Simple and fast installation

A flexible splice to screw
SOLUTIONS FOR HEAVY AND LIGHT-DUTY BELTS, MANUFACTURER OF TECHNICAL BELTS, TOOLS, VULCANIZING PRESSES

A Partner you can Trust

Our products and solutions meet your needs

70 years of experience and innovation for you
What is SUPER-SCREW®?..............................................p04

Packaging roll or ready-to-use cut lengths...............p05

Which quality of rubber is available?.......................p06

Support in the choice of your SUPER-SCREW®.....p07

Installation method..................................................p08

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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 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®:

<table>
<thead>
<tr>
<th>Type of SUPER-SCREW®</th>
<th>Quantity in meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screws</td>
<td>Spacers</td>
</tr>
<tr>
<td>SS 80 - 105</td>
<td>280</td>
</tr>
<tr>
<td>SS 125 - 250</td>
<td>254</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th></th>
<th>SUPER-SCREW® 80 - 105</th>
<th>SUPER-SCREW® 125 - 250</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screws</strong></td>
<td>A bag of 2500 screws</td>
<td>A bag of 2000 screws</td>
</tr>
<tr>
<td></td>
<td>or bag of 100 screws</td>
<td>or bag of 100 screws</td>
</tr>
<tr>
<td><strong>Spacers</strong></td>
<td>SUPER-SCREW® 80 - 250</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A bag of 250 spacers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or a bag of 25 spacers</td>
<td></td>
</tr>
<tr>
<td><strong>PZ Bit</strong></td>
<td>SUPER-SCREW® 80 - 250</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A bag of 25 PZ bits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or per unit</td>
<td></td>
</tr>
</tbody>
</table>

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® 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

#### SUPER-SCREW® 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

### 1 kit of helpful tools for installation:

- The chart «How to choose your SUPER-SCREW®»
- Installation Template
- SUPER-SCREW® Installation Tool
Available quality of rubber:

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:

<table>
<thead>
<tr>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion resistant</td>
<td>SUPER-SCREW® answers the majority of applications, since it is fabricated with a high quality of rubber abrasion resistant 50mm². <em>This is one of the most resistant compounds available today.</em></td>
</tr>
<tr>
<td>Heat retardant</td>
<td>SUPER-SCREW® can be installed on your heat retardant belt and can <strong>be able to withstand temperatures between 170°C (338°F) and 200°C (392°F).</strong></td>
</tr>
<tr>
<td>Fire resistant</td>
<td>SUPER-SCREW®, fabricated with fire resistant surface ISO 340 and ISO 284, ensures your security of silos and underground mines.</td>
</tr>
<tr>
<td>Heat resistant</td>
<td>SUPER-SCREW® can be installed on your heat resistant belt and can <strong>be able to withstand temperatures between 150°C (302°F) and 170°C (338°F).</strong></td>
</tr>
<tr>
<td>Oil resistant</td>
<td>SUPER-SCREW® is also available for oil resistant surface <strong>which resists oil and solvent.</strong></td>
</tr>
<tr>
<td>Very low temperature</td>
<td>SUPER-SCREW® resists even at low temperatures until -30°C (-22°F) (-50°C (-58°F) on demand).</td>
</tr>
</tbody>
</table>
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.

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<table>
<thead>
<tr>
<th>Belt thickness of your original belt before skiving</th>
<th>mm</th>
<th>5 + 3</th>
<th>6 + 2</th>
<th>6 + 3</th>
<th>8 + 3</th>
<th>10 + 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>inch</strong></td>
<td></td>
<td>3/16&quot; + 1/8&quot;</td>
<td>15/64&quot; + 5/64&quot;</td>
<td>15/16&quot; + 1/8&quot;</td>
<td>5/16&quot; + 1/8&quot;</td>
<td>25/64&quot; + 1/8&quot;</td>
</tr>
</tbody>
</table>

| Blades for skiver (mm) | 4.5 | 3.5 | 6.5 | 2.5 | 6.5 | 3.5 | 8.5 | 3.5 | 10.5 | 3.5 |

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**SUPER-SCREW®**

<table>
<thead>
<tr>
<th>Ref</th>
<th>Bande EP ou PP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/mm</td>
<td>PIW</td>
</tr>
<tr>
<td>SUPER-SCREW® 80</td>
<td>800/2</td>
</tr>
<tr>
<td></td>
<td>800/4</td>
</tr>
<tr>
<td>SUPER-SCREW® 85</td>
<td>800/2</td>
</tr>
<tr>
<td></td>
<td>800/4</td>
</tr>
<tr>
<td>SUPER-SCREW® 100</td>
<td>1000/3</td>
</tr>
<tr>
<td></td>
<td>1000/5</td>
</tr>
<tr>
<td>SUPER-SCREW® 105</td>
<td>1000/3</td>
</tr>
<tr>
<td></td>
<td>1000/5</td>
</tr>
<tr>
<td>SUPER-SCREW® 125</td>
<td>1250/3</td>
</tr>
<tr>
<td></td>
<td>1250/5</td>
</tr>
<tr>
<td>SUPER-SCREW® 127</td>
<td>1250/3</td>
</tr>
<tr>
<td></td>
<td>1250/5</td>
</tr>
<tr>
<td>SUPER-SCREW® 180</td>
<td>1400/3</td>
</tr>
<tr>
<td></td>
<td>1500/5</td>
</tr>
<tr>
<td></td>
<td>1600/5</td>
</tr>
<tr>
<td></td>
<td>1800/5</td>
</tr>
<tr>
<td>SUPER-SCREW® 185</td>
<td>1400/3</td>
</tr>
<tr>
<td></td>
<td>1500/5</td>
</tr>
<tr>
<td></td>
<td>1600/5</td>
</tr>
<tr>
<td></td>
<td>1800/5</td>
</tr>
<tr>
<td>SUPER-SCREW® 200</td>
<td>2000/4</td>
</tr>
<tr>
<td></td>
<td>2000/4</td>
</tr>
<tr>
<td>SUPER-SCREW® 205</td>
<td>&gt; 2000</td>
</tr>
<tr>
<td>SUPER-SCREW® 250</td>
<td>&gt; 2000</td>
</tr>
</tbody>
</table>

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

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### Chose your **SUPER-SCREW®** in 3 steps

1. Depending on your belt type (part «EP or PP belt») determine which **SUPER-SCREW®** to use.

2. 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. 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® 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

- 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 right move:

Schematic 1

Bad skiving

Good skiving

Schematic 2

Not enough tightening

Too much tightening

Good tightening

Schematic 3

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:

1. Position yourself the direction the conveyor belt travels toward.

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

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

4. In the traveling direction of conveyor, place Installation Template SUPER-SCREW™’s big side (in reading orientation), on the left side of the belt.

5. Depending on your SUPER-SCREW™’s model, trace your skiving lines on the trailing edge.

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

7. Note: take account of trailing and leading edges previously identified.

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

9. Turn your Installation Template SUPER-SCREW™ in such a way as to be on the back of traveling direction of conveyor.

10. Turn with your Installation Template SUPER-SCREW™ (in reading orientation) of the left side of the belt.
With a knife or cutter, chamfer the end of the belt (if belt thickness ≥ 6mm)

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

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

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

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

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

Use the SUPER-SCREW™ Installation Tool, splice factor in the characteristics of your belt, in order to determine right skiving blades to use

Do the same operation on the leading edge of conveyor

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

Repeat steps 18 and 19 on trailing edge

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

 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.

Repeat step number 25 on the leading edge.

If necessary, trim the SUPER-SCREW® with a grinder along the edges of the belt.

Your SUPER-SCREW® splice is installed!
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.
BRI was created to address the existing theoretical or practical needs of conveyor belt training, especially rubber belts. BRI was founded to offer an unique solution and a domain of expertise that would exceed the users expectations.

Our institute offers a complete range of training:
- conveyor belt training
- on-site expertise
- audit
- an independent testing laboratory

We study your needs and put together a customized offer. Please do not hesitate to contact us.

Contact us:
BRI services are available worldwide through MLT and if you are located in France, through Provulco. Do not hesitate to get in touch with your MLT contact.
MLT – it’s also metallic fasteners, flexible splices, tools, endless and spliceless technical belts

Innovative products, easy to install!
Innovation for 70 years.

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