

REPLACEMENT & AFTERMARKET

# STAPLE SPLICE KITS



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# STAPLE SPLICE KITS



## Staple Splice Kits

Solid woven PVG/PVC and rubber-ply belts rated from 800 to 2000 PIW carry the highest tensions handled by mechanical fastening, and that load concentrates at the splice where two belt ends meet. When a heavy-duty splice separates in a mine, quarry, or recovery facility, the entire line stops, and vulcanized repair demands controlled conditions, dedicated crews, and 4 to 24 hours of downtime that remote sites cannot absorb. Worn belting often cannot be vulcanized at all, leaving mechanical fastening as the only repair path short of full belt replacement.

Staple splice kits join heavy-duty belt ends with cold-rolled steel plate fasteners carrying factory-preset staples. A single applicator stroke compresses the plate while driving and folding the staples through both belt ends, and an armored cable hinge pin threaded through the mating loops completes a connection that flexes around every pulley in the system. Seven fastener sizes cover belt thicknesses from 1/4" to 25/32" after skiving, installed by manual, hydraulic, or pneumatic applicators in 1.5 to 3 hours, matched to the belt rating and pulley diameters of the existing system.

# APPLICATIONS



## Recycling

Material recovery facilities run solid woven and rubber-ply belts under shredded scrap, mixed debris, and contamination-heavy streams that abrade the splice joint from both belt faces. Staple splice kits restore a separated joint on the sort line within hours using portable applicators, with sift-seal foam strips blocking fines from working through the splice.



## Aggregate & Quarrying

Crushed stone, sand, and gravel lines hold belts at sustained high tension across long conveyor runs. Fastener ratings of 800 to 2000 PIW match the belt's rated strength so the splice never becomes the weakest point under load.



## Underground & Surface Mining

Underground and surface operations subject splices to impact loading, abrasive ore, and wet corrosive conditions far from any maintenance shop. Bare armored cable hinge pins and stainless steel plate options withstand the abrasion and moisture that degrade standard hardware.



## Food Processing

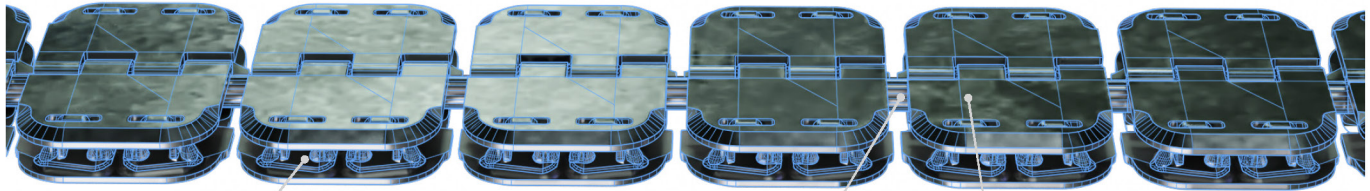
Food-grade facilities demand corrosion-resistant hardware that tolerates washdown cycles without shedding fragments into the product stream. Stainless plate fasteners seat flush in countersunk installations, keeping the splice profile clear of cleaners and product contact.



## Chemical Processing

Corrosive atmospheres and wet processing conditions attack standard fastener plating at the splice joint. 300 series stainless steel plates paired with stainless armored cable pins resist chemical exposure through the full service interval.

# KEY FEATURES


**01**

## Sift-Seal Foam Strips:

Foam strips seat between the two fastener plate strips, sealing the joint against fines sifting through the splice.

**02**

## Armored Cable Hinge Pin:

A flexible armored pin threads through the mating fastener loops and articulates as the belt wraps each pulley, supplied in bare, nylon-covered, and stainless constructions.

**03**

## Stainless Steel Plate Option:

300 series stainless plates replace standard galvanized steel where chemical exposure, washdown, or marine conditions corrode plated hardware.

**04**

## Preset Staple Plate Fasteners:

Cold-rolled steel plates arrive with staples factory-inserted, compressing and folding through both belt ends in a single applicator operation.

**05**

## Hinge Pin Retaining Collars:

Knurled point screws with self-locking nylon patches clamp each pin end, preventing pin migration across the belt width during operation.

**06**

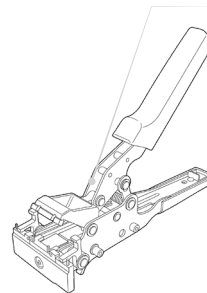
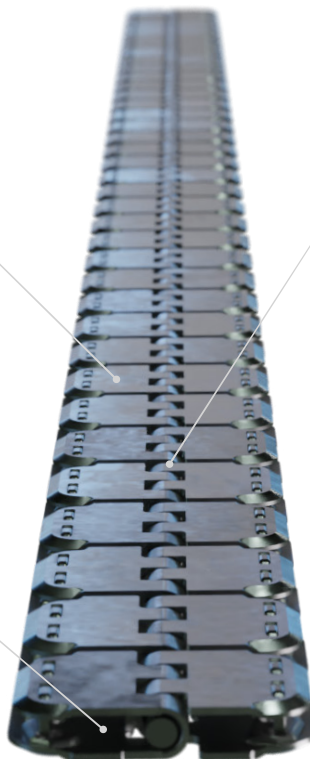
## Integral Belt Stops:

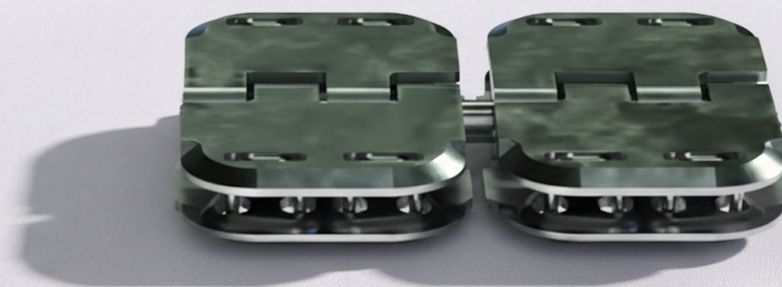
Built-in stops on each fastener plate engage the belt edge, aligning strips across the full belt width without separate gauging.

**07**

## Single-Lever Applicator Systems:

Hydraulic and pneumatic applicators compress the plate and drive the staples in one lever motion, with manual applicators covering remote sites without powered infrastructure.





# STAPLE SPLICE KITS SPECIFICATIONS

## Fastener Size Selection

| Fastener size | Fastener Size Selection      | PIW rating | Belt strength | Min. pulley diameter | Application                         |
|---------------|------------------------------|------------|---------------|----------------------|-------------------------------------|
| Size 3        | 1/4" - 11/32" [6 - 9 mm]     | 800 PIW    | 1400 kN/m     | 10" (250 mm)         | Light heavy-duty, compact systems   |
| Size 3-L      | 5/16" - 7/16" [8 - 11 mm]    | 800 PIW    | 1400 kN/m     | 10" (250 mm)         | Thicker belts in the 800 PIW class  |
| Size 5        | 11/32" - 15/32" [9 - 12 mm]  | 1150 PIW   | 2000 kN/m     | 14" (350 mm)         | Medium heavy-duty service           |
| Size 5-L      | 7/16" - 9/16" [11 - 14 mm]   | 1150 PIW   | 2000 kN/m     | 14" (350 mm)         | Thicker belts in the 1150 PIW class |
| Size 7        | 1/2" - 5/8" [13 - 16 mm]     | 2000 PIW   | 3500 kN/m     | 20" (500 mm)         | Heavy-duty mining, aggregate        |
| Size 8        | 19/32" - 23/32" [15 - 18 mm] | 2000 PIW   | 3500 kN/m     | 20" (500 mm)         | Thick-belt heavy-duty systems       |
| Size 8-L      | 21/32" - 25/32" [17 - 20 mm] | 2000 PIW   | 3500 kN/m     | 20" (500 mm)         | Maximum-thickness systems           |

Note: Long [-L] versions carry longer staples for thicker belts at the same tension rating. The fastener PIW rating must equal or exceed the belt's rated strength, and fasteners must never run on pulleys smaller than the specified minimum diameter. Consult Fluent Conveyors for belt width configurations and package quantities.

# STAPLE SPLICE KITS SPECIFICATIONS

## Hinge Pin and Material

| Option                            | System                     | Service environment                                                                                       |
|-----------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------|
| Galvanized steel plates           | Fastener plates (standard) | Most industrial applications with rust and corrosion protection                                           |
| 300 series stainless steel plates | Fastener plates            | Chemical plants, wet mine conditions, marine environments, food processing                                |
| Bare armored cable pin            | Hinge pin                  | Underground mining and demanding industrial service; armor wrapping protects interior wires from abrasion |
| Nylon-covered armored cable pin   | Hinge pin                  | Dry conditions with pin migration concerns; not for wet or highly abrasive environments                   |
| Stainless armored cable pin       | Hinge pin                  | Wet applications, chemical exposure, salt environments, food-grade facilities                             |
| Retaining collars                 | Pin retention              | All installations; knurled point screws with self-locking nylon patches secure the pin                    |

Note: Hinge pins are ordered separately from fastener plates; pin diameter and length must match the fastener size selected. Fastener strips are cut to length for standard belt widths from 40" to 72".

# THE ENGINEERING ADVANTAGE

This section outlines the fastening methodology behind staple splice kits, covering plate metallurgy, single-operation staple setting, countersunk seating, and hinge loop geometry to ensure a full-rated splice matched to the belt and its pulley system.

## **Cold-Rolled Plate Metallurgy:**

Cold rolling work-hardens the fastener plates to uniform mechanical properties, raising tensile strength through the loop and staple zones where splice load concentrates.

## **Countersunk Skived Seating:**

Skiving the belt cover at a maximum of 3/8" per pass seats the fastener flush with the belt surface, holding the splice profile below cleaner blades and skirtboard contact.

## **Oversized Hinge Loop Construction:**

Enlarged loop areas paired with larger-diameter hinge pins spread flexing stress across the joint as the belt transitions between flat and troughed positions.

## **Full-Width Strip Fabrication:**

Fastener plates are cut to length for standard belt widths from 40" to 72", with each package containing enough strips to complete one splice at the specified width.

## **Single-Operation Staple Setting:**

The applicator compresses the plate while driving and folding the staples through both belt ends in one stroke, producing consistent fastener seating across the full belt width.

# 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.

### Reach Us Directly

#### Email

Send us your questions or requests, and we'll respond promptly.

[sales@fluentconveyors.com](mailto:sales@fluentconveyors.com)

#### Phone

Call us for immediate assistance and technical support.

[+1\(866\) 764-2980](tel:+18667642980)

### Business Hours

#### Monday - Friday

8:00 AM – 5:00 PM MST

### Departments

#### Sales & Quoting

Product pricing, availability, and order placement.

[sales@fluentconveyors.com](mailto:sales@fluentconveyors.com)

#### Customer Service

Product pricing, availability, and order placement.

[+1 \(303\) 390-1228](tel:+13033901228)

#### Engineering

Technical specs, application review, custom configurations.

[engineering@fluentconveyors.com](mailto:engineering@fluentconveyors.com)