With over a dozen unique wing pulley configurations ranging from 4” to 60” diameter, PCI has North America’s largest selection of true self-cleaning pulley solutions. PCI’s patented technologies are field-proven to maximize component life and increase performance in the most demanding applications.
The Eradicator wing pulley combines the best features of a traditional wing pulley with several unique performance enhancing characteristics to create the optimum self-cleaning solution.

**THE ERADICATOR®**

**Patent# 8,857,606**

The Tipless Eradicator wing pulley incorporates some of the performance enhancing characteristics of the Eradicator to create the optimum self-cleaning solution for small diameter applications.

**TIPLESS ERADICATOR®**

**Patent# 8,857,606**

The Eradicator D² (Directional Discharge) with Rim incorporates the innovative features of the Eradicator into a design allowing for operation in reversing conveyors handling smaller materials. The Eradicator D² also controls the flow of material discharge to one direction only.

**ERADICATOR® D²®-RIM**

**Patent# 8,857,606**

**Patent# 10,442,631**

The Eradicator D² (Directional Discharge) with Tips incorporates the innovative features of the Eradicator into a design allowing for operation in reversing conveyors of all material sizes. The Eradicator D² also controls the flow of material discharge to one direction only.

**ERADICATOR® D²®-TIPS**

**Patent# 8,857,606**

**Patent# 10,442,631**

(989)358-6149  www.pcimfg.com
THE DEFLECTOR™

The Deflector™ wing pulley increases the performance of a traditional wing pulley by adding our proven and patented ports with angled deflectors to continuously direct material to the outer edges of the pulley.

VIDEO COMING SOON

SPIRAL WING

Spiral wing pulleys incorporate a fixed spiral pattern around the circumference of a traditional wing pulley to achieve continuous contact with the conveyor belt for reduced vibration and noise.

TRADITIONAL WING

Traditional wing pulleys utilize a series of individual wings for the creation of open voids that are designed to allow loose material to fall away from the contact surface.

SMALL DIAMETER DESIGNS

Self-cleaning designs such as squirrel cage, beater bar, 7-shaped and solid core wing provide intermittent contact for a higher level of clean out over drum pulley designs in small diameter applications.

CONVEYOR PULLEYS
Self-Cleaning Wing Pulleys

Patent# 8,857,606
Patent# 10,442,631

(989)358-6149 www.pcmfg.com
WHY IS CLEANOUT RATE IMPORTANT?
The faster a properly sized wing pulley cleans out loose materials, the longer it will last. It is that simple. Along with the pulley, recirculating materials can also influence the life of the conveyor belt, idlers and bearings. Self-cleaning pulleys with proven cleanout designs work to lengthen the life of your system components by quickly ejecting materials that damage and wear exposed surfaces.

DOES MATERIAL SIZE AFFECT WHICH PULLEY I SHOULD SELECT?
The size of the open voids in the construction of a self-cleaning wing pulley determine its degree of cleanout efficiency. Because of this, wing pulleys with smaller openings are best suited for eliminating smaller materials.

WHICH WING PULLEY OFFERS THE LOWEST VIBRATION AND NOISE?
The manner in which the wing pulley contacts the belt directly affects belt vibration and noise. While vibration can play an important role in knocking material off the belt, it can cause damage to system components and increase operational noise. Wing pulleys designed to achieve continuous contact with the conveyor belt work to minimize vibration and decrease noise.

DOES THE DIRECTION OF MY CONVEYOR LIMIT MY CHOICES BETWEEN WING PULLEYS?
The design of the wing pulley will influence its performance in applications where the conveyor belt runs in both directions. Reversing applications require a wing pulley designed to not only eliminate the unwanted material but assist in tracking the belt in both directions as well. Products such as the Eradicator D² excel in these environments.
The Eradicator® wing pulley combines the best features of a traditional wing pulley with several unique performance enhancing characteristics to create the optimum self-cleaning solution.

**DIAMETERS AVAILABLE**
6" through 48"

<table>
<thead>
<tr>
<th>THICKNESSES</th>
<th>WING</th>
<th>WING TIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Duty</td>
<td>7 gauge(.180&quot;)</td>
<td>3/4&quot; Round</td>
</tr>
<tr>
<td>Heavy Duty</td>
<td>1/4&quot;</td>
<td>1&quot; Round</td>
</tr>
<tr>
<td>Mine Duty</td>
<td>3/8&quot;</td>
<td>1-1/4&quot; Round</td>
</tr>
<tr>
<td>Tipless</td>
<td>3/8&quot;</td>
<td>-</td>
</tr>
</tbody>
</table>

**HUB STYLES AVAILABLE**
Welded Compression Hubs/Bushings (Type 4)
Dead Shaft Assembly

“AR” ABRASION RESISTANT MATERIALS AVAILABLE UPON REQUEST

**Design Benefits**
Accelerated Cleanout
Increased Component Life
Quieter Operation
Enhanced Belt Tracking

ACCELERATED CLEANOUT
The Eradicator dominates material displacement by forcing particulate away from its center toward its open ends. PCI’s exclusive design retains a traditional wing pulley’s belt slapping capability to prevent material buildup while the cleanout ports maximize the material removal rate and minimize recirculation of material. These patented features power the Eradicator with a cleanout rate up to 40 times faster than a traditional wing pulley, creating the ultimate in self-cleaning solutions.

INCREASED LIFE
The hybrid design of The Eradicator maximizes both the life of the pulley and the conveyor belt. PCI’s self-reinforced design discourages wing fold over and prevents incidental damage to the pulley. The Eradicator also maximizes belt life by reducing deformation commonly associated with high center point designs.

ENHANCED BELT TRACKING
The unique profile of the Eradicator encourages conveyor belt tracking by continually guiding the belt with its curved and angled wing members towards a reliable flat center point. This tracking benefit reduces the reliance on routine maintenance and the need for other belt training devices.

QUIETER OPERATION
The Eradicator decreases noise by continuously contacting the belt while its straight center maximizes cleanout. Only the Eradicator achieves the optimum balance of noise reduction and cleanout efficiency.
How is PCI’s Eradicator different from a traditional Wing Pulley?
The Eradicator wing pulley retains the belt cleaning benefits of a traditional wing while providing continuous belt contact and improved cleanout efficiency. These additional benefits provide longer component life and decreased noise. Traditional wing pulleys feature straight wings that contact the belt intermittently, entrapping and recirculating material rather than displacing it, often leading to belt damage and pulley failure.

What applications benefit from using the Eradicator Wing Pulley?
Applications where loose materials are causing damage to either the belt or conveyor pulleys would benefit from the use of The Eradicator. In addition to solving cleanout problems, PCI’s Eradicator decreases operating noise compared to traditional wing designs, making it ideal for applications where noise reduction is also desired.

How does The Eradicator Wing Pulley compare to other enhanced wing pulley designs?
Although other wing products may offer similar benefits, no other product offers the combination of benefits provided by the hybrid design of PCI’s Eradicator wing pulley. Spiral wing designs achieve continuous belt contact but underperform in material removal because of their straight wing members. Other enhanced wing products feature a center high point, eliminating the beater bar benefits of a traditional wing and may cause additional belt deformation with reduced belt tracking capability. The hybrid design of The Eradicator retains the belt cleaning benefits of a traditional wing while enhancing cleanout efficiency, offering unparalleled overall performance.

Patent# 8,857,606
SMALL DIAMETER PERFORMANCE
The patented design of the Tipless Eradicator® wing pulley combines the best features of a traditional wing pulley with several unique performance enhancing characteristics to create the optimum self-cleaning solution for small diameter applications.

ENHANCED BELT CLEANING
The patented profile of the Eradicator provides the optimum balance of belt cleaning and cleanout performance. The flat at the center provides the highest level of belt beating of any angled wing product while the angled wing members actively work to discharge material out of the system. This unique combination makes the Tipless Eradicator the ultimate choice for installations in beater bar applications.

CONVEYOR PULLEYS
Focus Flyer – The Tipless Eradicator®
The Tipless Eradicator® wing pulley combines the best features of a traditional wing pulley with several unique performance enhancing characteristics to create the optimum self-cleaning solution for small diameter applications.

PRODUCT DASHBOARD
CLEANOUT RATE
20x FASTER
MATERIAL SIZE
GRANULAR
SINGLE DIRECTION
NOISE

“AR” ABRASION RESISTANT WINGS AVAILABLE UPON REQUEST

WATCH THE VIDEO
www.pcimfg.com/portfolio_page/the-eradicator/

Patent# 8,857,606

ALL OF THE BENEFITS OF THE ERADICATOR, PLUS...

SMALL DIAMETER PERFORMANCE
The patented design of the Tipless Eradicator is available in almost any outside diameter and length combination including small diameters. Traditional small diameter designs incorporate straight wings that contact the belt intermittently, entrapping and recirculating material rather than displacing it, often leading to belt damage and pulley failure. The features of the Tipless Eradicator power it with a cleanout rate up to 20 times faster than a traditional wing pulley giving it unparalleled performance in applications with space limitations.

ENHANCED BELT CLEANING
The patented profile of the Eradicator provides the optimum balance of belt cleaning and cleanout performance. The flat at the center provides the highest level of belt beating of any angled wing product while the angled wing members actively work to discharge material out of the system. This unique combination makes the Tipless Eradicator the ultimate choice for installations in beater bar applications.

(989)358-6149 www.pcimfg.com
How is the Tipless Eradicator different from the original Eradicator?
The Tipless Eradicator features the industry leading, patented design of the original Eradicator but eliminates the use of round bar tips to enable configuration in extremely small diameters. The Tipless Eradicator features increased component thicknesses to maximize rigidity and longevity in a small package.

What applications benefit from using the Tipless Eradicator Wing Pulley?
Applications requiring a diameter of 6” or smaller where loose materials are causing damage would benefit from the use of The Eradicator. Because of its unique design and small diameter capabilities, the Tipless Eradicator is the optimum solution for any bulk handling application with diameter restrictions.

How does the Tipless Eradicator Wing Pulley compare to other small diameter wing designs?
Traditional small diameter wing pulleys have straight wings that entrap materials making them prone to failure due to weaknesses in their construction. The buildup of material in these designs, particularly with snub or beater bar applications, further encourages carryback through the system thereby contributing to premature wear on other components such as return rollers and bend pulleys. The Tipless Eradicator offers a solution to these common problems by beating the belt while effectively discharging unwanted material thereby reducing failure and increasing component life.

Patent# 8,857,606
CONVEYOR PULLEYS
Focus Flyer
Eradicator® D²® - Rim

The Eradicator D² (Directional Discharge) with Diamond Rim incorporates the innovative features of the Eradicator into a design allowing for operation in reversing conveyors of material sizes 3” and smaller. The Eradicator D² also has the unique ability to control the flow of material discharge to one direction only.

**PRODUCT DASHBOARD**

“AR” ABRASION RESISTANT RIM AVAILABLE UPON REQUEST

**WATCH THE VIDEO**

**ALL OF THE BENEFITS OF THE ERADICATOR, PLUS...**

**OPERATION IN BOTH DIRECTIONS - REVERSIBILITY**
The Eradicator D² provides an enhanced cleanout solution for applications where the conveyor belt operates in both directions. The patent pending design of the Eradicator D² has a cleanout rate up to **10 times faster** than traditional wing pulley products.

**SINGLE DIRECTION DISCHARGE**
The unique design of the Eradicator D² forces material out of the pulley in one direction only allowing the user to control the placement of the ejected material. In reversing or dual-direction applications, the direction of cleanout will change based on the direction of the conveyor belt.

**MAXIMUM BELT CONTACT**
By utilizing a steel rim with diamond shaped passageways, the Eradicator D² - Rim achieves maximum continuous belt contact for increased traction and reduced noise. Because of the rim profile, this pulley is best suited for material sizes 3” and smaller.

Patent# 8,857,606
Patent# 10,442,631

(989)358-6149  www.pcmfg.com
The Eradicator D² (Directional Discharge) with Circumferential Tips incorporates the innovative features of the Eradicator into a design allowing for operation in reversing conveyors of all material sizes. The Eradicator D² also has the unique ability to control the flow of material discharge to one direction only.

**OPERATION IN BOTH DIRECTIONS - REVERSIBILITY**

The Eradicator D² provides an enhanced cleanout solution for applications where the conveyor belt operates in both directions. The patent pending design of the Eradicator D² has a cleanout rate up to 10 times faster than traditional wing pulley products.

**SINGLE DIRECTION DISCHARGE**

The unique design of the Eradicator D² forces material out of the pulley in one direction only allowing the user to control the placement of the ejected material. In reversing or dual-direction applications, the direction of cleanout will change based on the direction of the conveyor belt.
How is PCI’s Eradicator D² different from an Eradicator or traditional Wing Pulley?
The Eradicator D² utilizes the angled wing and cleanout port design of the Eradicator to maximize material removal but unlike the Eradicator, the D² is designed to operate in reversing/dual-direction applications. Additionally, the Eradicator D² forces the material in a single direction so that the ejection of material will take place on one side of the conveyor. The Eradicator D² is the first pulley of its kind to offer these innovative features.

What applications benefit from using the Eradicator D² Wing Pulley?
Reversing applications where loose materials are causing wear or damage to the conveyor belt or pulley would benefit from the Eradicator D² wing pulley. Additionally, by achieving continuous contact with the conveyor belt the Eradicator D² decreases noise and vibration to help eliminate related issues. Finally, by forcing the material in a single direction, the Eradicator D² provides an ideal solution for applications such as conveyor tunnels or tubular galleries, where accumulation of tramp materials on one side is causing increased maintenance costs or safety concerns.

How do I order an Eradicator D² Wing Pulley?
The Eradicator D² is designed with either Tips or Rim in a Right or a Left hand configuration. The Right or Left designation specifies the side of the conveyor in which the materials will be ejected. In a dual-direction/reversing conveyor, the side of ejection will change with the direction of the belt.

Patent# 8,857,606
Patent# 10,442,631
PCI® Traditional Wing Pulleys are designed for bulk handling applications where material removal is desired. Our construction standards allow for selection into a variety of applications ranging from light loads to extreme impact loading.

**Diameters Available**
6” through 52”

<table>
<thead>
<tr>
<th>Thicknesses</th>
<th>Wing</th>
<th>Wing Tip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Duty</td>
<td>7 gauge (.180”)</td>
<td>1/4”</td>
</tr>
<tr>
<td>Heavy Duty</td>
<td>7 gauge (.180”)</td>
<td>3/8”</td>
</tr>
<tr>
<td>Mine Duty</td>
<td>3/8” (min)</td>
<td>5/8”</td>
</tr>
</tbody>
</table>

**Hub Styles Available**
- Plain Bore or Welded Shaft (Type 1/Type A)
- Keyed Hubs (Type 2/Type B/Type D)
- Internal Bearings (Type 3/Type C)
- Welded Compression Hubs/Bushings (Type 4)
- Contoured Integral End Disks/Bushings
- Keyless Locking Devices
- Dead Shaft Assembly

Hub style availability will vary based on pulley construction.

(989)358-6149

www.pcinmg.com
The Deflector™ wing pulley increases the performance of a traditional wing pulley with the addition of PCI’s proven and patented ports coupled with angled deflectors to continuously direct material to the outer edges of the pulley.

**ACCELERATED CLEANOUT**
The design of the Deflector™ wing pulley stems from the proven performance results of the Eradicator®'s angled wings and cleanout ports. The patent pending design of the Deflector maintains the straight wing members of a traditional wing but incorporates deflectors to fling material towards the edges. When installed with the deflectors angled towards the direction of belt travel, the Deflector minimizes recirculation of material and provides a cleanout rate up to **5 times faster** than its traditional counterparts provide. Even when installed in the opposite direction, this innovative design has a cleanout rate 2 times faster than a traditional wing pulley.

**BELT CLEANING**
The straight wing members of the Deflector™ wing pulley allow for intermittent contact with the conveyor belt and provide belt slapping and vibration to help knock lodged materials off of the conveyor belt.
How is PCI’s Deflector™ Wing different from a traditional Wing Pulley?

Traditional wing pulleys feature straight wings that contact the belt intermittently, entrapping and recirculating material rather than displacing it, often leading to belt damage and pulley failure. The Deflector wing pulley utilizes the same straight wing members as a traditional wing pulley but drastically improves cleanout efficiency from its cleanout ports and patent pending deflectors. The accelerated cleanout produced by the deflectors and ports will provide longer component life for the pulley and the belt.

What applications benefit from using the Deflector Wing Pulley?

Because the Deflector wing pulley improves on the performance of a traditional wing pulley, any bulk material application where a traditional wing pulley is being used will benefit from the Deflector. However, if maximum cleanout efficiency is desired, no other conveyor pulley will perform as well as the Eradicator.

How do I order a Deflector Wing Pulley?

The Deflector will replace all PCI traditional wing pulleys 14” in diameter and larger when construction allows. When you order a traditional wing pulley from PCI in this size range, you'll receive the Deflector and its innovative design features.

Patent# 8,857,606
Patent# 10,442,631
CONVEYOR PULLEYS
Additional / Custom Designs

SPIRAL STYLE PULLEYS
A metal strip contact surface is fixed in a spiral pattern around the circumference of a drum or wing pulley to achieve continuous contact with the conveyor belt while enhancing material removal. Spiral style pulleys are primarily used on bulk handling systems where material buildup and continuous contact with the conveyor belt are operational concerns.

SQUIRREL CAGE
Squirrel cage pulleys are comprised of solid steel round bars welded to a series of disks which serve as the pulleys core. The open body construction provides for added clean-out over round bar or standard wing pulley designs.

BEATER BAR
Beater Bar designs feature a series of solid steel round bars welded to a tube or pipe core. The robust construction provides an increased safety factor in harsh environments.

“7” SHAPED FINS
7-Shaped wing pulleys feature steel wing members formed to a bent shape resembling the number seven. The profile of the wing member reduces belt wear while providing an economical construction for light duty applications.

SOLID CORE
Solid core pulleys offer self-cleaning benefits in the smallest of pulley diameters. Wing members can be designed using profiles including fins with flat tips, round bar or custom profiles.

CUSTOM WING TIP OPTIONS
Several styles of wing tips can be substituted for PCI standard flat bar tips. Options include round bar (shown here), thicker flat bar and AR-Abrasion Resistant materials.