Twisted felting needle

The Twisted felting needle with its twisted working part is particularly suitable for the manufacture of end products with high tear strength.

GROZ-BECKERT

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Characteristics and special features:

- Defined twist of the working part
- Equilaterally formed triangular working part
- Barb dimensions identical across all the edges
- Traditional number of barbs: 2 barbs per edge
- Modified barb arrangement on the working part compared to the standard felting needle

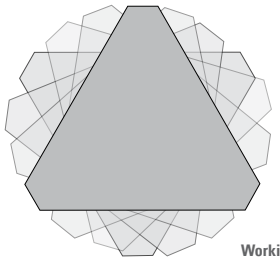
Availability

Gauges: 36–42 gauge
Needle lengths: 3", 3.5"
Barb shape: RF

Other working part geometries, gauges, barb shapes and needle lengths on request

Fields of application:

- Automotive sector (visible areas)
- Filtration



Working part cross-section

Luggage compartment lining

Filter hose

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Benefits:

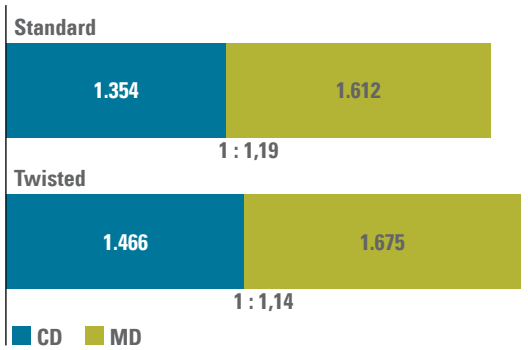
- More efficient needling due to higher fiber transportation
- Improved tensile strength and better isotropic properties (MD:CD ratio) of the end product due to modified barb arrangement
- Optimized surface quality of the end product
- Higher production speeds possible due to reduced penetration density
- Good compaction of the non-woven fabric
- Compared to standard felting needles, the twisted working part does not cause any detrimental bending strength properties.
- Higher degree of splitting when using microfibers

Needling efficiency

The Twisted felting needle demonstrates up to 10 % higher mechanical work compared to a standard felting needle with the same barb dimensions. This results in improved fiber transport.

Tensile strength

The tensile strength levels of the Twisted felting needles are up to 8 % higher in the MD (machine direction) and 4 % higher in the CD (cross direction) compared to standard felting needles. This also brings about an improvement of the MD:CD tear strength ratio (isotropy).



Fiber transport

Fiber transport is substantially higher for the Twisted felting needle (right) compared to the standard felting needle (left). The classical black and white test makes the difference visible.

Degree of splitting

The modified barb positioning of the Twisted felting needle demonstrates good splitting characteristics, particularly for products in the higher weight ranges.