

MLT

Minet Lacing Technology



Super-Screw®

Simple and fast installation

A flexible splice to screw



MLT
**A Partner you
can Trust**

Our products and solutions
meet your needs

70 years of experience and
innovation for you

MLT
Material Handling Technology
Conveyor belt/Cing systems
Technical belts / Tools

**SOLUTIONS FOR HEAVY
AND LIGHT-DUTY BELTS, MANUFACTURER OF
TECHNICAL BELTS, TOOLS, VULCANIZING PRESSES**

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What is Super-Screw®?

A flexible simple and fast rubber splice to screw.

A Solution of flexible splice to screw !

Super-Screw® is an innovative and fast solution for splicing your belts

Your problems

- Very long downtime of machine
- Installation with difficult access
- Inclement weather conditions
- Staff safety testing
- Heavy materials investment
- Qualified technician's necessity causing a lack of staff's autonomy

Your solution

To answer to these constraints, MLT has developed unique and innovative splice for belts : Super-Screw®.

This patented, incomparable splice gives you solution to all your installation problems.

SUPER-SCREW® considerably reduces the downtime. It can bear all type of tensions up to 250N/mm (failure stress belt up to 2500N/mm) It is available in several options of rubber.

Thanks to the screwing system, the Super-Screw® can be installed regardless of the:

- Configuration of the conveyor belt
- Access conditions
- Weather conditions
- Temperature (-30°F up to +200°F flash)

The screws which are specifically designed for being both self-drilling and self-tapping. They pierce the fibres of the the belt, without cutting them.

**Simple and practical,
the SUPER-SCREW® is done for you !**

The advantages:

- Considerably optimizes your productivity
- Easy to install
- 3 times faster than your current system
- Under any weather conditions
- Leak proof
- Flexible
- High longevity
- High tensile strength
- Compatible with small pulley diameter
- Compatible with conveyor scraper

Applications :

- Mines**
- Cement plants**
- Quarries**
- Heavy industries**
- And other...**

Plan the quantity for a meter of Super-Screw®:

Type of SUPER-SCREW®	Quantity in meter		
	Screws	Spacers	PZ Bit
SS 35 - 40	110	10 Spacers	1 PZ2
SS 63 - 65	200		
SS 80 - 105	280		
SS 125 - 250	254	10 Spacers	1 PZ3

Packaging:

In a kit or in a roll depending on your needs

Packaging of screws, spacers, PZ bits:

Screws	Super-Screw® 35 - 105 A bag of 2500 screws or bag of 100 screws	Super-Screw® 125 - 250 A bag of 2000 screws or bag of 100 screws
Spacers	Super-Screw® 35 - 250 A bag of 250 spacers or a bag of 25 spacers	
PZ Bit	Super-Screw® 35 - 250 A bag of 25 PZ bits or per unit	

To facilitate your choice, Super-Screw® is available in some new kits, special packaging options that are adapted to your needs and to your installations.

Packaging for Super-Screw®:

New

The Super-Screw® kit allows you to make an installation depending on your belt's type & width

(available for some options and models of Super-Screw®)



SUPER-SCREW®

Super-Screw® is carefully pre-assembled by us :
(delivered with pre-assembled spacers)

2 sizes of screws are necessary for the installation

1 packet of PZ bits

1 kit of helpful tools for installation:

Installation Template Super-Screw®

Super-Screw® Installation Tool

The Super-Screw® in rolls

(available for some options and models of Super-Screw®)



SUPER-SCREW®

To assemble the Super-Screw® oneself
(screws, spacers and PZ bit must be ordered separate)

SS 35 to SS 105 :

Roll of 5, 10 and 25 meters with steel screws and inserts

Roll of 3, 10 and 25 meters with stainless screws and inserts

SS 125 to SS 250 :

Roll of 5, 7.5 and 15 meters with steel screws and inserts

Roll of 3, 7.5 and 15 meters with stainless screws and inserts

Helpful tools for installation:

Installation Template Super-Screw®

Super-Screw® Installation Tool

Available quality of rubber: Super-Screw® for each situation

Screwing system allows installing Super-Screw® splice whatever your activity and your needs. Super-Screw® is available in several materials with 2 types of screws and steels:

Steel screws and inserts

High resistance, it's the perfect choice for most situations.

Quarries, Cement Plants, Mines, Food Processing, and Wood handling

Stainless steel screws and inserts

A resistance in corrosive and saline environment. It is compatible with most metal separators*

Gold mines, Phosphate mines, Sorting center, Fertilizer plant, Recycling facilities and salt handling

Abrasion resistant

Super-Screw® answers the majority of applications, since it is fabricated with a high quality of rubber abrasion resistant 50mm³. **This is one of the most resistant compounds available today.**



Heat retardant

Super-Screw® can be installed on your heat retardant belt and can **be able to withstand temperatures between 170°C and 200°C.**



Fire resistant

Super-Screw®, fabricated with fire resistant surface ISO 340 and ISO 284, **ensures your security of silos and underground mines.**



Heat resistant

Super-Screw® can be installed on your heat resistant belt and can **be able to withstand temperatures between 150°C and 170°C.**



Oil resistant

Super-Screw® is also available for oil resistant surface **which resists oil and solvent.**



Very low temperature

Super-Screw® resists even at **low temperatures until -30°C (-50°C on demand).**



White FDA/USDA rubber (max length: 2 m)

Super-Screw®, fabricated with white **FDA surface agreement, respects hygiene standards for alimentary product's contact** (Available for Super-Screw® 35 and 63 models).



How to choose your Super-Screw® :

Refer to the chart and determine your Super-Screw®, spacers, screws and blades for skiver to use..

Belt thickness of your original belt before skiving (mm)		3 + 1	4 + 1.5	5 + 1.5	4 + 2	5 + 3	6 + 2	6 + 3	8 + 3	10 + 3						
Blades for skiver (mm)		3.5	4.5	4.5	4.5	2.5	4.5	3.5	6.5	2.5	6.5	3.5	8.5	3.5	10.5	3.5
Belt EP or PP	Type SS	Ref spacers	Screws size (mm)													
250/2	250/3	SS 35	506	5 x 10 ; 5 x 12												
315/2	315/3															
400/2	400/3	SS 40	508	5 x 10 ; 5 x 12												
500/3	500/4															
630/2	630/3	SS 63	510					5 x 12 ; 5 x 14								
630/4	630/5															
500/3	500/4	SS 65	512					5 x 14 ; 5 x 16								
630/2	630/3															
630/4	630/5															
800/2	800/3	SS 80	514					5 x 14 ; 5 x 16								
800/4	800/5															
800/2	800/3	SS 85	516					5 x 16 ; 5 x 18								
800/4	800/5															
1000/3	1000/4	SS 100	518					5 x 18 ; 5 x 20								
1000/5	1000/6															
1000/3	1000/4	SS 105	520					5 x 20 ; 5 x 22								
1000/5	1000/6															
1250/3	1250/4	SS 125	522					6.3 x 19.5 ; 6.3 x 21								
1250/5	1250/6															
1250/3	1250/4	SS 127	524					6.3 x 21 ; 6.3 x 22.5								
1250/5	1250/6															
1400/3	1400/4	SS 180	526					6.3 x 21 ; 6.3 x 22.5								
1500/5	1600/4															
1600/5	1800/4															
1800/5	1800/6															
1400/3	1400/4	SS 185	528					6.3 x 22.5 ; 6.3 x 24								
1500/5	1600/4															
1600/5	1800/4															
1800/5	1800/6															
2000/4	2000/5	SS 200	530					6.3 x 22.5 ; 6.3 x 24								
2000/4	2000/5	SS 205														
2000 à 2500		SS 250	532					6.3 x 27 ; 6.3 x 28.5								

Template can be used with EP or PP multiples belt

Choose your Super-Screw®:

1 Depending on your belt type (purple) (part «EP or PP belt») determine which Super-Screw® to use (red).

Define spacer and screws:

2 Once your Super-Screw® is determined, identify spacer reference (dark blue), as well as the screws (light blue) which will be necessary to its installation according to your belt thickness.

Define blades for skiver to use:

3 Depending on the belt thickness before skiving (gray), easily determine which blade you will use to skive (orange).

Installation method :

Install your Super-Screw® easily!

You will need the following equipment:

These are tools that you will need for your Super-Screw®'s installation, These tools allow you to install your splices quickly and easily.

Cordless Tools kit with skiver and powered screwdriver ref.2991688

- Beltskiver* FEIN
- Blade for beltskiver centre harp (2, 4, 6, 8, 10mm)
- HSS Saw blade, with fine teeth for precise cutting
- Powered driver FEIN
- Charger
- battery charger
- Cutter + 10 standard spare blades
- Silver ball point pen
- Bit holder magnet with locking systems for the bits
- Cut resistant gloves
- STANLEY Triple-meter with jamming
- Light protection goggles



*2 types of skiver, depending on your needs

- FEIN Skiver
- PS-15 Skiver



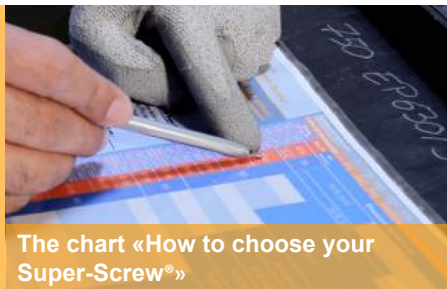
FEIN Skiver



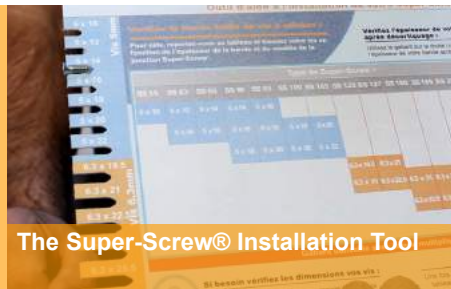
PS-15 Skiver

- Appropriate Super-Screw®
- Ruler
- Installation Template (delivered free with your Super-Screw®)
- Helpful tools (delivered free with your Super-Screw®)
- PZ bit
- Quantity of screws needed (cf p.4)





The chart «How to choose your Super-Screw®»



The Super-Screw® Installation Tool



The Installation Template Super-Screw®

Thanks to helpful installation tools of your Super-Screw®, developed by MLT, you can install your splice simply:

- The chart «How to choose your Super-Screw®» allows you to find rapidly the adapted model for your belt, furthermore the skiving blades that you need.
- Super-Screw® Installation Tool, allows you to find which one to use.
- The Installation Template Super-Screw® gives you the possibility to cut the proper angle, and to place the splice correctly.

The right move:

Schematic 1

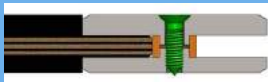
Bad skiving



Good skiving



Schematic 2



Schematic 3

Not enough tightening



Too much tightening



Good tightening



Schematic 4

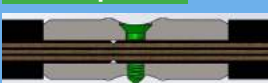
Screw is too long



Screw is too short



Screw is perfect



Warning:

DO NOT USE AN IMPACT DRILL
 SLIDE A THICK BOARD UNDERNEATH THE SUPER-SCREW®
 DO NOT SCREW ON A DRUM
 TAKE APPROPRIATE SAFETY GEAR : PPE

Assembly of Super-Screw's® splice delivered in rolls:

The rolls are delivered identified in boxes as top and bottom.
 A marking strip, on the Super-Screw's® top and bottom covers, identifies the rubber version. (cf. p.6)



Unroll the rolls side by side, in the same direction. To calculate the length of Super-Screw® needed, measure the length required.



Cut the coils using the MLT cutting press for an easy and quality cut. (optional)

NOTE:
 MLT manufactures adapted punches.



Align top and bottom holes.

NOTE:
 The arrows have to be pointing in the same direction.
 You may notice a small gap due to the elasticity of materials.



Set the spacers in the first 2 holes of each side of the cut (Super-Screw® middle row), place screws in the center row every 3 holes.

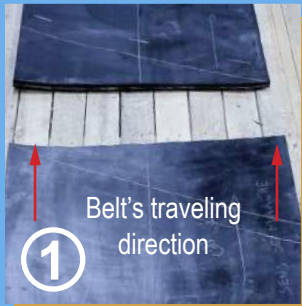


Place the "top" cut length over the "bottom" cut length.



Insert screws through the spacers, starting with the first 2 from each end and then the center (until 2m).

Operating method of Super-Screw® recommended by MLT:



Position yourself the direction the conveyor belt travels toward



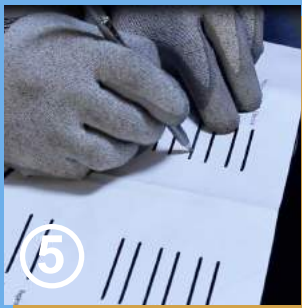
Identify clearly on your belt :
The traveling direction of conveyor,
the trailing edge and the leading edge



With a tape measure reduce the belt by one-half (both sides), and determine belt's axis



In the traveling direction of conveyor, place Installation Template Super-Screw®'s big side (in reading orientation), on the left side of the belt



Depending on your Super-Screw®'s model, trace your skiving lines on the trailing edge

Note : take account of trailing and leading edges previously identified



Trace the cutting line thanks to the angled part of tracing tool



Mark the skiving line on the thickness of the belt (on both sides)



Turn your belt, Pick up marks and then link up with a ruler



Turn with your Installation Template Super-Screw® in such a way as to be on the back of traveling direction of conveyor



Being on the back of traveling direction, place the big side of the Installation Template Super-Screw® (in reading orientation) of the left side of the belt



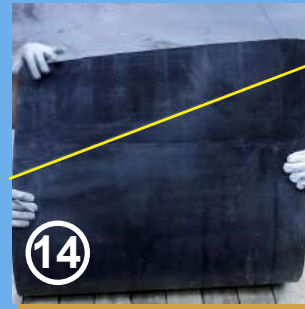
Trace the cutting line, then the skiving line on the TRAILING EDGE (depending on your Super-Screw®'s model)



Mark the skiving line on the thickness of the belt (on both sides)



Turn the belt, pick up the 2 marks, then link up with a ruler



That is your skiving landmark on TRAILING EDGE, the thickness of belt



To come back to trailing edge, then cut the belt as per the line to the point of cutting



Do the same operation on the leading edge of conveyor



Use the Super-Screw® Installation Tool, splice factor in the characteristics of your belt, in order to determine right skiving blades to use



Turn the belt (trailing edge), then skive the bottom face based on skiving landmarks, as you have done previously



Get your belt straight to make the same operation on the upper part

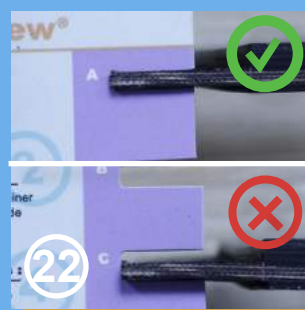
Think about to change your skiving blade as you have determined by the Super-Screw® Installation Tool



Repeat steps 18 and 19 on trailing edge



With a knife or cutter, chamfer the end of the belt (if belt thickness $\geq 6\text{mm}$)



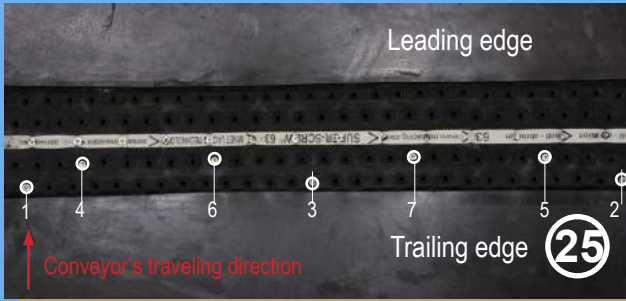
Measure the thickness of your skived belt using our the chart How to choose your Super-Screw®, and then, determine the correct size of screws to use



First, position splice on the trailing edge by putting it in abutment against spacers



In case of doubt, verify screw's sizes thanks to our chart How to choose your Super-Screw®



The first screwed side of the belt must be on the trailing edge. The screwing must be as divided as on the picture

Warning: tightening and screw size, screw on a flat, thick wooden board



Remove spacers



Repeat step number 25 on the leading edge



Dispersedly screw the splice



If necessary, trim the Super-Screw® with a grinder along the edges of the belt



Verification point: To certify a conforming splice



Skive the belt by leaving a very light cover of rubber.



Install the Super-Screw® with adapted sizes of screws.



Super-Screw® splice must be placed with a bias, and integrated in the belt, without any thickness.



Super-Screw®'s installation must be performed on a flat, thick wooden board for example.



It's important to get the 2 sides in contact.
Think about removing the spacers



For the cleated belt, Super-Screw® must be placed following to cleated angle.
(systematically consult us)



Training

A dedicated team just for you, in our offices or on site



Theoretical and practical training on MLT products



Maintenance of the conveyor belt



Conveyor belt technology



Conveyor belt calculation

Scope of our training center

Our training center operates all over the world, depending on your requirements and needs. Contact us for a quotation.

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Minet Lacing Technology

MLT – it's also metallic fasteners, flexible splices, tools, endless and spliceless technical belts



Super-Screw®



ISC® splice



MS®



FIX'N GO®

Innovative products, easy to install !



Self-Lock®



Clip'N Lock®



Technical belt
Endless spliceless belts



Innovation for 70 years.

MLT, it's solutions for heavy and light duty belts, tools, technical belts, etc.



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