

SUPER-SCREW®

Flexible Rubber Fastening System

Fast, easy alternative to vulcanization

The Super-Screw® Flexible Rubber Fastening System is a unique and innovative solution that acts as an alternative to vulcanization in even the toughest, most demanding applications. The flexible splice screws directly into the belt with great accuracy and precision, offering a solution that is truly like no other.



In Any Space, in Any Weather Condition

This revolutionary fastening system consists of a top and bottom piece of rubber, reinforced with one or more fabric plies for strength, along with pre-drilled holes that are fastened together with screws and a cordless drill and bit. This creates a strong, yet flexible splice that provides all the benefits of vulcanization without the challenges. With Super-Screw, you can install these flexible splices regardless of the location or accessibility of the conveyor belt and regardless of weather conditions. The Super-Screw Flexible Rubber Fastening System can be used on belts with skived belt thicknesses from 5/32" to 3/4" (4 mm to 19 mm), and pulley diameters as small as 6". Sizes are available to accommodate PIW ratings up to 1430.

Market Applications

- Quarries
- Cement plants
- Crushed rock
- Underground and surface mining
- Coal
- Hard-rock
- Wood processing
- Industrial minerals

SUPER-SCREW®

Flexible Rubber Fastening System

Fastener Overview

How the Super-Screw® Flexible Rubber Fastening System Works



The Super-Screw® Flexible Rubber Fastening System utilizes specially-designed self-drilling, self-tapping screws that preserve the integrity of the belt by passing between the carcass threads without cutting them. Super-Screw comes ready to be installed, with assembly spacers already in place, so that the top and bottom covers align correctly. Screws and Pozidrive or "PZ" bits are included for easy installation, without the need for tools beyond a standard powered drill. The result is a splice that can be installed anytime, anywhere, and in any weather condition.

The choice over vulcanization

The simple and practical Super-Screw® Flexible Rubber Fastening System can be used in place of vulcanization, saving you from long periods of downtime due to waiting for a crew to arrive, belt preparation, press set-up, and cooking time. It can also be used in the toughest, most demanding environments, regardless of climate and temperature, keeping your employees safer and more productive. It withstands temperatures from -22° F to 392° F (-30° C

to 200° C), making it the perfect alternative to vulcanization. This easy-to-install fastening system can be used to repair any spot on the belt, or for joining brand new belts ends, without the need for an outside service or skilled technician. The Super-Screw system is also compatible with belt cleaners, and smaller pulley diameters, and is highly abrasion resistant.



Fast and easy installation

Sift-free

*Withstands temperatures from
-22° F to 392° F (-30° C to 200° C)*

Self-tapping screws

Strong, yet flexible

Wear-resistant and cut-resistant

Compatible with small pulley diameters



SUPER-SCREW®

Flexible Rubber Fastening System

Fastener Selection Guidelines

Specify the Correct Super-Screw® Flexible Rubber Splice

The four items needed to order a Super-Screw splice are below.

The complete part number will be in this order: "A-B-C-D"

A. Determine the belt tension rating and measure the smallest pulley in your system. This determines the series to use.

Refer to page 4 for a chart listing the recommended maximum tension for each series. Consider pulleys over which the belt makes at least a 90-degree wrap. For tail or take-up of the self-cleaning "wing type" pulley, 25% larger diameter dimensions are usually required. Refer to the Super-Screw Series Selection Guide on page 5 for selecting the appropriate series based on the PIW and minimum pulley diameter.

B. Select the rubber compound best suited for the application. This determines the type of rubber for the splice.

Refer to page 4 for selecting the best splice material for your application

C. Measure belt thickness after skiving. This determines the screw length needed.

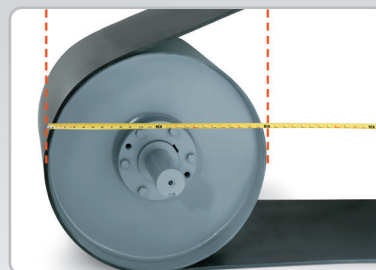
Measure the thickness of the belt after skiving by subtracting the top cover thickness from the overall belt thickness, or by measuring from the bottom of the belt to the top of the top ply. It is recommended to skive the bottom cover if it is greater than one eighth (1/8") of an inch thick. Refer to the Thickness After Skive guide on page 4 to find the "mm rounded up" number.

D. Choose the Super-Screw Splice length.

Super-Screw® Evolution has an 18° bias installation requirement (4" bias for every 12" of belt width), so splices must be ordered wider than belt width. The formula for length to order Evolution is $(\text{Belt Width}) \times (1.067)$ then round down to the nearest inch.

Super-Screw® Original has a 5° bias installation requirement (1" for every 12" of belt width), so splice length required is equal to belt width (example: order a 36" splice for a 36" wide belt).

Refer to the Splice Width Selection Guide on page 5 for total splice length needed for common belt widths.



Measure smallest pulley diameter and determine the belt's tension rating (PIW)



Measure belt thickness after skiving



Choose Super-Screw splice length



Select rubber compound

Super-Screw® Splice Selection Guidelines

A Super-Screw® Series Selection Guide

Super-Screw Series	Type	Max Belt Tension	Min Pulley Diameter		Belt Thickness After Skiving		Top of Splice Thickness (+/- 1mm)		Bottom of Splice Thickness (+/- 1mm)		Overall Width of Splice		Full Roll Size	
		PIW	in	mm	in	mm	in	mm	in	mm	in	mm	in.	m
35 Series	Evolution	200	6	160	5/32-1/2	3.2-14	1/8	3.5	1/8	3	2-27/32	72	984	25
63 Series	Evolution	360	8	200	5/32-1/2	3.2-16	5/32	4	1/8	3	4-9/16	116	984	25
65 Series	Evolution	360	8	200	5/32-1/2	3.2-15	1/4	6	1/8	3	4-9/16	116	984	25
80 Series	Evolution*	450	10	250	5/32-1/2	4.8-15	1/4	6	3/16	4.7	6-5/16	160	984	25
85 Series	Original	450	10	250	5/32-19/32	4.8-16	5/16	7.5	3/16	4.5	5-7/8	156	984	25
100 Series	Original	650	12	300	5/32-19/32	4.8-16	5/16	7.5	3/16	4.5	5-7/8	156	984	25
105 Series	Original	650	13	330	5/32-19/32	4.8-14	11/32	9	3/16	4.5	5-7/8	156	984	25
180 Series	Original	1030	16	400	9/32-13/16	2.8-20	9/32	7	1/4	6	10-1/2	266	590	15
200 Series	Original	1200	20	500	9/32-3/4	4.8-20	11/32	9	1/4	6	10-1/2	266	590	15
250 Series	Original	1430	32	800	9/32-3/4	4.8-18	7/16	10.5	5/16	8	10-1/2	266	590	15

*Note: 80 Series is currently transitioning from Original to Evolution. Only Original is available until stock is depleted. Contact Customer Service for availability.

B Rubber Compound Selection Guide

Rubber Compound	Color On Splice Stripe	Specs	Applications
AR (Abrasion Resistant)	White	Lowest DIN Rating (most resistant to abrasion)	Sand, Gravel, Quarries, Cement, Abrasive Applications
HOT	Orange	Heat Resistant up to 392°F	High-Temp Applications from 170° to 392F. Clinker, Foundries, Hot Sand
MOR (Moderately Oil Resistant)	Green	Moderately Oil Resistant	Wood, Pulp & Paper, Sawmills
SS (Stainless Steel)	White, Green or Blue Outlined in Yellow	AR, OR, or MSHA rubber compound with 316 stainless screws and internal hardware	Corrosive Environments, Chemical Fertilizer Plants, Chemical Plants, some Mining Applications
MSHA (Fire-Resistant/Anti-Static, Anti-Sparking)	Blue	MSHA/Fire-Resistant/Anti-Static	Underground Mining, Coal, Silos
White (FDA/USDA Food Grade)	Splice all White	FDA/USDA Food Grade	Food
AR BB/FB/SB (Bare back/Friction Back/Sliding Bed)	White with Bottom Ply Exposed	Abrasion resistant rubber compound with an extra ply vulcanized onto bottom.	Where an impact bed is present. Many times a standard AR will work. Use this for continuous sliding bed applications and on bare back belts
MOR BB/FB/SB (Bare back/Friction Back/Sliding Bed)	Green with Bottom Ply Exposed	MOR rubber compound with an extra ply vulcanized onto bottom.	Where an impact bed is present. Many times a standard MOR will work. Use this for continuous sliding bed applications and on bare back belts

Thickness After Skive Guide

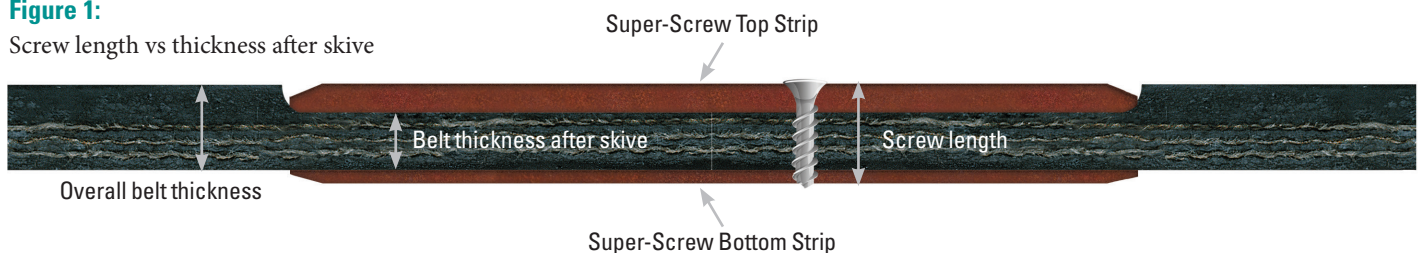
Thickness After Skive*			Screw Length Needed (mm)									
in.	mm	C mm Rounded Up	35	63	65	80	85	100	105	180	200	250
1/8	3.2	4	10	10	12	-	-	-	-	-	-	-
3/16	4.8	6	12	12	14	14	16	16	18	19	21	25.5
1/4	6.4	8	14	14	16	16	18	18	20	21	22.5	27
5/16	7.9	8	14	14	16	16	18	18	20	21	22.5	27
3/8	9.5	10	16	16	18	18	20	20	22	22.5	24	28.5
7/16	11.1	12	18	18	20	20	22	22	24	24	25.5	30
1/2	12.7	14	20	20	22	22	24	24	30	25.5	27	31.5
9/16	14.3	15	-	22	24	24	30	30	-	27	28.5	38
5/8	15.9	16	-	24	-	-	30	30	-	28.5	30	38
11/16	17.5	18	-	-	-	-	-	-	-	30	31.5	38
3/4	19.1	20	-	-	-	-	-	-	-	30	38	-

*Top (or top and bottom) cover of the belt must be skived to this thickness for the screws to engage.

Screw length is not equal to thickness after skive. The screws are longer to go through the Super-Screw top strip, belt, and bottom strip.

Figure 1:

Screw length vs thickness after skive



Super-Screw® Splice Selection Guidelines

Evolution Splice Length Selection Guide

Belt Width		35 SERIES			63/65 SERIES			80 SERIES EVOLUTION*		
in.	mm	D Splice Length	No. of Screws	No. of Spacers	D Splice Length	No. of Screws	No. of Spacers	D Splice Length	No. of Screws	No. of Spacers
12	300	12	28	2	12	56	2	12	84	2
18	450	19	44	2	19	88	2	19	134	2
24	600	25	58	3	25	116	3	25	176	3
30	750	32	74	3	32	148	3	32	224	3
36	900	38	88	4	38	176	4	38	266	4
42	1050	44	102	4	44	204	4	44	308	4
48	1200	51	118	4	51	236	4	51	358	4
54	1350	57	132	5	57	264	5	57	400	5
60	1500	64	148	5	64	296	5	64	448	5
72	1800	76	176	6	76	350	6	76	532	6
84	2100	89	206	7	89	410	7	89	624	7
120	3000	128	294	8	128	589	8	128	896	10
Per-Inch Screw Multiplier:			2.3			4.6			7.0	

*Note: 80 Series is currently transitioning from Original to Evolution. Only Original is available until stock is depleted. Contact Customer Service for availability.

Original Splice Length Selection Guide

Belt Width		80/85/100/105 Series Original			180/200/250 SERIES		
in.	mm	D Splice Length	No. of Screws	No. of Spacers	D Splice Length	No. of Screws	No. of Spacers
12	300	12	94	2	12	80	2
18	450	18	140	3	18	120	3
24	600	24	186	4	24	160	4
30	750	30	232	5	30	200	5
36	900	36	278	6	36	240	6
42	1050	42	324	7	42	280	7
48	1200	48	370	8	48	320	8
54	1350	54	416	9	54	360	9
60	1500	60	462	10	60	400	10
72	1800	72	556	11	72	480	11
84	2100	84	648	13	84	560	13
120	3000	120	924	15	120	799	15
Per-Inch Screw Multiplier:			7.7			6.66	

Super-Screw® Full Roll Ordering

When ordering a full roll, different screw lengths can be specified as needed in any quantity. Total screw quantity for a full roll of each series is listed below.

Super-Screw® Full Roll Series	Full Roll Size		Packaging	Spacer Quantity	Screw Quantity	PZ Bit Quantity
	in.	m				
35 Series Full Roll	984	25	Top and bottom in one box	100	2300 w/ washers	20 PZ2
63 Series Full Roll	984	25	Top and bottom in separate boxes	100	4600 w/ washers	
65 Series Full Roll	984	25		100	4600 w/ washers	
80 Series Full Roll	984	25		100	6900 w/ washers	
85 Series Full Roll	984	25		250	7700	
100 Series Full Roll	984	25		250	7700	20 PZ3
105 Series Full Roll	984	25		250	7700	
180 Series Full Roll	590	15		150	3970	
200 Series Full Roll	590	15		150	3970	
250 Series Full Roll	590	15		150	3970	

Additional Super-Screw® Selection Guidelines

Required Installation Equipment

The following tools are needed to properly splice a belt using the Super-Screw® Flexible Rubber Fastening System:

- Super-Screw® Fastener Strips
- Screws*
- Assembly spacers
- Powered drill
- PZ bit
- Belt Skiver
- Belt Marking Pen
- Tape Measure
- Belt or Carpenters Square

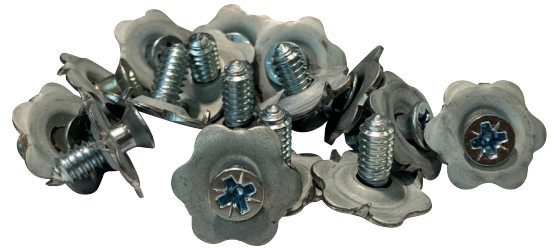
*Evolution screws include washers; Original screws do not require washers

Super-Screw® Metal Options for Screws and Inserts

The Super-Screw® Flexible Rubber Fastening System features two different metal options of screws and inserts.

Galvanized: Galvanized steel is the standard fastener material for most applications. Galvanization helps combat mild corrosion.

Stainless: 316 Stainless steel provides extra resistance to magnetic attraction and corrosion from acids and other chemicals.



Metal Options for Screws and Inserts

Rubber Compound Details	Abrasion Resistance	Chemical Resistance	Rust Resistance	Magnetic	Spark-Free
AR (Abrasion Resistant)	Excellent	Fair	Fair	Yes	No
HOT (Heat Resistant)	Fair	Fair	Fair	Yes	No
MOR (Moderately Oil Resistant)	Good	Fair	Fair	Yes	No
SS (Stainless Steel)	Good	Excellent	Excellent	Slightly	No
MSHA (Fire-Resistant/Anti-Static, Anti-Sparking)	Good	Fair	Fair	Yes	Spark Resistant
White (FDA/USDA Food Grade)	Fair	Good	Fair	Yes	No
AR BB/FB/SB (Bare back/Friction Back/Sliding Bed)	Excellent	Fair	Fair	Yes	No
MOR BB/FB/SB (Bare back/Friction Back/Sliding Bed)	Good	Fair	Fair	Yes	No

SUPER-SCREW®

Flexible Rubber Fastening System

Belt Preparation Tools

Flex-Lifter™ Belt Lifter

Lifting a conveyor belt out of the way to do belt repair and maintenance can be a difficult and hazardous job. The Flex-Lifter™ safely lifts and holds tensioned conveyor belts up to the stated ratings.

- Highest safe lift rating available: 4000 lbs (1810 kg) for the Medium and Large models; 6000 lb (2700 kg) for the XL model
- Eliminates pry bars and manual lifting
- Wide, dual-rail base maintains unit stability
- Optimized lift height provides sufficient room to make repairs safely

Flex-Lifter™		
Description	Ordering Number	
Medium Flex-Lifter	FL-M	
Large Flex-Lifter	FL-L	
XL Flex-Lifter	FL-XL	
XL V-Return Lift Bar	FLVRL-XL	
Aluminum Content		
Aluminum Alloy Type	Percent	
	Mg Magnesium	Ti Titanium
4043	0.05	0.2
5356	5.5	0.2
6005	0.6	0.1
6061	1.0	0.0
6063	0.7	0.0
7075	2.5	0.0



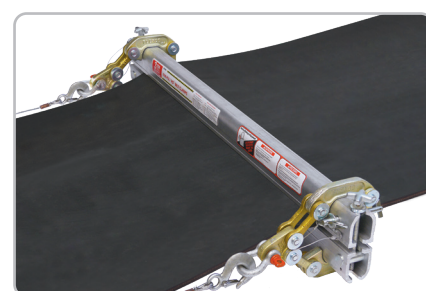
Flex-Lifter™ Belt Lifter

Far-Pul™ HD® Belt Clamps

Easy-to-use, lightweight and sturdy belt clamp, specially engineered for heavy-duty applications. With a load capacity up to three tons (2.7 metric tons) when used with two 1-1/2 ton come-alongs, it securely grips belts up to 1" (25 mm) thick.

- Provides even tensioning across belt width
- Retaining pins ensure scissors remain secured on the bar
- Each set includes four clamp bars and four steel clamp scissors with carry bag

Far-Pul™ HD® Belt Clamps		
Belt Width		Ordering Number
in.	mm	
Up to 30	Up to 750	LSHD30
Up to 36	Up to 900	LSHD36
Up to 42	Up to 1050	LSHD42
Up to 48	Up to 1200	LSHD48
Up to 54	Up to 1350	LSHD54
Up to 60	Up to 1500	LSHD60
Up to 72	Up to 1800	LSHD72
Aluminum Content		
Aluminum Alloy Type	Percent	
	Mg Magnesium	Ti Titanium
6061	1.0	0.0



Far-Pul™ HD® Belt Clamp

Electric Belt Cutter

The Electric Belt Cutter quickly and easily cuts all types of belting from the softest of natural rubbers to the hardest constructed solid woven PVC and fabric plied belts.

- Designed for cutting all belt widths as well as for extended, longitudinal cuts
- High-speed, steel blade provides for a smooth, accurate cut
- Spring-loaded blade guard protects operator from cutting edge of blade
- Cordless versions allow maximum portability and convenience

Electric Belt Cutter		
Description	Ordering Number	Item Code
Corded Model	EBC1	30001
	EBC2	30002
Cordless Model	CEBC1	30018
	CEBC2	30019
Cutting Capacity		
Description	EBC1/CEBC1	
	Imperial	Metric
Rubber Belt	Up to 1"	Up to 25 mm
PVC Belt	Up to 360 P.I.W.	Up to 630 EP
Description	EBC2/CEBC2	
	Imperial	Metric
Rubber Belt	Up to 2"	Up to 50 mm
PVC Belt	Up to 1140 P.I.W.	Up to 2000 EP



Electric Belt Cutter

Belt Grip

When the belt grip is slipped over the belt edge at a right angle, belts can be pulled without damaging the belt surface.

Belt Grip	
Description	Ordering Number
Sold by the pair	22



Belt Grip



SUPER-SCREW®

Flexible Rubber Fastening System

Belt Preparation Tools

PS15 Hot Knife Skiver

The PS15 Hot Knife Skiver is a high-quality belt skiving tool that is perfect for preparing belts for Super-Screw® installation.

- Skives belt top covers from 1/16" to 5/8" (1.5 mm to 16 mm) thick
- Spring-loaded clamps and two locking screws make for easy adjustments
- Ergonomically-designed handle for comfort
- Features 4 heat settings and an "off" button

PS15 Hot Knife Skiver	
Item	Description
PS15 Hot Knife Skiver	Includes tool and 20 C6/W6 replacement blades
PS15 Replacement Blades	Pack of 20 C6/W6 replacement blades



PS15 Hot Knife Skiver

FEIN Oscillating Belt Skiver

The FEIN Belt Skiver is an oscillating multi-tool that quickly removes rubber from the edge or inside of the belt using vibration without damaging belt plies or carcass.

- An assortment of blades (straight blades, blades for belt ends and belt centers) are available. The blades are designed for 1/8" to 3/8" (2.5 to 10.5 mm) thick belt covers
- Available in cordless/battery-powered and corded (110 Volt) options
- Features 6 oscillating frequency settings

FEIN Oscillating Belt Skiver	
Description	Item Code
110V Fein Skiver	110247
Cordless Fein Skiver	109887
Swerved Blade	110236
Straight Blade	110235
1/4" Belt End Blade	110237
3/16" Belt End Blade	110238
1/8" Belt End Blade	110239
3/8" Belt Center Blade	110244
5/16" Belt Center Blade	110245
1/4" Belt Center Blade	110240
3/16" Belt Center Blade	110241
1/8" Belt Center Blade	110242



FEIN Oscillating Belt Skiver

Screw Variety Kits

To ensure you have the right length screws for a smooth installation, we have created three new Screw Variety Kits. Each kit is specific to a range of Super-Screw series and includes 1,000 total screws in four different lengths to aid in situations where longer or shorter screws are needed at the time of installation. Also included are 10 PZ bits. Each kit is packaged in a durable organizer.

Screw Variety Kits		
Description	Ordering Number	Item Code
Super Screw Evolution Screw Variety Kit (5mm diameter screws)	SVK-EVO	110231
Super Screw Original Screw Variety Kit (5mm diameter screws)	SVK-5MM-ORIG	110232
Super Screw Original Screw Variety Kit (6mm diameter screws for 180-250 Series)	SVK-6MM-ORIG	110233



Screw Variety Kit

Visit www.flexco.com for other Flexco locations and products, or to find an authorized distributor.

