Conveying Solutions

Aramid Cord Reinforced Flat Belts

The Next Step in Belting
Aramid Cord Reinforced Flat Belts

A food grade flat belt with special tensioning members fully sealed in a dense homogeneous material which has been tested for durability. Used, for example, where heavy or unevenly loaded products are carried. The Volta code for this Aramid cord reinforcement is ACR and the splicing method advised is a finger splice.

Aramid Cord reinforeced Flat Belt Range

![Embosed Bottom Belt](image1)
![ITO50-Impression Top Oval](image2)
![IST-Impression Saw Tooth](image3)

### Aramid Cord Reinforced (ACR) Embossed Bottom Belt

<table>
<thead>
<tr>
<th>Product &amp; Color</th>
<th>Shore Hardness</th>
<th>Temperature Range</th>
<th>CoF (bottom) UHMW</th>
<th>Thickness (mm)</th>
<th>Minimum Pulley Diameter</th>
<th>Pull Force: Pretension of 0.2%</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FELB-ACR</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2.5</td>
<td>20</td>
<td>1</td>
<td>4.2</td>
</tr>
<tr>
<td>FELB-ITO50-ACR**</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2.5</td>
<td>20</td>
<td>0.79</td>
<td>4</td>
</tr>
<tr>
<td>FELB-ITO50-ACR RAL 5002</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2.5</td>
<td>20</td>
<td>0.79</td>
<td>4</td>
</tr>
<tr>
<td>FELB-IST-ACR</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2 // 4*</td>
<td>35</td>
<td>1.38</td>
<td>4.2</td>
</tr>
</tbody>
</table>

### Aramid Cord Reinforced (ACR) Impression Top & Embossed Bottom Belt

<table>
<thead>
<tr>
<th>Product &amp; Color</th>
<th>Shore Hardness</th>
<th>Temperature Range</th>
<th>CoF (bottom) UHMW</th>
<th>Thickness (mm)</th>
<th>Minimum Pulley Diameter</th>
<th>Pull Force: Pretension of 0.2%</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FELB-ACR</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2.5</td>
<td>20</td>
<td>1</td>
<td>4.2</td>
</tr>
<tr>
<td>FELB-ITO50-ACR**</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2.5</td>
<td>20</td>
<td>0.79</td>
<td>4</td>
</tr>
<tr>
<td>FELB-ITO50-ACR RAL 5002</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2.5</td>
<td>20</td>
<td>0.79</td>
<td>4</td>
</tr>
<tr>
<td>FELB-IST-ACR</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2 // 4*</td>
<td>35</td>
<td>1.38</td>
<td>4.2</td>
</tr>
</tbody>
</table>

### Low Temperature (LT) Aramid Cord Reinforced (ACR) Impression Top & Embossed Bottom Belt

<table>
<thead>
<tr>
<th>Product &amp; Color</th>
<th>Shore Hardness</th>
<th>Temperature Range</th>
<th>CoF (bottom) UHMW</th>
<th>Thickness (mm)</th>
<th>Minimum Pulley Diameter</th>
<th>Pull Force: Pretension of 0.2%</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FELB-LT-ITO50-ACR</td>
<td>80A</td>
<td>-40°C to 50°C</td>
<td>0.45</td>
<td>2.5</td>
<td>18</td>
<td>0.70</td>
<td>4</td>
</tr>
<tr>
<td>FEMB-LT-ITO50-ACR</td>
<td>95A/46D</td>
<td>-35°C to 50°C</td>
<td>0.25</td>
<td>2.5</td>
<td>40</td>
<td>1.57</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: FELB-IST-ACR – Base belt thickness = 2mm // Total belt thickness including Saw tooth impression top = 4mm. Pull force in table relates to a finger splice weld 20x50 mm. The calculation takes into account the weld splice which has strength of 28kg/cm.

Note that various finger splice methods and different tools can result in differing belt strengths.

**Available belt width: 1524mm/60inch-standard or 2032mm/80inch."
Guidelines for Finger Splice Welding of the Volta Aramid Cord Reinforced (ACR) Belts

The Finger splice, with its increased contact area overlapping reinforcement cords, ensures the best weld in terms of belt strength.

Important Note: All information in the finger splice instructions is to be used as general guidelines only, based on experience from service centers using a variety of equipment. It has been noted that the exact temperature of a specific welding bar and the pressure required will vary from press to press or even on the same press when used in a workshop and then on site. Prior to first use, it is recommended to run a small set of trials to calibrate a given press. Prior to repeated use in a different environment and/or with a different thickness or texture, a test should be made to confirm the quality of weld is consistent and that every splice is hermetically closed and free from bubbles and cracks.

For Splicing "L" Material Belts:
- After switching on the press, wait for both the top and bottom platens to heat to 180°C.
- When cutting the belt to the finger pattern, cut away any protruding Aramid fibers. Do not attempt to drill out the ends of these fibers into the belt surface.
- Place belt in position on heated area. Do not leave for any length of time without continuing the operation.
- Place an appropriate silicone pad across the top side of the belt in order to preserve the original belt surface (smooth or textured) as far as is possible.
- Apply 2 Bar of pressure for 4 minutes.
- Wait for the belt to cool down in the press (approx. 15 minutes) and then release.

For Splicing "MLT" Material Belts:
- After switching on the press, wait for both platens to heat to 180°C.
- When cutting the belt to the finger pattern, cut away any protruding Aramid fibers. Do not attempt to drill out the ends of these fibers into the belt surface.
- Place belt in position on heated area. Do not leave for any length of time without continuing the operation.
- Place an appropriate silicone pad across the top side of the belt in order to preserve the original belt surface (smooth or textured) as far as is possible.
- Apply 2.5 Bar of pressure for 6 or 7 minutes.
- Wait for the belt to cool down in the press (approx. 20 minutes) and then release.
Benefits:

- Reinforced belts with no fabric exposed
- No fraying, no delamination
- Eliminate contaminated reinforced fabric which is difficult to clean
- Fully extruded
- Food approved
- Compatible with HACCP principles
- Permits versatile applications such as soft base belts on small pulley diameters
- Can replace reinforced belts in wet applications where the sealed reinforcement hinders contamination and in bakery applications using flour
- High resistance to oils, fats and hydrolysis