

MLT

Minet Lacing Technology



SUPER-SCREW® *the Original* since 1994

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
MLT Local 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®** *the Original* since 1994 ?

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°C (-22°F) up to 200°C (-392°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 80 - 105	280	10 spacers	1 PZ2
SS 125 - 250	254	10 spacers	1 PZ3

Two types of steel for screws and inserts:

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

Packaging:

In a kit or in a roll depending on your needs

Packaging of screws, spacers, PZ bits:

Screws	SUPER-SCREW® 80 - 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® 80 - 250 A bag of 250 spacers or a bag of 25 spacers	
PZ Bit	SUPER-SCREW® 80 - 250 A bag of 25 PZ bits or per unit	

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

Packaging for SUPER-SCREW®:

SUPER-SCREW® *the Original* since 1994 IN 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® is carefully pre-assembled by us
(delivered with pre-assembled spacers)

2 sizes of screws are necessary for the installation

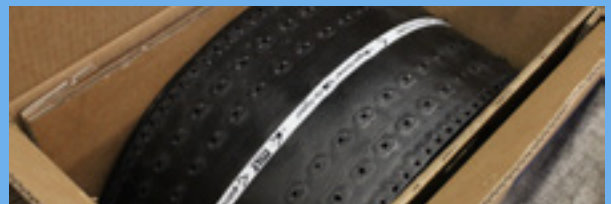
1 packet of PZ bits

1 kit of helpful tools for installation:

The chart «How to choose your SUPER-SCREW®»
Installation Template
SUPER-SCREW® Installation Tool

SUPER-SCREW® *the Original* since 1994 IN ROLLS

(available for some options and models of SUPER-SCREW®)



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

SUPER-SCREW® 80 to 105 :

Roll of 3, 5, 10 and 25 meters with steel or stainless inserts

SUPER-SCREW® 125 to 250 :

Roll of 5, 7.5 and 15 meters with steel inserts

Roll of 3, 5, 7.5 and 15 meters with stainless inserts

Helpful tools for installation:

The chart «How to choose your SUPER-SCREW®»
Installation Template SUPER-SCREW®
SUPER-SCREW® Installation Tool

Available quality of rubber:

SUPER-SCREW® *the Original* since 1994 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 screw and steel :

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 (338°F) and 200°C (392°F).**



Fire resistant

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



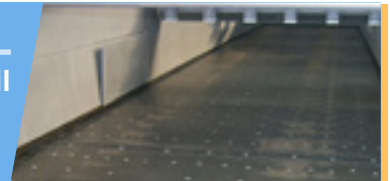
Heat resistant

SUPER-SCREW® can be installed on your heat resistant belt and can **be able to withstand temperatures between 150°C (302°F) and 170°C (338°F).**



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 (-22°F) (-50°C (-58°F) on demand).**



How to choose your

SUPER-SCREW® *the Original* since 1994

Refer to the chart to determine which SUPER-SCREW® is right for you, and which screws and which blades for skiver correspond.

For your belts from EP800/2 and higher (or 450 PIW and higher), please refer to the SUPER-SCREW® range below. For technical datas that are above the previously mentioned, please check the **SUPER-SCREW® Evolution** range.

Belt thickness of your original belt before skiving	mm	5 + 3		6 + 2		6 + 3		8 + 3		10 + 3		
	inch	3/16" + 1/8"		15/64" + 5/64"		15/16" + 1/8"		5/16" + 1/8"		25/64" + 1/8"		
Blades for skiver (mm)		4,5	3,5	6,5	2,5	6,5	3,5	8,5	3,5	10,5	3,5	
SUPER-SCREW®	Bande EP ou PP*		Ref spacers	Screws size								
	N/mm	PIW										
SUPER-SCREW® 80	800/2	800/3	450	508	5x14 ; 5x16							
	800/4	800/5										
SUPER-SCREW® 85	800/2	800/3	450	510	5x16 ; 5x18							
	800/4	800/5										
SUPER-SCREW® 100	1000/3	1000/4	650	510	5x18 ; 5x20							
	1000/5	1000/6										
SUPER-SCREW® 105	1000/3	1000/4	650	612	5x20 ; 5x22							
	1000/5	1000/6										
SUPER-SCREW® 125	1250/3	1250/4	1250	612	6.3x21 ; 6.3x22.5							
	1250/5	1250/6										
SUPER-SCREW® 127	1250/3	1250/4	1250	612	6.3x21 ; 6.3x22.5							
	1250/5	1250/6										
SUPER-SCREW® 180	1400/3	1400/4	1650	612	6.3x21 ; 6.3x22.5							
	1500/5	1600/4										
	1600/5	1800/4										
	1800/5	1800/6										
SUPER-SCREW® 185	1400/3	1400/4	1650	612	6.3x21 ; 6.3x22.5							
	1500/5	1600/4										
	1600/5	1800/4										
	1800/5	1800/6										
SUPER-SCREW® 200	2000/4	2000/5	2000	614	6.3x22.5 ; 6.3x24							
SUPER-SCREW® 205	2000/4	2000/5	2000		6.3x24 ; 6.3x25.5							
SUPER-SCREW® 250	> 2000		>2000	616	6.3x27 ; 6.3x28.5							

Template can be used with EP or PP (PN or NN) multiplies belt

Chose your SUPER-SCREW® in 3 steps

- 1 Choose your SUPER-SCREW®:**
 Depending on your belt type (part «EP or PP belt») determine which SUPER-SCREW® to use.
- 2 Define spacer and screws:**
 Once your SUPER-SCREW® is determined, identify spacer reference, as well as the screws which will be necessary to its installation according to your belt thickness.
- 3 Define blades for skiver to use:**
 Depending on the belt thickness before skiving, easily determine which blade you will use to skive.

*For EP or PP lower than 800/2 (or 450 PIW), please refer to the SUPER-SCREW® Evolution documentation

Installation method :

Install your **SUPER-SCREW®** *The Original* since 1994 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 (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 3M with jamming
- Light protection goggles



*2 types of skiver, depending on your needs

- FEIN Skiver
- PS-15 Skiver

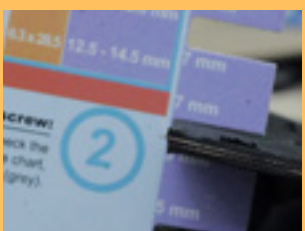


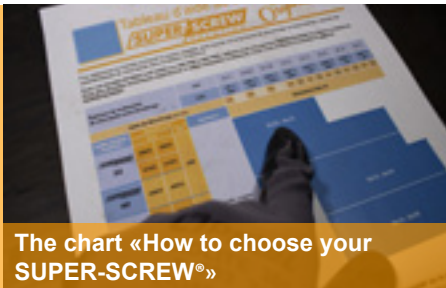
FEIN Skiver



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

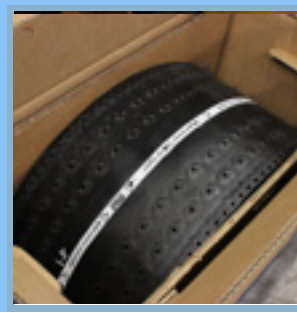


Warning:

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.



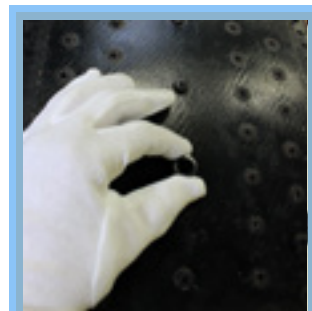
Cut the coils using the MLT cutting press for an easy and quality cut. (optional)

NOTE:
 MLT manufactures adapted punches.

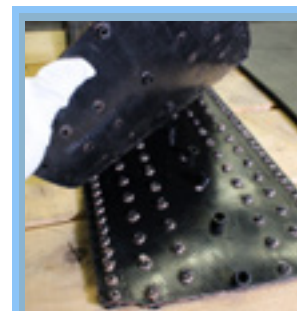


Align top and bottom holes.

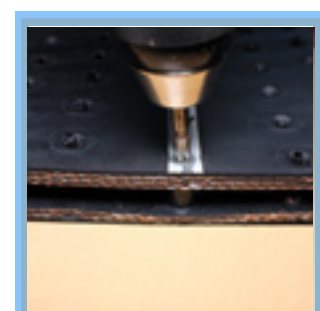
NOTE:
 The arrows have to be pointing in the same direction. You may notice a small gap due to the elasticity of materials.



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



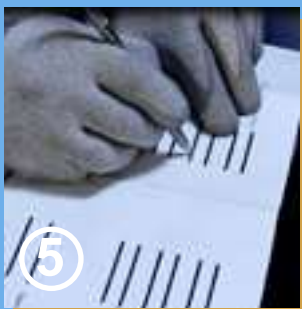
Identify clearly on your belt :
The traveling direction of conveyor,
the trailing edge and the leading edge



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

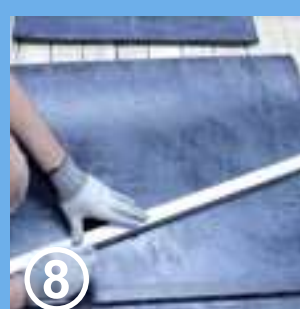
Note : take account of trailing and leading edges previously identified



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



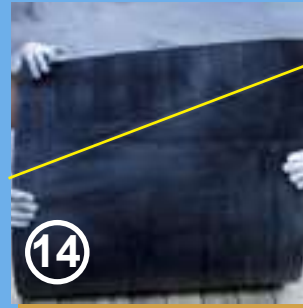
Trace the cutting line, then the skiving line on the LEADING EDGE (depending on your SUPER-SCREW®'s model)



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



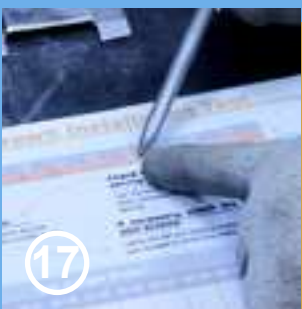
That is your skiving landmark on LEADING EDGE, the thickness of belt



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



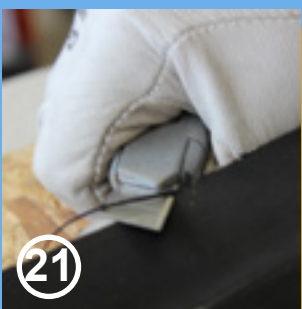
Turn the belt (trailing edge), then skive the bottom face based on skiving landmarks, as you have done previously



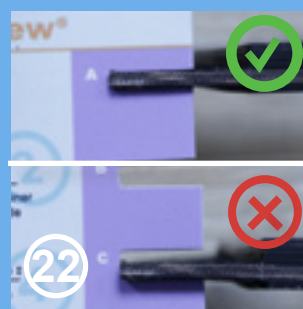
Get your belt straight to make the same operation on the upper part Think about to change your skiving blade as you have determined by the SUPER-SCREW® Installation Tool



Repeat steps 18 and 19 on trailing edge



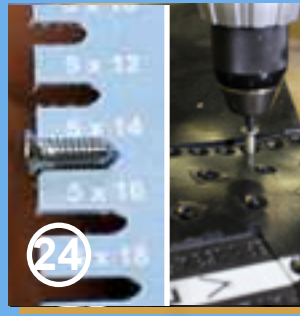
With a knife or cutter, chamfer the end of the belt (if belt thickness $\geq 6\text{mm}$)



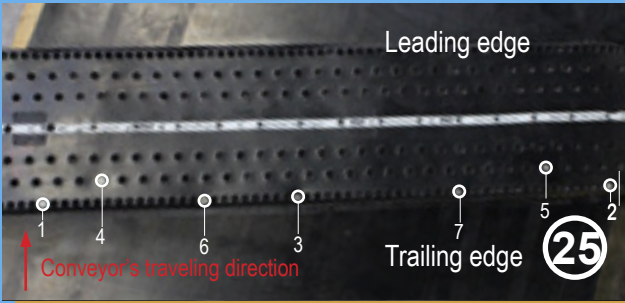
Measure the thickness of your skived belt using our the chart How to choose your SUPER-SCREW®, and then, determine the correct size of screws to use



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

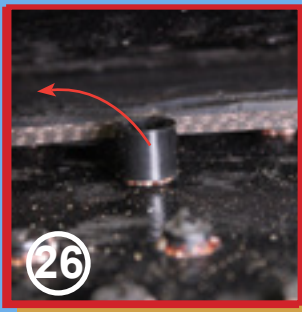


In case of doubt, verify screw's sizes thanks to our chart How to choose your SUPER-SCREW®



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

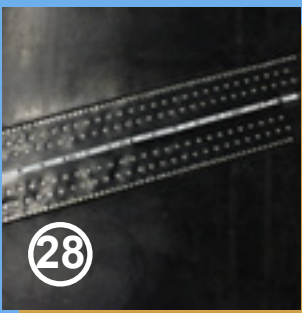
Warning: tightening and screw size, screw on a flat, thick wooden board



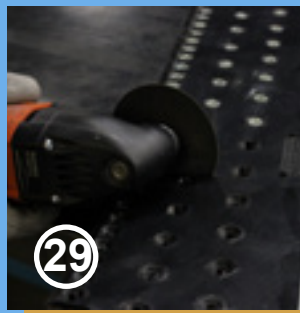
Remove spacers



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



Your SUPER-SCREW® splice is installed!

the Original
since 1994

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