

REPLACEMENT & AFTERMARKET

REPLACEMENT URETHANE RETURN IDLERS



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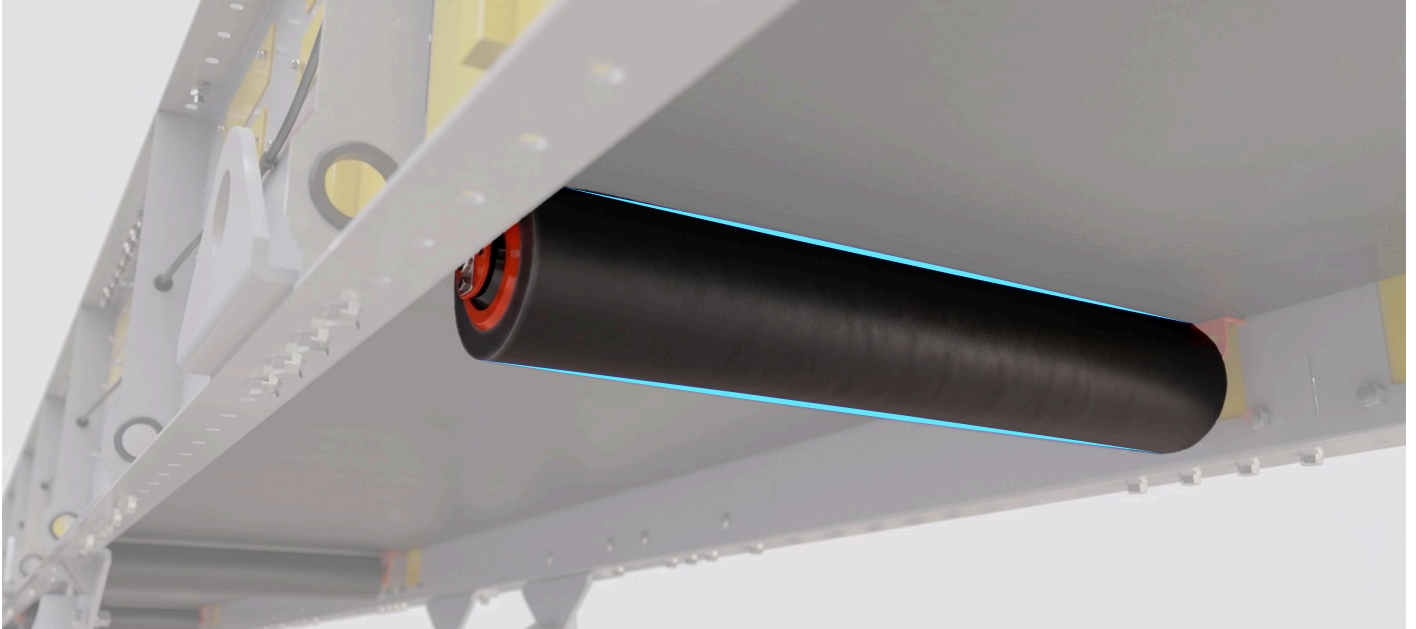
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REPLACEMENT URETHANE RETURN IDLERS



Replacement Urethane Return Idlers

Return idlers support the empty belt on the bottom strand of the conveyor, where carryback from sticky, wet, or abrasive material settles onto the roll face after discharge. On steel and rubber rolls, that material packs into diameter variations across the belt width, pushing the belt off track and grinding the belt cover on every revolution. Each mistracked belt or buildup-locked roll on the return run forces an unplanned stop that pulls tonnage off the schedule.

Urethane return idlers mount molded polyurethane discs over a steel core roll running on sealed ball bearings, with seal packages specified for dry, wet, eco, or titanium severe-duty service. Polyurethane presents a non-stick surface that rejects the material rubber traps through friction, and wears at least 3X longer than steel or rubber rolls in comparable material handling applications. Standard, spiral, and beater configurations cover CEMA classes B through E across belt widths of 18" – 96", with 4" – 7" roll diameters and drop bracket or channel inset mounting. Provide the brand and part number of the unit being replaced and engineering matches the new roll to the original fit.

APPLICATIONS



Recycling & Material Recovery

Sort lines and material recovery facilities run mixed streams of film, organics, and wet residue that cling to the belt and transfer onto the return strand of 8 to 12-man pulley-driven sortation conveyors. Non-stick polyurethane discs reject that carryback before it packs into the uneven buildup that pulls picking-line belts off track.



Aggregate Crushing & Screening

Crushing and screening circuits coat the return run in abrasive dust and dry fines that wear through rubber and steel rolls. Urethane discs outwear both materials while dry seal packages keep fines away from the bearings.



Mining & Mineral Processing

Overland and plant conveyors carry high tonnage across long return runs where every roll changeout costs production time. Polyurethane extends replacement intervals to at least 3X those of steel or rubber rolls in comparable service.



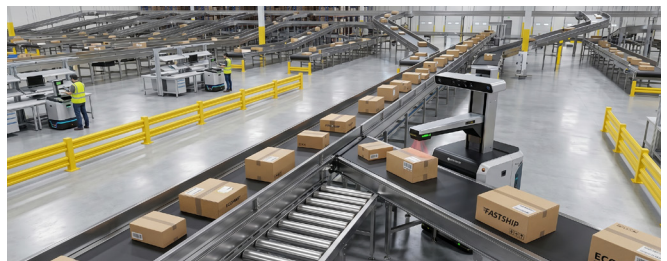
Sand & Gravel Wash Plants

Wash plants saturate the return side with wet sand and washed fines that pack onto conventional roll faces. Wet and eco seal packages guard the bearings while the urethane surface releases saturated material cleanly.



Dredging & Fines Removal

Dredging operations expose return rolls to constant moisture and fine solids that migrate past standard sealing. Eco seal packages combine wet and dry protection for washed sand and fines in these conditions.



Package Handling & Sortation

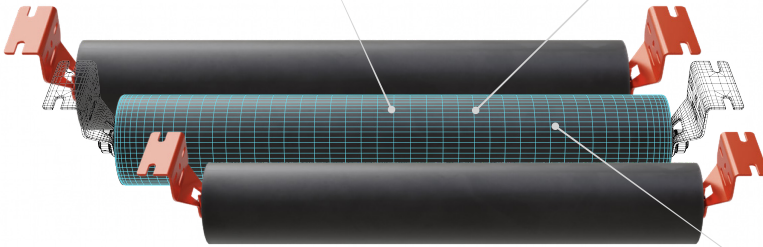
Indoor flat belt systems move packages and sorted goods where operating noise carries across the plant floor. Spiral urethane configurations scrub the belt at reduced noise levels compared with beating-type rolls.

KEY FEATURES

01

Non-Stick Polyurethane Disc Construction:

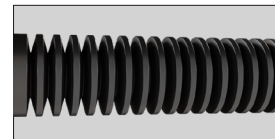
Molded urethane rejects wet, sticky material that cakes onto steel or rubber rolls, keeping roll diameter uniform across the full belt width.



02

Spiral Disc Geometry:

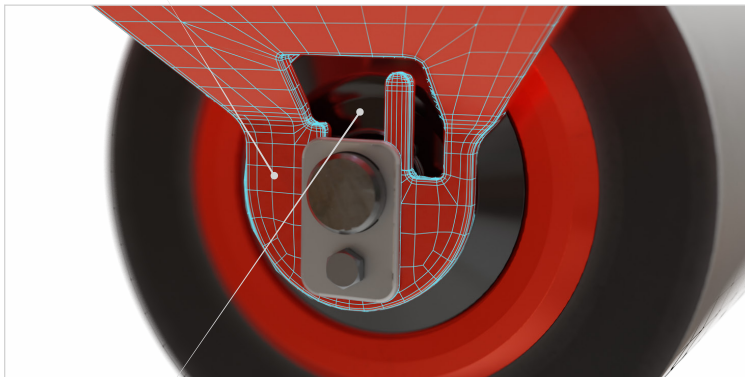
Discs wound in a helical layout shift the point of belt contact continuously, cleaning buildup from the belt surface without beating action and at lower operating noise.



03

Drop Bracket Mounting System:

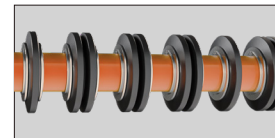
Standard drop brackets hang the roll beneath the conveyor stringers, with channel inset options available where the frame design requires a recessed mount.



04

Lobed Thumper Disc Array:

Lobed urethane discs on a solid core roll generate light vibration that shakes stubborn carryback loose without the aggressive impact that damages belt covers.



05

Sealed Ball Bearing Assembly:

Sealed ball bearings run behind dry, wet, eco, or titanium seal packages matched to dusty, high-moisture, fines-laden, or severe-duty environments.

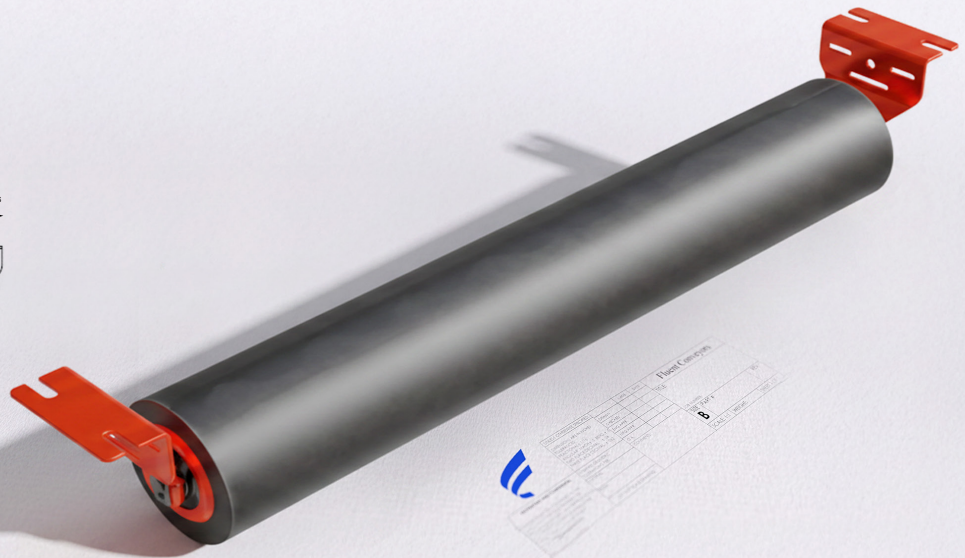
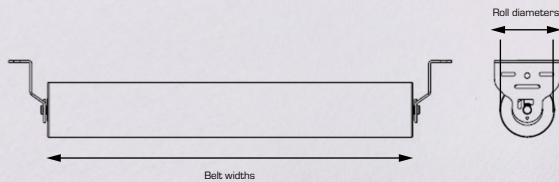


06

Frame Finish Options:

Painted frames cover standard duty, while galvanized and stainless steel builds resist washdown and chemical exposure in corrosive plants.





REPLACEMENT URETHANE RETURN IDLERS SPECIFICATIONS

Parameter	Standard specification
CEMA classes	B, C, D, E
Belt widths	18" – 96" (custom widths available)
Roll diameters	4" – 7"
Configurations	Standard, spiral, beater
Roll material	Polyurethane
Bearings	Sealed ball bearings
Seal packages	Dry, wet, eco, titanium
Mounting	Standard drop brackets, channel inset
Frame finishes	Painted, galvanized, stainless steel
Typical return spacing	8' – 10'*

Note: *Spacing adjusted for belt tension, belt width, and load characteristics. Position beater configurations above stockpiles, screens, or bins for active carryback removal.

REPLACEMENT URETHANE RETURN IDLERS SPECIFICATIONS

Configuration Selection

Configuration Selection	Roll Construction	Cleaning Action	Best For
Standard urethane	Polyurethane discs on steel core	Passive shedding from the non-stick surface	Sticky materials and general carryback prevention
Spiral urethane	Polyurethane discs in helical layout	Continuously shifting contact point, no beating	Buildup prevention with reduced operating noise
Urethane beater	Lobed thumper discs on solid core	Light vibration dislodges stubborn carryback	Installation above stockpiles, screens, and bins

Protection Selection

Seal package	Operating environment	Application
Dry	Reinforced barriers	Crushing, screening, and dusty aggregate handling
Wet	Enhanced moisture protection	Wash plants, dredging, and high-moisture applications
Eco	Combined wet and dry protection	Extreme conditions with washed sand and fines
Titanium	Maximum durability build	Severe-duty applications

THE ENGINEERING ADVANTAGE

This section outlines the material and configuration methodology behind the urethane return idler line, covering compound behavior, disc arrangement, seal pairing, and replacement matching to ensure correct fit and full service life on the return strand.

Polyurethane Compound Specification:

Urethane formulations resist the abrasion, oils, solvents, and certain acids that degrade rubber, delivering at least 3X the wear life of steel or rubber rolls in comparable material handling service.

Seal-to-Environment Pairing:

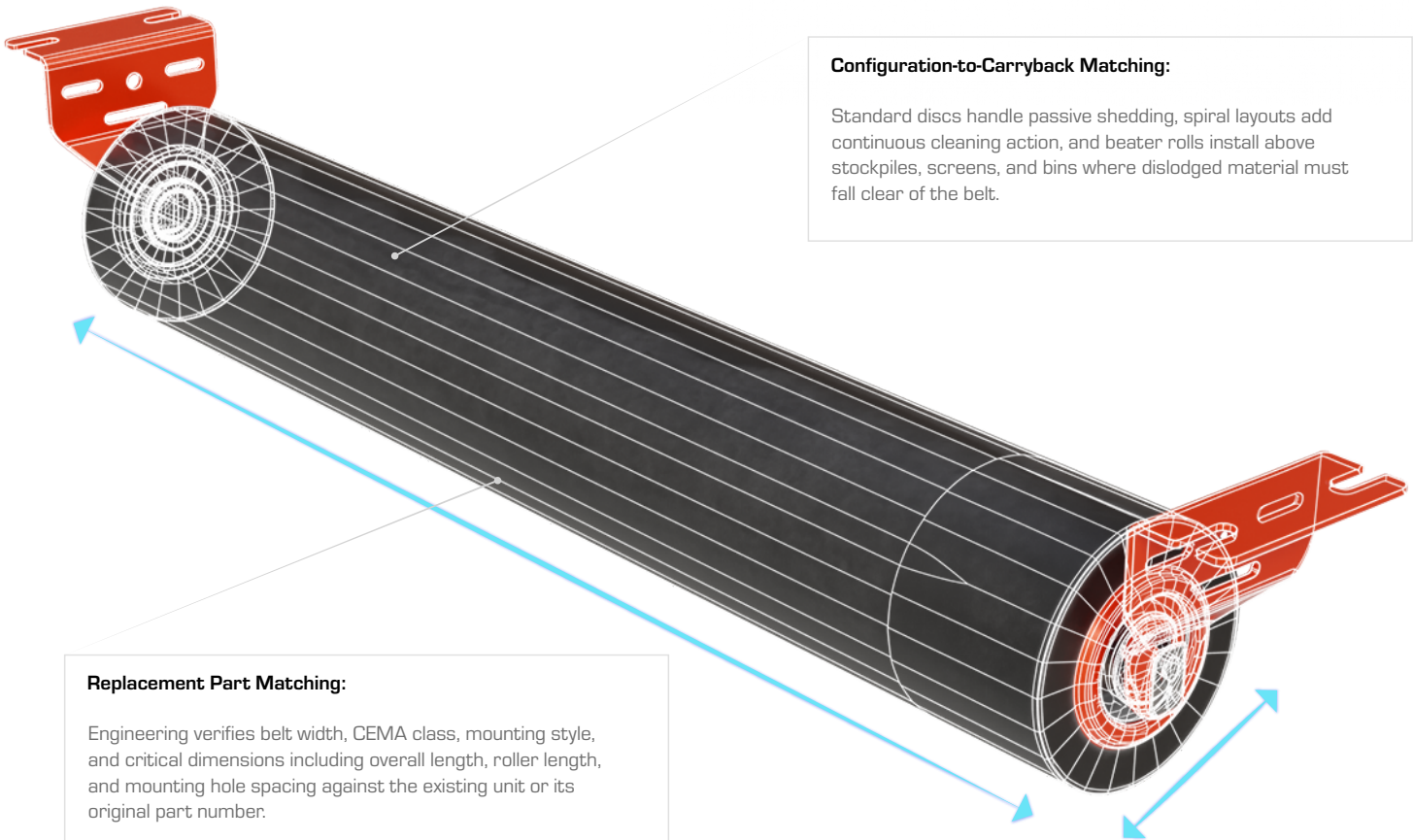
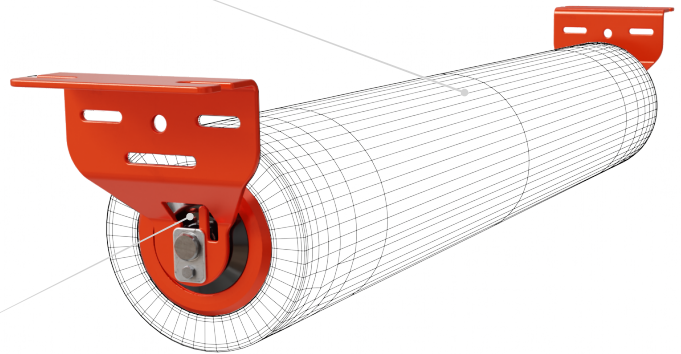
Dry seals block crushing and screening dust, wet seals hold out wash plant and dredging moisture, eco seals combine both barriers for washed sand and fines, and titanium seals cover severe duty.

Configuration-to-Carryback Matching:

Standard discs handle passive shedding, spiral layouts add continuous cleaning action, and beater rolls install above stockpiles, screens, and bins where dislodged material must fall clear of the belt.

Replacement Part Matching:

Engineering verifies belt width, CEMA class, mounting style, and critical dimensions including overall length, roller length, and mounting hole spacing against the existing unit or its original part number.



CONTACT INFORMATION

OUR ENGINEERS WILL SPEC THE EXACT PART FOR YOUR SYSTEM

For product specifications, engineering support, or order inquiries, please contact our team using the information provided below. Our specialists are available to ensure accurate recommendations and efficient service for your application requirements.

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