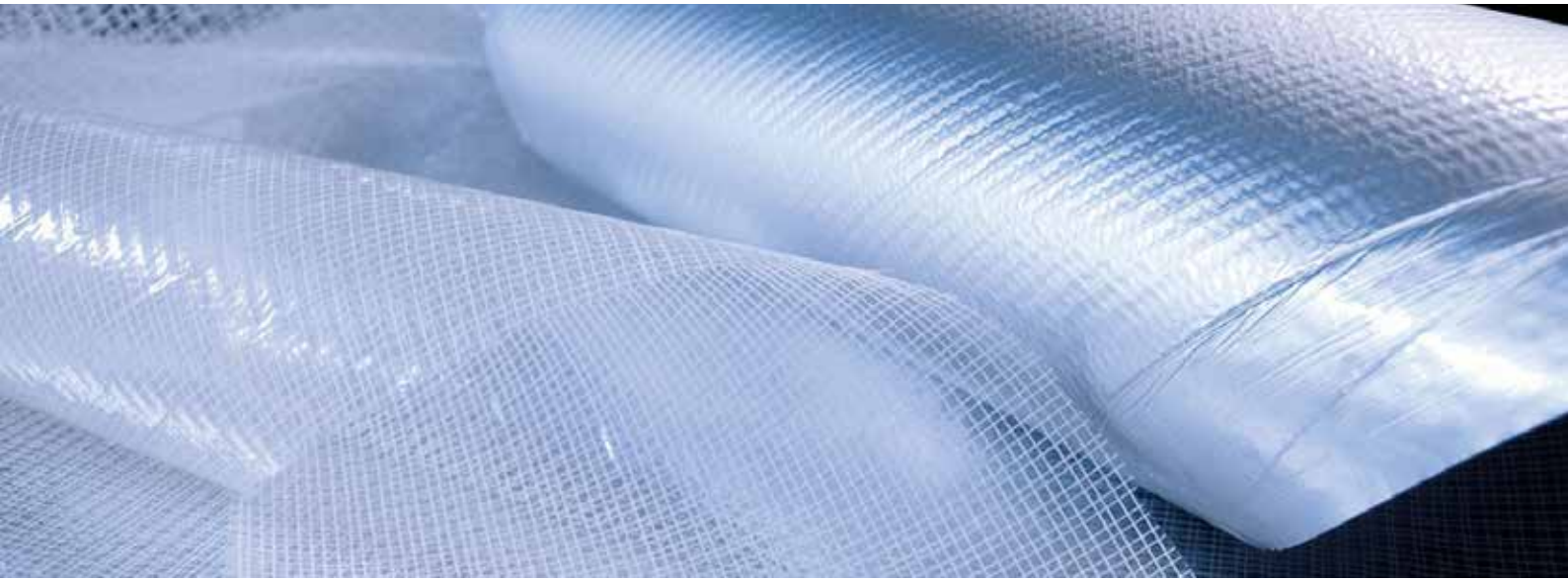


Scrim System I TURBOTEX

NEUENHAUSER
ONTEC

Neuenhauser was founded in 1955 as a design and manufacturing company. It has specialized in the field of automated transport systems for the various production processes of textile spinning mills and the associated individual needs.

Neuenhauser offers a wide range of automatic systems for the transport of spinning cans, roving bobbins, and yarn packages, as well as palletizers or depalletizers and related downstream systems such as carton or polybag packaging systems. The automatic quality control of yarn packages by means of Vision Systems, named QCS, has also become an essential process in modern spinning mills.

The portfolio is rounded off by the use of Automatic Guided Vehicles (AGVs), which are widely used in various industries but are rarely found in the textile industry.

In addition to the quality feature „Made in Germany“, Neuenhauser Textile Division Automation places the greatest value on continuous product and process innovations, the use of „state of the art” technologies, and sustainable products. The name Neuenhauser enjoys an excellent reputation worldwide. The reference list reads like the „who is who“ in the textile industry.

The business unit Textile Machinery of ONTEC Automation GmbH was taken over by Neuenhauser in November 2022. The products of „Textile Machinery” will be continued under the brand „Neuenhauser-ONTEC“.
Sales and product management, construction and service will be located in Naila, Bavaria whereas the manufacturing plant will be located in Neuenhaus, Northwestern Germany.

Neuenhauser sees itself not only as a system supplier of automation solutions in various stages of expansion, but more as a long-term partner who always has an open ear for the daily new challenges and optimizations of the processes that our customers must face.

CONTENT

1 DESCRIPTION

The TURBOTEX is a machine for the production of scrim fabrics.
It is the first serial machine in the world that can be delivered ready for production of laid scrim.

Scrims are used for the reinforcement of a wide variety of materials.
Scrim fabrics are made of continuous textile filaments.

In comparison to woven fabrics, the bonding of the threads on the TURBOTEX is carried out chemically using liquid binding agents.

2 ADVANTAGES

- High production speed
- High operating safety
- Low down times
- Low space requirement
- Low energy consumption
- Combines all production steps from the yarn up to coated scrim fabric including lamination possibility with fleece or film

Applicationfield of scrims

Plastic sheets
Tarpaulins, pond sheets, packing materials

Construction products
Roof sheeting, thermal insulation, fire and noise protection, floor coverings, building boards of gypsum boards and concrete, adhesive tapes, geotextiles

Sport
Canvas, swimming pool sheets
Fleece, glass fiber reinforced plastic products (GRP) and much more

Reinforcement for medical products

Reinforcement for packing materials and cardboard boxes

ADVANTAGES OF SCRIMS

Thinner end product
Scrims can reach half of the thickness compared to woven or warp knitted fabrics produced with the same yarn.

Lower stretch values
Based on straight yarn structures, the scrims show lower elongation than woven fabrics, which result in a better reinforcing effect of the end product.

Smoother surface
The grid structure is less noticeable in scrims. This results in a smoother and more even surface of the end product. The scrim can easier be joined to the cover layers during further processing.

Savings in material and cost
The use of scrim reinforced material allows higher machine speeds during running cost production and leads to significant savings in material and costs, because e.g. no additional binding thread system is necessary.

3 BASIC MATERIAL

Various glass and synthetic fiber yarns

Yarn thickness
Polyester from 100 – 2200 dtex
Glass fiber from 34 – 300 tex

Warp threads
On warp beams with up to 1250 mm flange diameter or as single threads
from creel with supply unit

Weft threads
Yarn bobbins max. 300 mm diameter, max. 400 mm length and max. 15 kg weight

Chemical bonding materials
PVC-dispersion, styrene-butadiene rubber (SBR), acrylate, plastisol, and others

4 ENDPRODUCT

Scrims of polyester yarn, glass fiber yarn or their combinations.
Simultaneous lamination with fleeces or films (made of plastic material or aluminum) is possible.

Yarn density
Stepless adjustable from closed fabrics up to coarse-meshed grid structures.

2 Standard working widths
2600 mm nominal laying width: for a finished fabric width from 1 300 up to 2500 mm.
3600 mm nominal laying width: for a finished fabric width from 1 800 up to 3500 mm.

Fabric winding diameter
As standard, up to max 1200 mm; optionally up to 1500 mm.

OPTIONS

Warp yarn feeding from warp beam or creel with supply unit

Fleece or film feeding

Product-specific application systems for the coating chemicals

With default detection

Longitudinal cutting devices

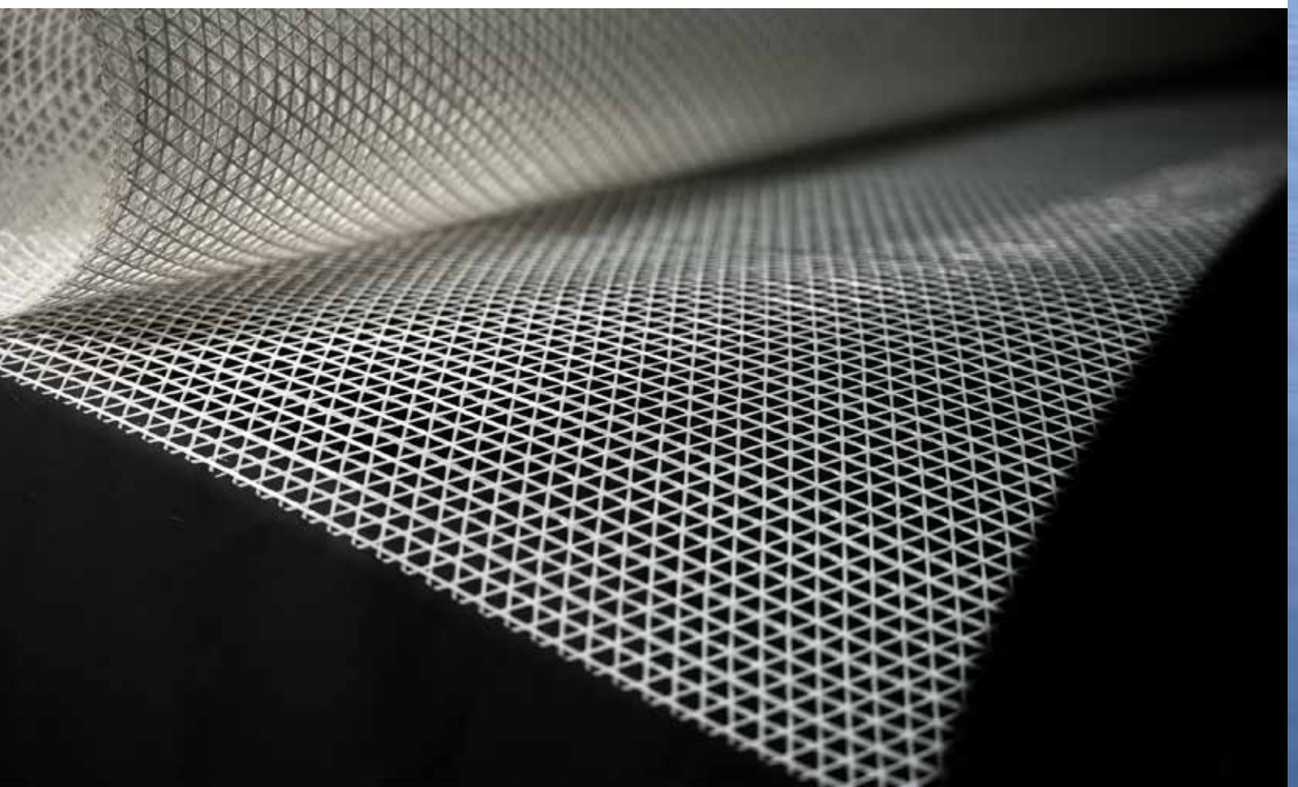
Infrared dryer in different power levels

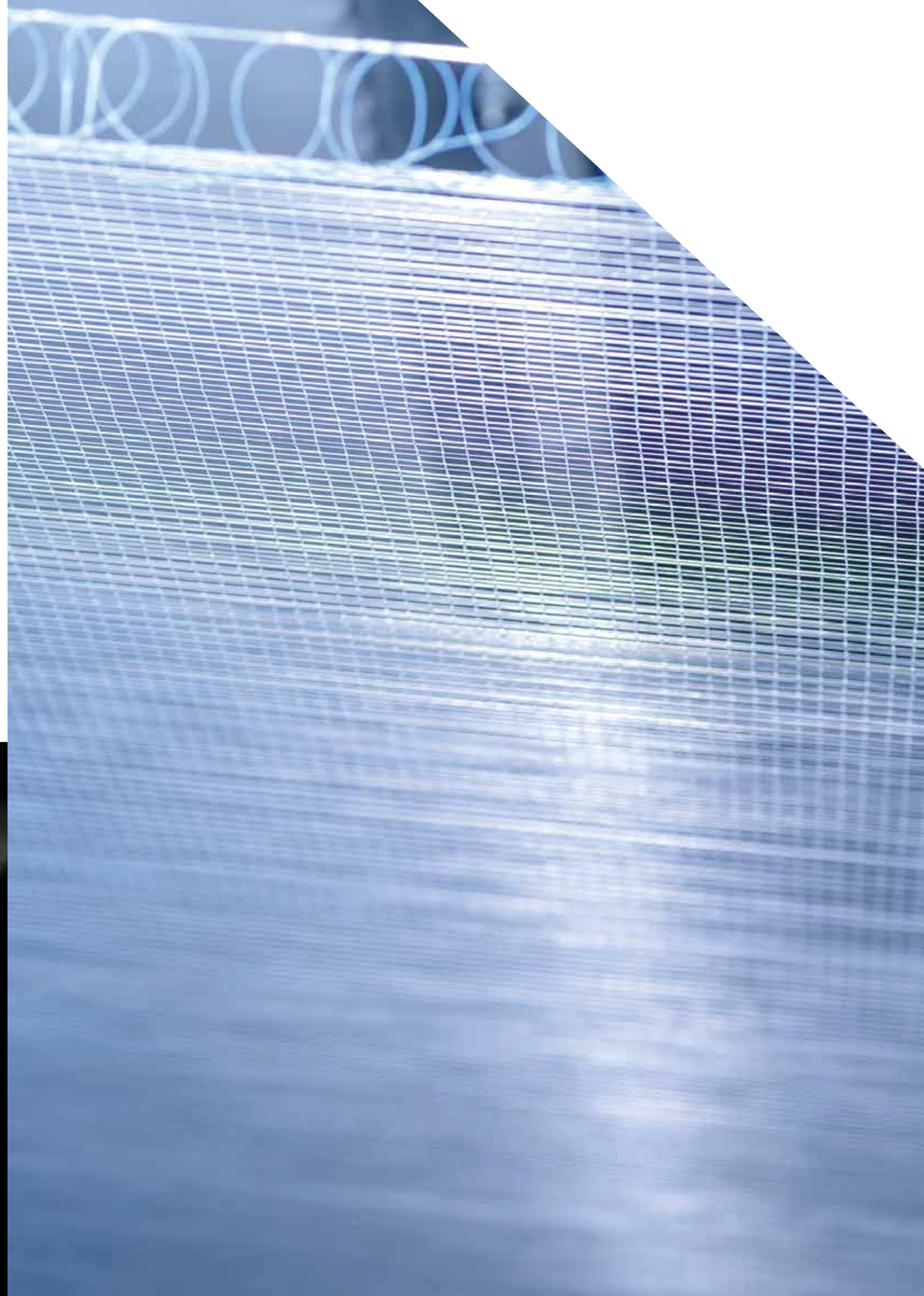
Thermal oil heater (electrically or gas-heated)

Fabric inspection (manual or camera-based)

CAPACITY

Weft speed:
Mechanically up to max. 4000 wefts/min





5 PRODUCTION STEPS

SCRIM PRODUCTION

Weft thread count up to
8 bobbins on the rotation layer

Weft density stepless
adjustable

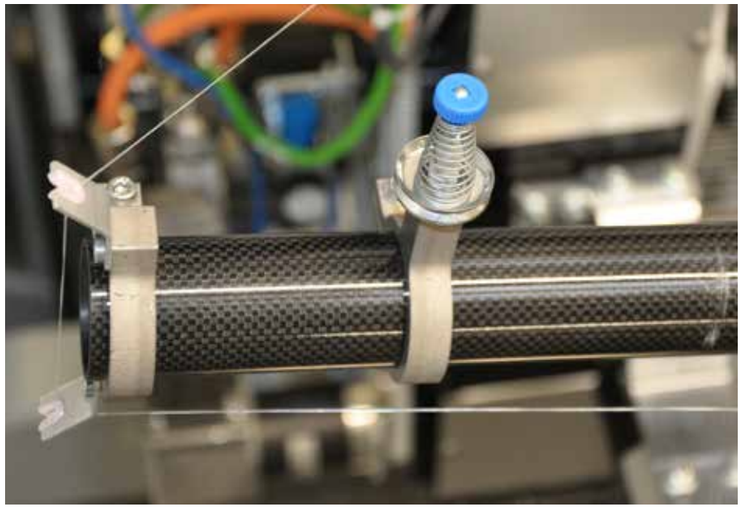
Weft yarn detector

Warp yarn feeding through
upper and lower supply unit

Warp yarn tension stepless
adjustable

Warp yarn detector

Automatic bobbin monitoring
of remaining lengths



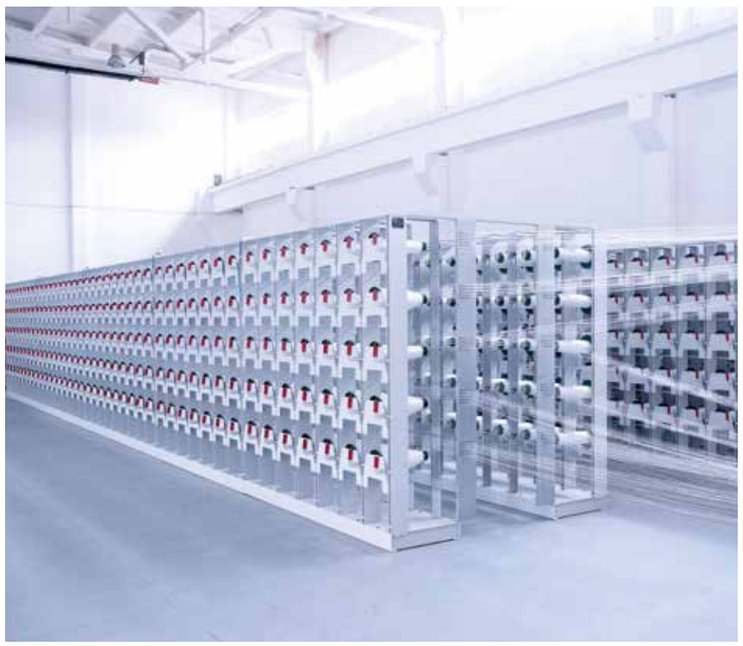
SCRIM COATING

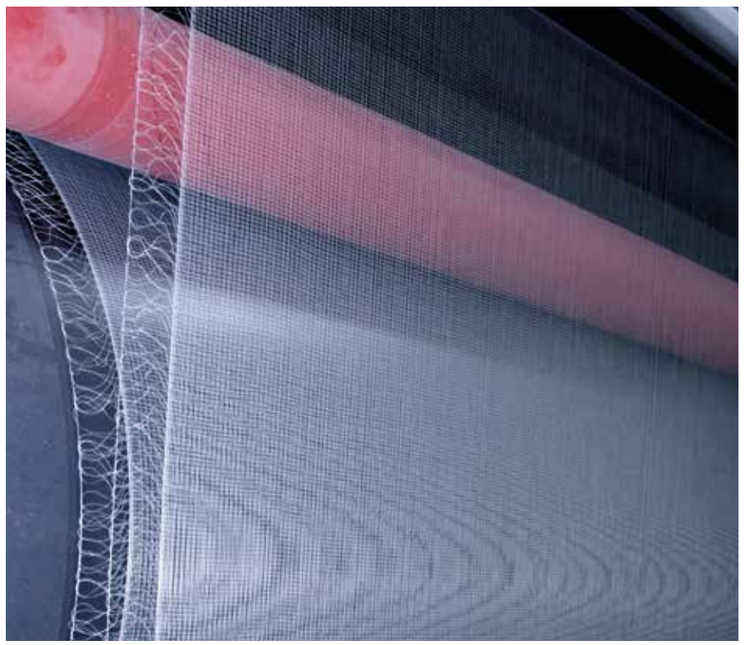
Possible coating chemicals:
dispersion and plastisol

Coating by foulard and dipping process
with different roller configurations

Automatic filling and level control of the
coating material

Encapsulation and humidification of the
application system prevent the coating
chemical from drying during machine
stops





DRYING

Drying by means of contact rollers and
infrared heaters, if necessary

Drying capacity is individually
configurable as per the product

Special coated heating rollers

Roller heating with thermal oil

Thermal oil heater optionally
electrically or gas-heated

DRAW-OFF /FABRIC INSPECTION and CUTTING UNIT

Inspection area for manual quality control or system for camera-based fabric inspection including data storage

Cutting devices for edge and center cuttings

Edge control with sensor and pivoting frames

WINDING

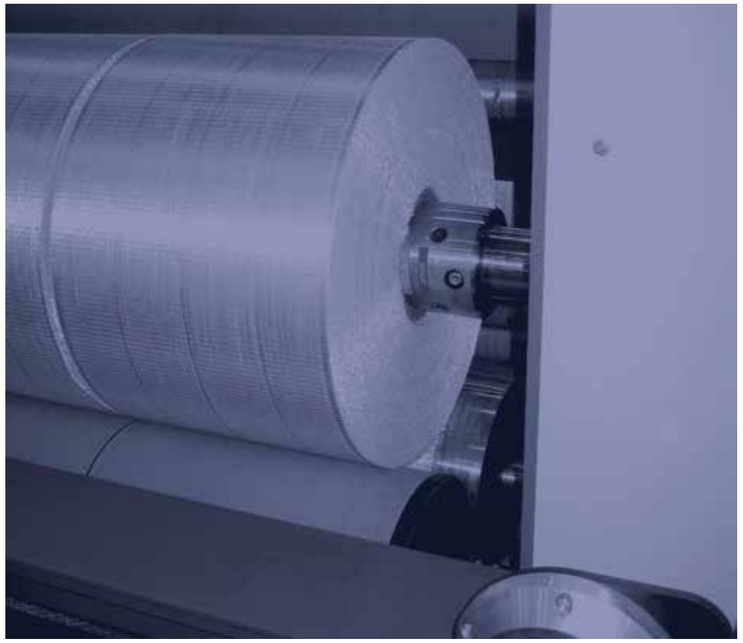
Winding system with center drive

Integrated ejector device

Transversal cutting device

Fabric winding diameter
max. 1200 mm, optionally up to 1500 mm

Traverse motion device



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