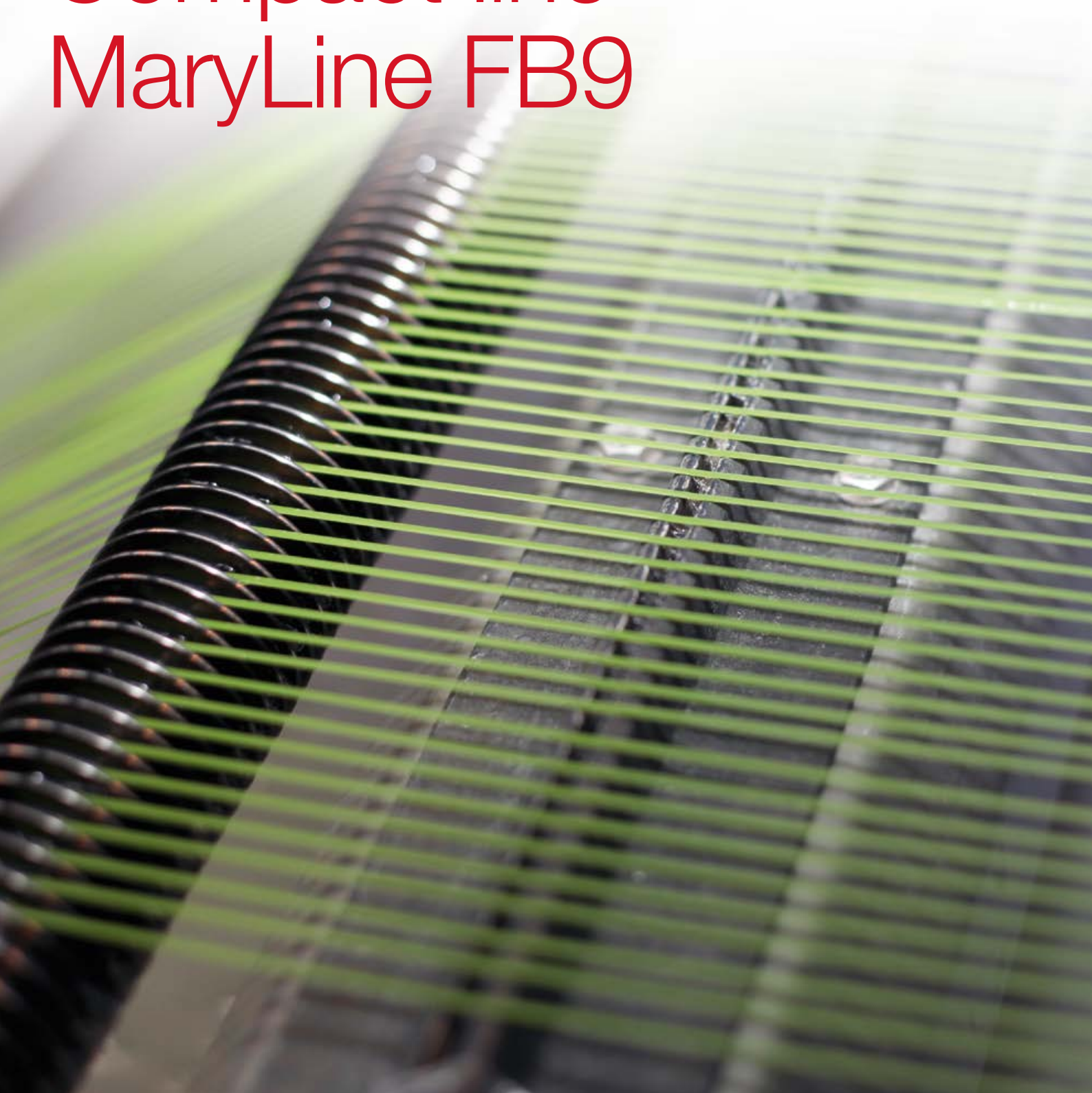
STC
spinnzwirn

# Monofilament lines

## Compact line
## MaryLine FB9

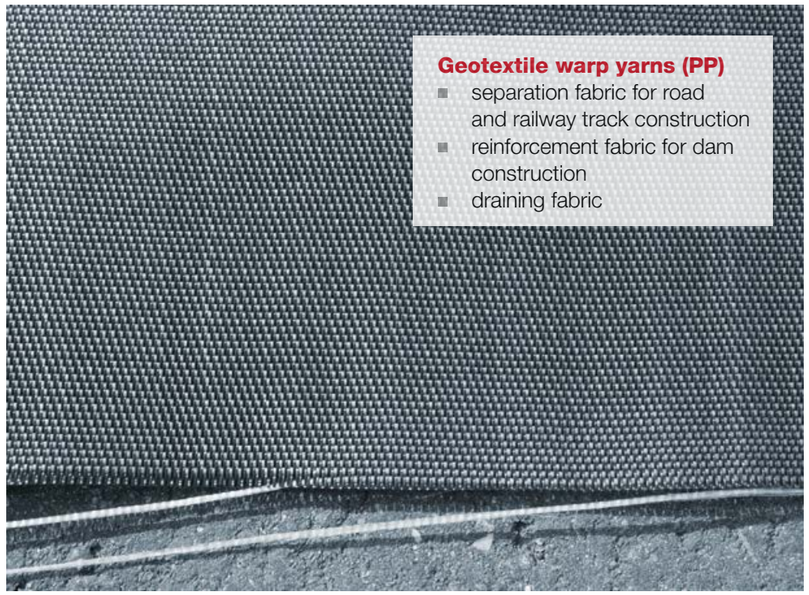


# Features

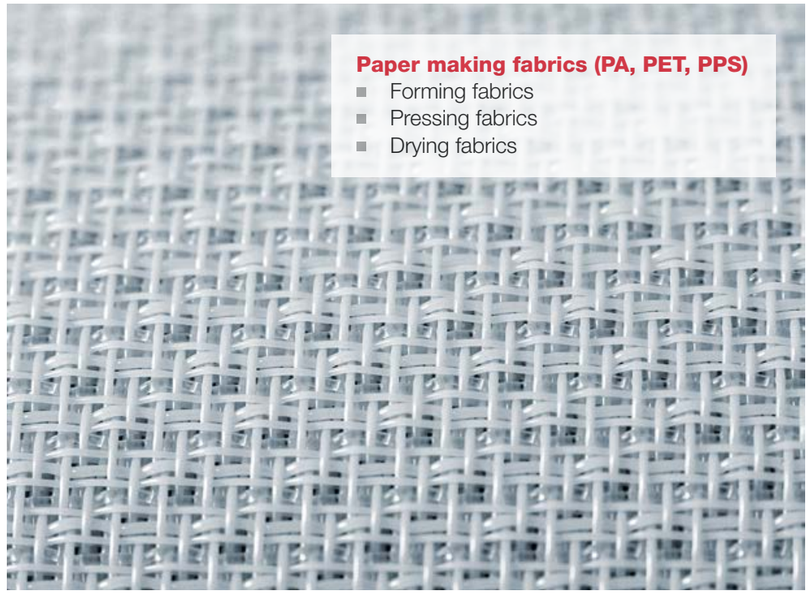
- High yarn tenacity: the small screw diameter of our extruder ensures short residence times when heating the polymer. This guarantees low polymer degradation, resulting in high yarn tenacity.
- Low maintenance costs: the steel quality and its special surface treatment ensure an extraordinarily long lifespan for the extruder screw and barrel.
- High efficiency: the gear metering pumps are optimized for precision metering. This guarantees a high polymer quality and a long lifespan for the whole system.
- Even yarn quality: a central feeding port with a cone is responsible for the melt distribution and die head. This ensures even monofilament diameter and roundness, resulting in high yarn quality.
- High yarn quality: hot-air stretching /annealing ovens and heated godets guarantee precise temperatures across the entire working width. This ensures a high monofilament yarn quality with minimum deviation.
- High productivity: STC Spinnzwirn's precision winders are used for high efficiency downstream when unwinding the yarn from bobbins (e.g. warp beaming and weaving).

# Monofilament products

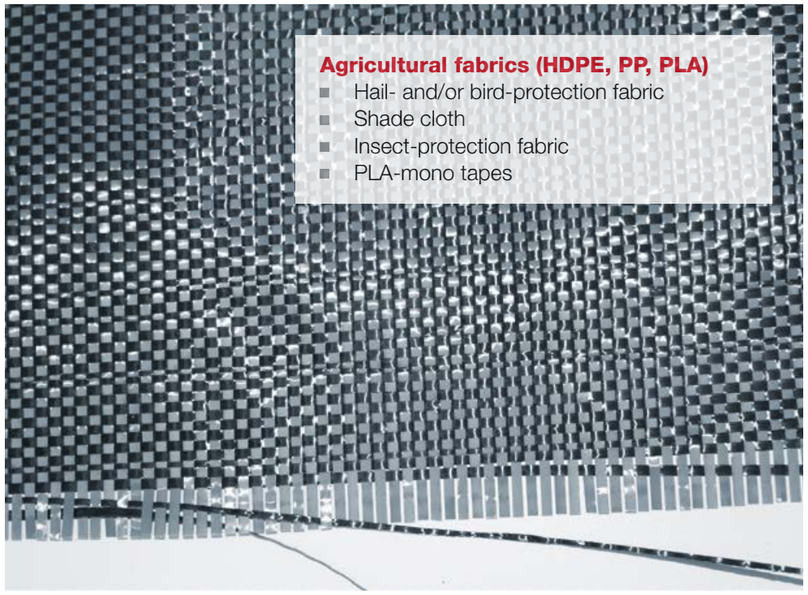
**Artificial grass yarns (PE, PP, PA, PET)**
- Flat-twisted
- Flat spiral-wrapped
- Textured



**Geotextile warp yarns (PP)**
- separation fabric for road and railway track construction
- reinforcement fabric for dam construction
- draining fabric

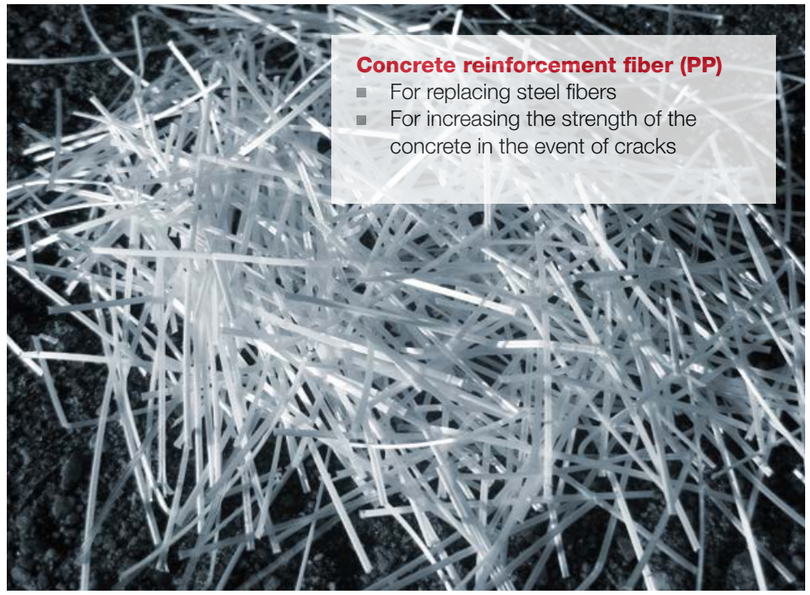


**Paper making fabrics (PA, PET, PPS)**
- Forming fabrics
- Pressing fabrics
- Drying fabrics

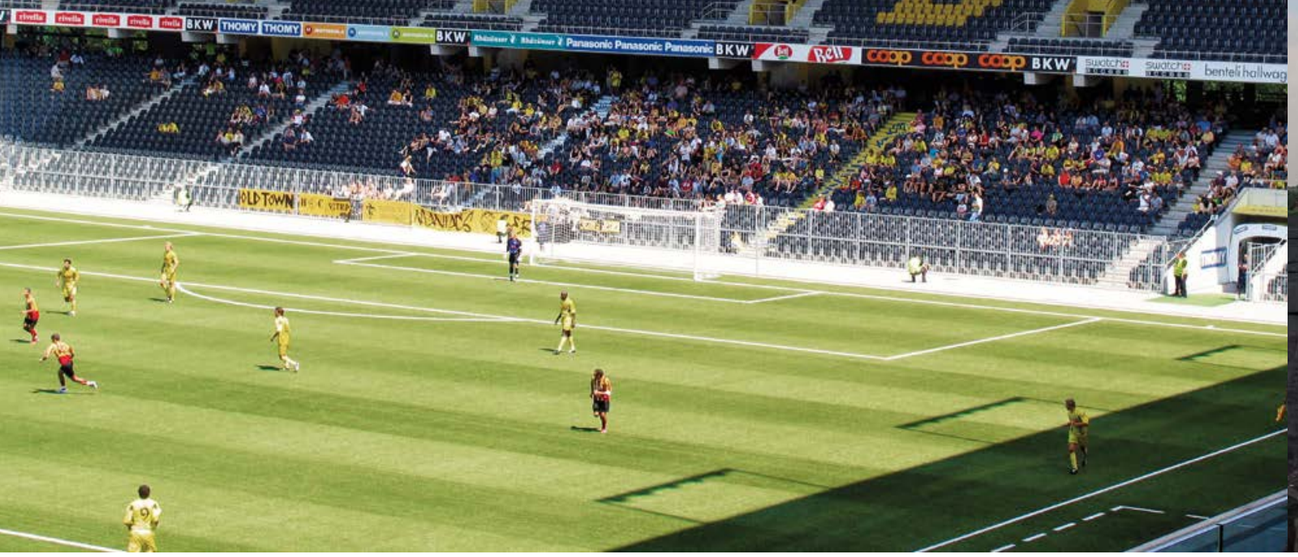


**Agricultural fabrics (HDPE, PP, PLA)**
- Hail- and/or bird-protection fabric
- Shade cloth
- Insect-protection fabric
- PLA-mono tapes

**Ropes (PP, HDPE)**
- Embossed multi-end monofilament
- High-tenacity HDPE monofilament

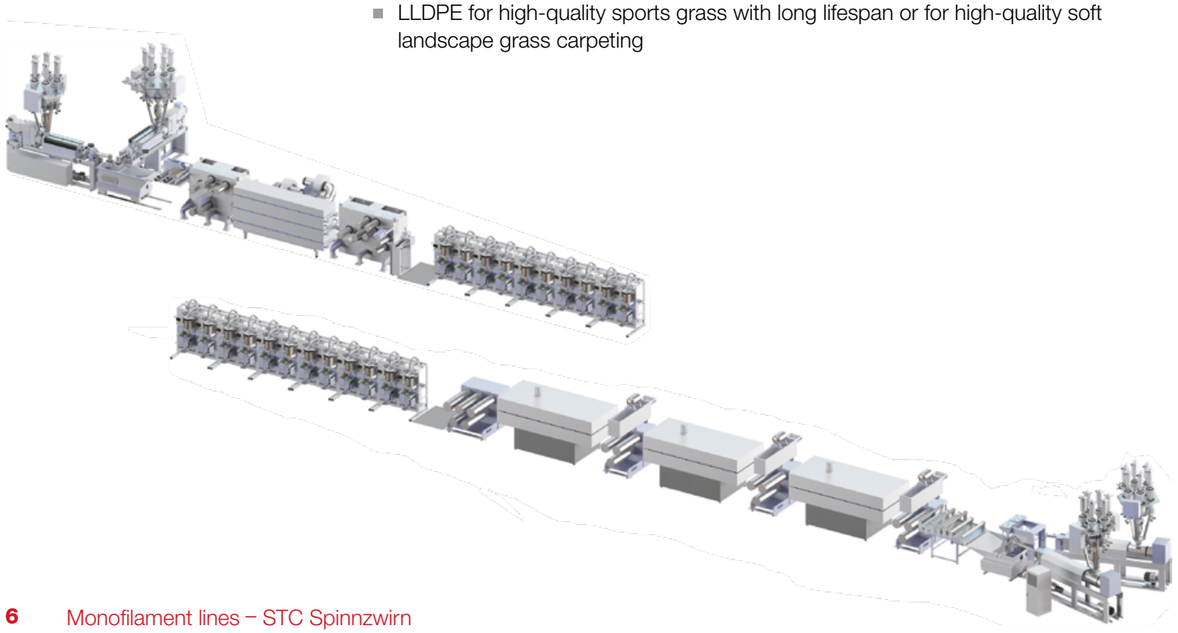


**Concrete reinforcement fiber (PP)**
- For replacing steel fibers
- For increasing the strength of the concrete in the event of cracks



# Artificial grass yarns (PE, PP, PA, PET)

- Monofilament line for mono-color yarn with one extruder and with two extruders for bi-color yarn
- Compact monofilament line 550 for up to 96 monofilaments (up to 1,200 tons/year)
- MaryLine FB9 monofilament line for up to 240 monofilaments (up to 2,800 tons/year)
- High speed compact monofilament line 550 with in-line texturing (up to 400 m/min)
- Typical monofilament deniers:
  - 550 to 1,100 dtex for landscaping
  - 1,500 to 2,500 dtex for sports
- PP for cost-efficient artificial grass carpeting
- LLDPE for high-quality sports grass with long lifespan or for high-quality soft landscape grass carpeting



# Agricultural fabrics (HDPE, PP)

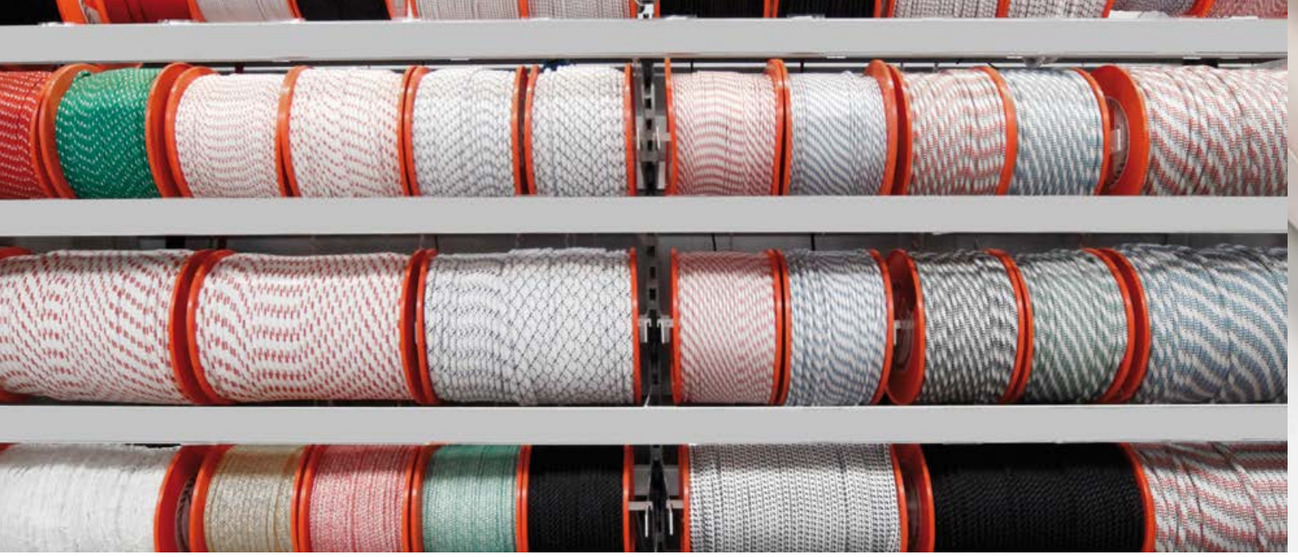
- FB7-1000-M for up to 300 monofilaments
- FB9-1400-M for up to 384 monofilaments
- Winding:
  - Precision-wound bobbins with a bobbin weight of up to 12kg for high beaming efficiency: ATW300LGT winder
  - Parallel-wound bi-conical bobbins with a bobbin weight of approx. 3 kg

# Concrete reinforcement fiber (PP)

- MoisTurf (patent pending) treatment provides excellent anchoring of the reinforcement fiber in concrete with up to 30% superior concrete properties compared to conventional reinforcement fiber.
- MoisTurf treatment changes the reinforcement fiber from hydrophobic to hydrophilic. Today's PP concrete fiber is hydrophobic, thus water drips off the fiber. With the new MoisTurf treatment, the yarn becomes hydrophilic. As a result, water disperses and remains on the fiber.
- Controlled over-stretching makes the surface of the concrete reinforcement fiber rough. In conjunction with a special shape, this improves anchoring in concrete.

# Geotextile warp yarns (PP)

- High-denier, high-tenacity monofilament with 3,000 to 6,000 dtex, produced on STC Spinnzwirn's compact monofilament line with WinDuro8 flanged bobbin winders
- High-tenacity monofilament with 7 g/den at 4,000 dtex, for example; short residence time of polymer and low melt temperature ensure low PP degradation
- Optimum air-temperature distribution in stretching oven for high stretching ratio
- Minimized loss of yarn tenacity during beaming and weaving compared to other types of yarn

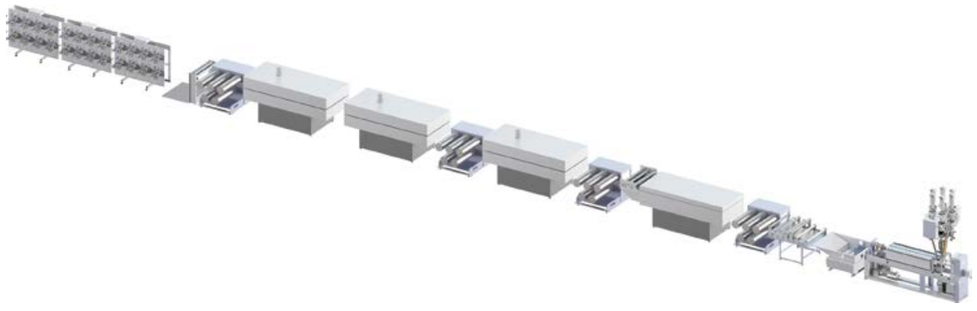


# Ropes (PP, HDPE)

- High-tenacity round HDPE monofilament with up to 9 g/den
- First draw stand with 7 godets plus 2 nip rollers to avoid slippage at high stretching, hot-water stretching
- Low melt temperature level and short residence time in the extruder guarantee low degradation, resulting in high monofilament tenacity.

# Paper making fabrics (PA, PET)

- Optimized roundness of monofilaments
- Close diameter tolerances



**STC Spinnzwirn GmbH**
Zwickauer Straße 247
09116 Chemnitz
GERMANY
Phone +49 371 23 88/240
Fax +49 371 85 21 42
www.stc-spinnzwirn.com
info@stc-spinnzwirn.com

The information supplied in this brochure is for guidance only. We reserve the right to modify it at any time.

Reprint only with expressed permission of STC Spinnzwirn