60506

+1 (630) 844 -1300
info@benetechusa.com
www.benetechglobal.com