Mission Statement

The aim of the project is the development of carbon fabrics with a high degree of closure and a low area weight. To achieve this goal, a new process is being developed which processes conventional, open carbon fabrics with a low area weight after weaving by means of controlled spreading of the rovings in the textile in such a way that carbon fabrics with a high degree of closure are produced ("GaplessWeave"). The weight of the fabric and the width of the fabric remain constant.
Approach
Within the scope of this project, a process is being developed which spreads the weft and warp threads after the weaving process so that the gaps are closed. The rovings become thinner in the process. The simultaneous spreading of all rovings in the fabric significantly reduces the overall process time and improves the appearance of the fabric, in contrast to the successive spreading of individual fibre bundles into tapes.

New approach to the production of closed, lightweight fabrics

<table>
<thead>
<tr>
<th>Until now:</th>
<th>Goal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>① tow spreading (offline)</td>
<td>① weaving (extended standard machine)</td>
</tr>
<tr>
<td>② weaving (special machine)</td>
<td>② Closing the fabric afterwards (inline/ offline)</td>
</tr>
</tbody>
</table>

Relevance
- 16 million € to 50 million € market volume in Germany annually
- approx. 10 % potential market share of the total carbon fabric market

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