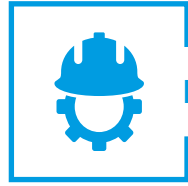




TECHNOLOGY LICENSING



ENGINEERING SERVICES



PLANT CONSTRUCTION

IDEAS INSIDE^{EPC}



EPC variYARN[®]

Filaments | Staple Fibers | Technical Yarns

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Spinning plants for filaments, staple fibers and technical yarns

EPC offers process technology, engineering services and equipment supply for the construction of modern and cost-effective spinning plants for filaments, staple fibers and technical yarns. We meet our customers' requirements for both, small capacities and large direct spinning plants. EPC's filament spinning systems are designed for the production of POY and FDY. Technical yarns are characterized by highest stability and excellent durability. EPC's staple fiber technology is suitable for a wide range of applications.

A MEMBER OF
EPC GROUP



EPC Group is certified per DIN EN ISO 9001

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EPC variYARN®

Filaments | Staple Fibers | Technical Yarns

Today, man-made fibers find many applications, in modern apparel, home furnishings, medicine, aeronautics and many more. EPC Engineering & Technologies GmbH is offering complete production facilities based on long-time experience and expertise. The combination between EPCs technology and proven equipment from well-known manufacturers is the foundation for excellent quality fibers and filaments for a wide range of applications at low production costs.

Filaments and fibers can be produced in direct spinning plants starting from polymer melt or in extruder spinning plants from chips. POY (Partially Oriented Yarn) is manufactured using the godet process; it is further processed into draw textured or air textured yarn. FDY (Fully Drawn Yarn) is made on spin-draw-machines in one step at high speed and can be used for flat yarn applications.



Large direct spinning lines with capacities of 200 tons/day are being utilized for the production of staple fibers. The polymer is melt spun and the bundle of continuous filaments is collected into a tow. The tow is further processed in consecutive steps such as drawing, crimping, spin finish application, drying and then cut into defined lengths to get cut fibers almost equal in length and properties to natural fibers such as cotton or wool.

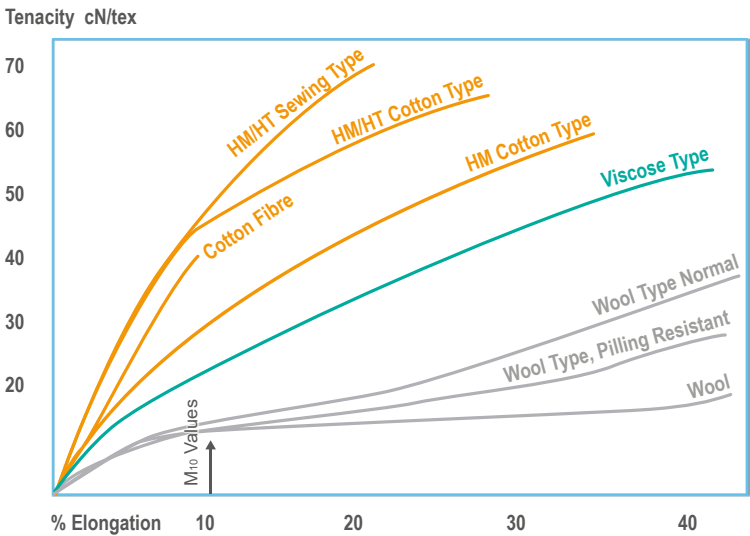
For the production of technical yarn EPC offers different process routes starting from monomer to the final yarn. Rheologically optimized polymer distribution pipes ensure an even melt distribution and melt homogeneity for better spinning performance.

Spin packs are designed for easy handling and ensure, in connection with the annealer and the quenching system, a uniform yarn formation that is a condition for high tenacity yarn. The draw-winding machine is designed for 3, 4 or 6 ends per position for a high productivity. The heated godets allow a precise temperature and speed control.

PET Filament Production Range

| | POY | FDY |
|----------------|--------------------------------------|--------------------------------------|
| PET Filament | 56 – 330 dtex ... 44 – 192 Filaments | 33 – 330 dtex ... 10 – 144 Filaments |
| PA6.6 Filament | 4 – 220 dtex ... 3 – 192 Filaments | - |
| PA6 Filament | 8 – 210 dtex ... 3 – 96 Filaments | 17 – 220 dtex ... 5 – 48 Filaments |
| PP Filament | - | 33 – 110 dtex ... 10 – 34 Filaments |

STAPLE FIBER TYPES



EPC AS A TURNKEY CONTRACTOR

Highest product quality and short delivery time

- Engineering (basic, detail, turnkey) out of one hand
- Tailor-made or ready-made solutions
- Flexibility to meet all customers demands in shortest time
- High productivity and low operation costs
- Highest consistency of product quality and reproducibility for each product lot
- Multiple number of variYARN®-modules per spinning line, i.e. 2,4,6,8,10 or 20 modules to meet the demands of our customers
- Required utility plants / labs can be engineered and supplied
- Individual masterbatch production units can be supplied, shortening the supply chain and reducing delivery time

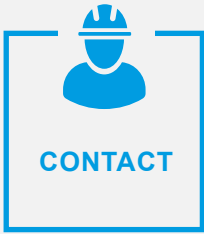


TYPICAL FINAL PRODUCTS FOR TECHNICAL YARN:

- Conveyor belt yarn
- Tire yarn & dipped card fabric
- V-belt yarn
- Yarn for hoses
- Belt and rope yarn

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- Chemistry
- Pharmaceuticals & Fine Chemistry
- Polymers & Fibers
- Renewable Energies
- Biotechnologies
- Engineering Services & Infrastructure



- Cryogenic Systems
- Systems for Compression & Liquefaction of Gases
- Small Scale LNG Systems
- Air Separation Systems
- CO₂ Technologies
- Special Applications for Technical Gases



- Construction Engineering
- Infrastructure
- Building & Civil Engineering
- Project Management
- Technical Building Equipment



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