REPLACEMENT & AFTERMARKET

PLATE SPLICE KITS

Collaborate / Create / Convey

FLUENT CONVEYORS

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PLATE SPLICE KITS

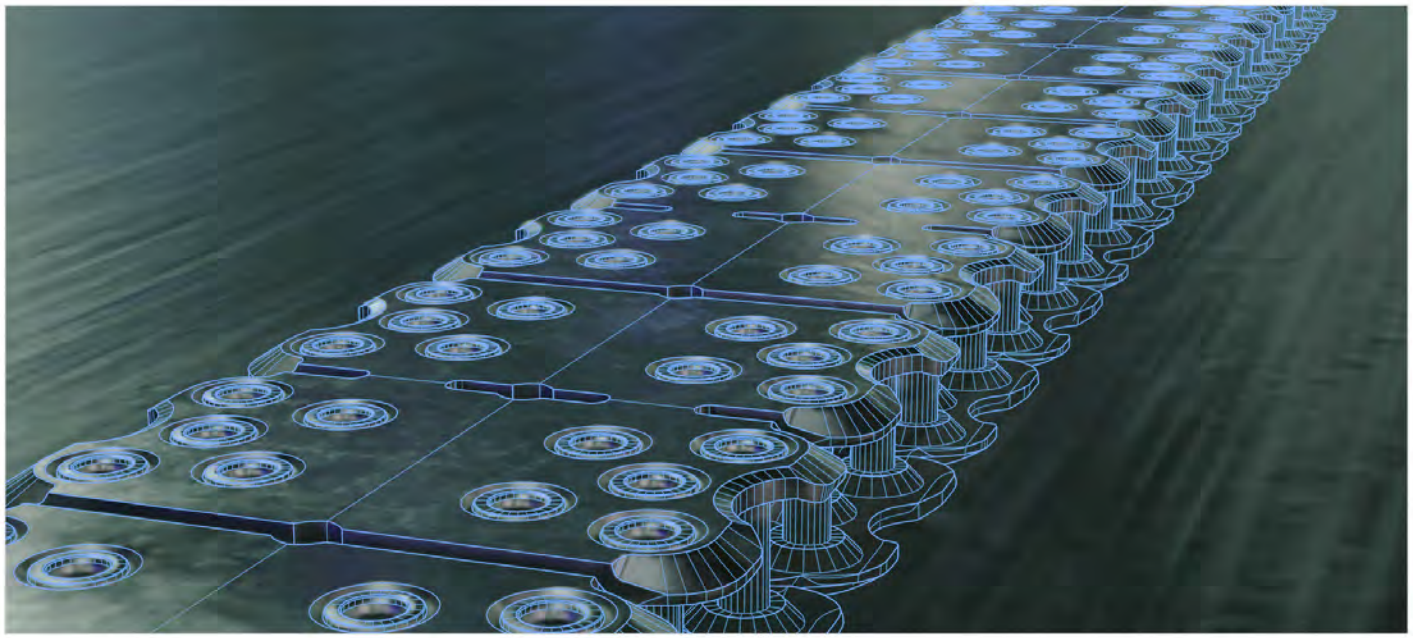


Plate Splice Kits

High-tension conveyors moving sand, cement fines, grain, and shredded scrap punish the splice harder than any other point on the belt. Fastener pullout under load separates the joint and stops the line, while gaps in a conventional splice let fine material sift through, contaminating the product stream and eroding return-side components. On thick, high-PIW belting, hinged fasteners reach their tension limit long before the belt does, leaving the splice as the rated weak point of the system.

Plate splice kits close that gap with solid plate fastening in two systems. Bolt solid plate fasteners compress matched top and bottom plates across the belt with high-tensile bolts, driving specially formed teeth into the carcass without damaging its fibers, and cover belts from 3/16" to over 1" thick at ratings to 620 PIW. Rivet solid plate fasteners set staggered, self-setting rivets between the carcass fibers of straight warp and fabric-reinforced belts, reaching 800 PIW for maximum-tension service. Every kit is specified against belt thickness, PIW rating, and minimum pulley diameter, so the installed splice matches the belt and conveyor it serves.

APPLICATIONS

Recycling & Material Recovery

Shredder discharge and mixed C&D streams drop heavy, irregular debris directly onto the splice zone, hammering fastener plates until standard hardware deforms and pulls out. Rubber-covered top plate variants absorb that loading-zone impact, while solid plate compression holds the joint sift-free through abrasive fines and contamination-heavy material.

Aggregates & Cement

Sand, crushed stone, and cement fines work through any opening in a splice, abrading the joint from inside and dusting return-side components. Solid plate compression seals the full belt width, and stainless or high-strength alloy plate grades withstand the fine dust abrasion cement service generates.

Mining

High-tension trunk conveyors run thick belting on layouts where splice failure strands the entire operation. Rivet solid plate fasteners deliver staggered multi-point attachment rated to 800 PIW, matching vulcanized splice tension with mechanical field serviceability.

Coal & Power

Coal handling combines heavy tonnage with thick belts on large-diameter pulley systems. Size-matched bolt solid plate fasteners carry belts from 9/16" to over 1" thick while keeping the splice serviceable during scheduled outages.

Agriculture

Grain elevators and feed lines demand sift-free joints that keep product out of the splice and fastener fragments out of the product. Formed plate teeth grip the carcass without severing fibers, preserving belt strength through seasonal peak loading.

Food Processing

Washdown chemistry and sanitation regimes corrode standard fastener hardware and disqualify it near magnetic separators. Stainless plate and rivet grades resist corrosion and display extra resistance to magnetic attraction where separator systems operate.

KEY FEATURES

01

Self-Setting Rivet Hardware:

Rivets pre-assembled with pilot nails drive between carcass fibers and set with uniform head formation under an electric or air-powered rivet driver.

02

Piloted Bolt Assembly:

Bottom plates arrive pre-assembled with high-tensile bolts whose tapered tips cradle the nut on start, holding alignment across the full fastener row during tightening.

03

Formed Carcass Penetrating Teeth:

Specially formed teeth on the bottom plate penetrate the belt carcass and grip between fibers without cutting them, transferring splice tension into intact belt structure.

04

45-Degree Splice Geometry:

An optional 45-degree splice angle staggers the joint's pulley entry across the belt width, smoothing fastener passage and improving belt tracking.

05

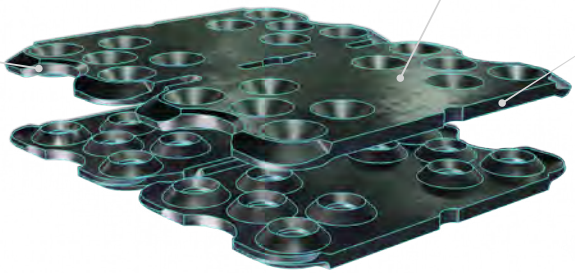
Rubber-Covered Top Plate Option:

A bonded rubber cover over the top plate cushions direct material impact in loading zones, protecting both the fastener and the material stream.

06

Scalloped Plate Edge:

A low-profile scalloped edge on rivet system plates reduces fastener exposure to belt scrapers, skirting, and other conveyor components along the carry path.



07

Heavy-Gauge Plate Construction:

Wide, heavy-gauge top and bottom plates spread clamping force across the splice area and form the sift-free barrier that seals the joint.

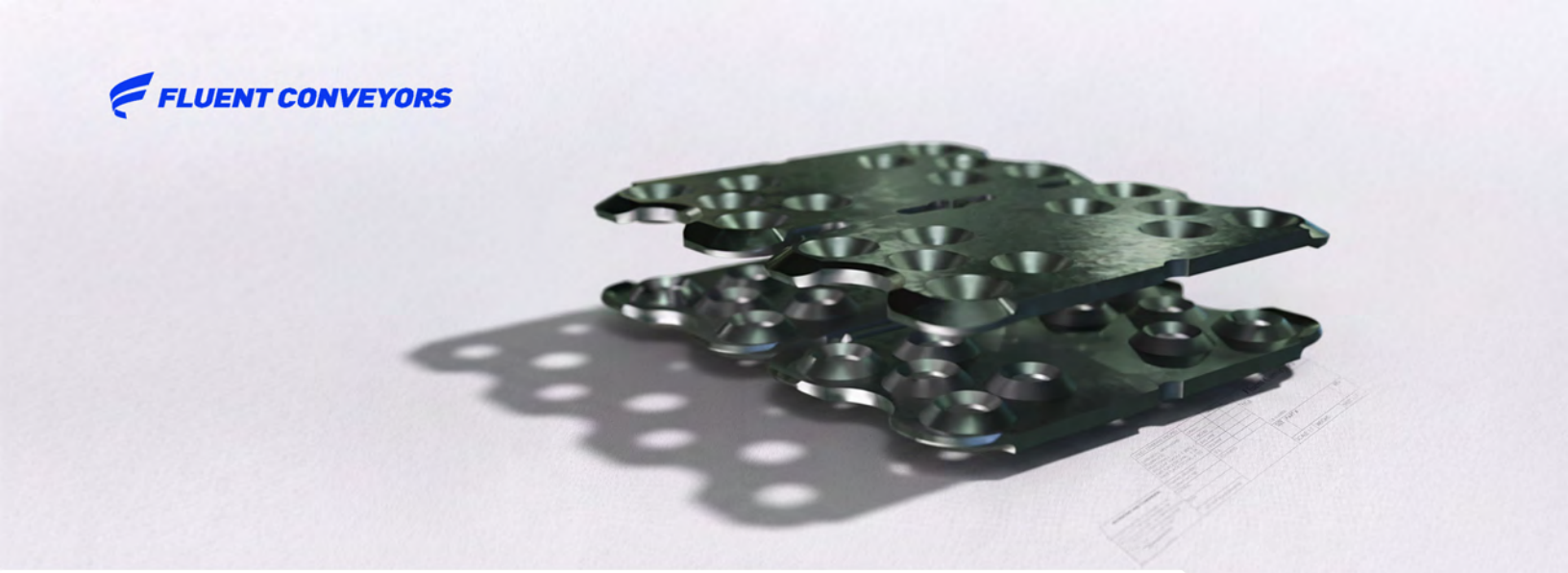


PLATE SPLICE KITS SPECIFICATIONS

Bolt Solid Plate Fastening Systems

Fastener size	Belt thickness range	PIW rating	Min. pulley diameter	Applications
Size 1	3/16" – 7/16" (5 – 11 mm)	Up to 150 PIW	12" (300 mm)	Light aggregate, general industrial Size 140
Size 140	3/16" – 7/16" (5 – 11 mm)	Up to 175 PIW	14" (350 mm)	Sand, crushed stone, packaging
Size 190	5/16" – 9/16" (8 – 14 mm)	Up to 375 PIW	18" (460 mm)	Aggregate, grain handling
Size 1-1/2	7/16" – 11/16" (11 – 17 mm)	Up to 325 PIW	18" (460 mm)	Medium-duty mining, aggregate
Size 2	9/16" – 13/16" (14 – 21 mm)	Up to 440 PIW	30" (760 mm)	Coal, heavy aggregate
Size 2-1/4	9/16" – 1-3/16" (14 – 30 mm)	Up to 600 PIW	36" (920 mm)	Heavy-duty mining, cement
Size 2-1/2	3/4" – 1" (19 – 25 mm)	Up to 500 PIW	42" (1070 mm)	Thick belt applications
Size 3	15/16" and over (24+ mm)	Up to 560 PIW	48" (1220 mm)	Maximum capacity systems

Rivet Solid Plate Fastening Systems

Configuration	Belt thickness range	PIW rating	Min. pulley diameter	Applications
6-rivet	3/16" – 21/32" (5 – 17 mm)	Up to 400 PIW	14" (350 mm)	Higher tension, small pulleys
10-rivet	7/32" – 11/16" (6 – 17 mm)	Up to 650 PIW	18" (450 mm)	Straight warp belts, high tension
14-rivet	13/32" – 15/16" (10 – 24 mm)	Up to 800 PIW	36" (900 mm)	Maximum tension applications

PLATE SPLICE KITS SPECIFICATIONS

Fastener Materials

Material	Abrasion resistance	Corrosion resistance	Spark-free	Application
Plated steel (standard)	Good	Fair	No	General aggregate, mining, industrial
300 series stainless steel	Good to excellent	Excellent	No	Washdown, food processing, corrosive environments
High-strength alloy	Excellent	Poor	No	Highly abrasive applications
Non-sparking copper alloy	Poor	Poor	Yes	Explosive atmospheres, spark-sensitive environments
Rubber-covered top plates	Good (impact)	Fair	No	Heavy loading zones, impact applications

Note: Specifications represent typical sizes and configurations. Consult Fluent Conveyors engineering for application-specific selection and belt compatibility verification.

THE ENGINEERING ADVANTAGE

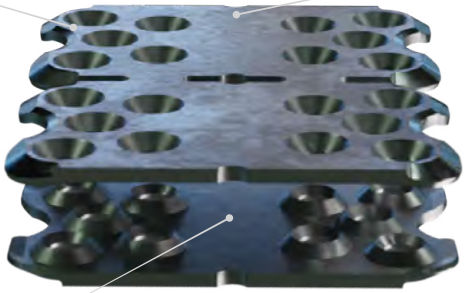
This section outlines the fastening mechanics behind plate splice kits, covering plate compression, rivet attachment geometry, carcass preservation, and hole preparation methodology to ensure the installed splice matches belt construction and operating tension.

Full-Width Plate Compression:

Matched top and bottom plates clamp the belt across its entire width under high-tensile bolt load, forming a continuous sift-free barrier rather than a row of discrete attachment points.

Staggered Rivet Attachment Patter:

Rivets set in a staggered, multiple-point layout distribute splice tension across the plate area, resisting pullout at operating tensions to 800 PIW.



Fiber-Separating Rivet Placement:

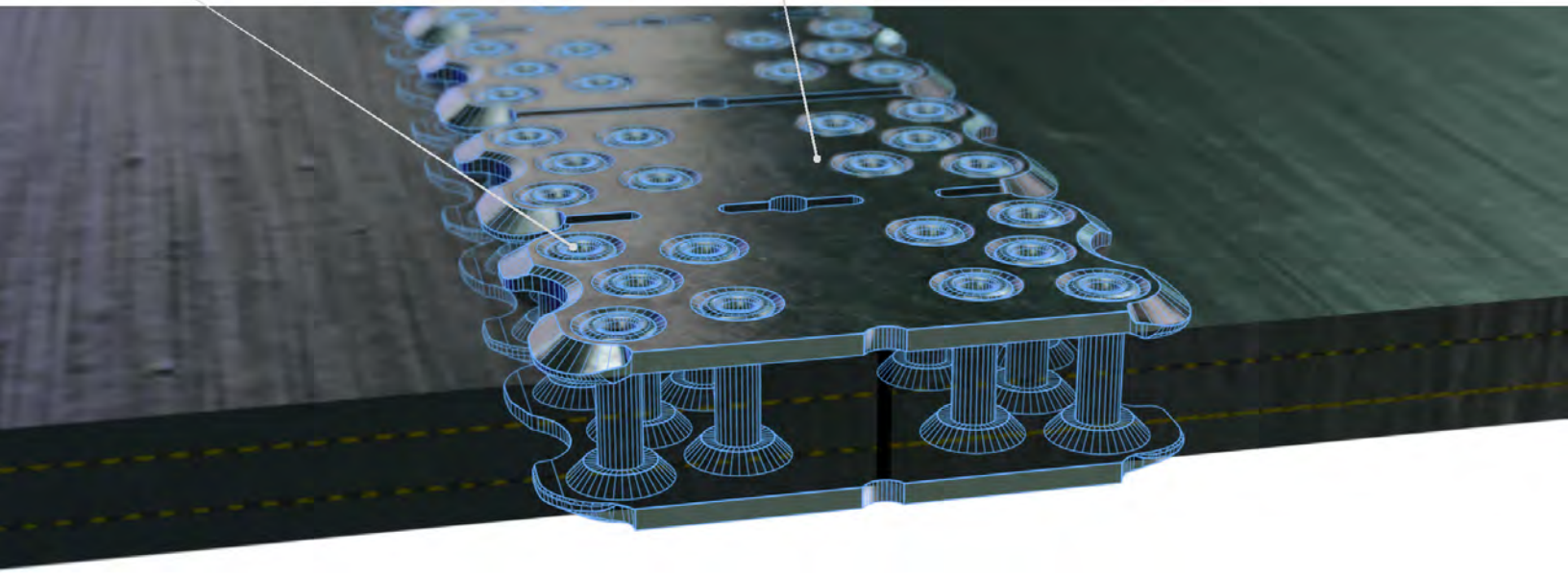
Self-setting rivets pass between carcass fibers instead of severing them, leaving straight warp and synthetic carcass strength intact through the splice zone.

Template-Guided Hole Preparation:

Precision-aligned templates in 90-degree and 45-degree patterns position every bolt or rivet hole to the fastener size and belt width, so field installations reproduce factory hole geometry.

Specialty Alloy Plate Grades:

Plate and rivet hardware is fabricated in plated steel, 300 series stainless, high-strength alloy, and non-sparking copper alloy, matching fastener metallurgy to abrasion, corrosion, and atmosphere requirements.



FLUENT CONVEYORS

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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