

**TRÜTZSCHLER** NONWOVENS

NONWOVENS CUSTOMER AND TECHNOLOGY CENTER

NCTC





# The Nonwovens Customer and Technology Center (NCTC)

Make it yours

## Discover the opportunities

Drive innovation forward, train your staff or optimize your processes and convince yourself of the possibility with Trützschler technology. Our state-of-the-art infrastructure in Egelsbach near Frankfurt/Main, Germany is your playground for trials and experiments.

Experience the perfect blend of advanced technology and customized adaptation. We understand that every challenge is unique, which is why we offer you the opportunity to use the NCTC as your personal, cost-effective workbench. Our experts are there to support you and find the best solution for your needs. Benefit from the NCTC in a number of ways.



### Running to full capacity?

Bring your own raw material, process and product ideas. Together, we'll make the most out of it.



### Need experts to talk to?

Our team is available for every developing or optimizing task. Benefit from our rich knowledge in fiber materials, processes and applications.



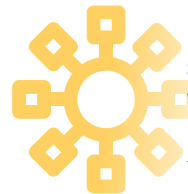
### Looking for the optimal process?

Put our machines through their paces to find best configurations and settings.



### No time to train new people?

Send them to the NCTC for a thorough qualification and focused practical training.



### Seeking future fit products?

We love to realize your ideas on our flexible needle-punching, hydroentangling, through-air bonding installations.

# Make use of two fully equipped nonwoven lines



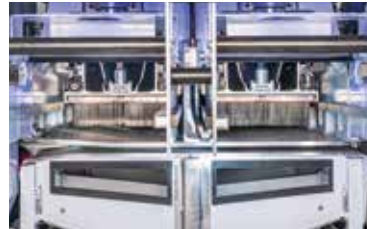
Contact us for more information or about reserving your trial time slot. Scan the code and write to us:  
[nonwovens@truetzschler.de](mailto:nonwovens@truetzschler.de)

In more than 5,000m<sup>2</sup> we have set whole complete trial lines for

- Carded/crosslapped/needle-punched,
- Carded/spunlaced,
- Air-through bonded (ATB) products.

In cooperation with Voith, NCTC also allows for manufacturing WLS (Wet-laid/Spunlaced) and CP (Carded/Pulp) nonwovens.

NCTC – the largest nonwovens trial center of its kind – is equipped with typical laboratory and testing capabilities. Moreover, it features a showroom demonstrating the capabilities of our machines. Hundreds of nonwovens samples from our own trials in the NCTC, as well as samples from customer lines, illustrate our technical and technological expertise.

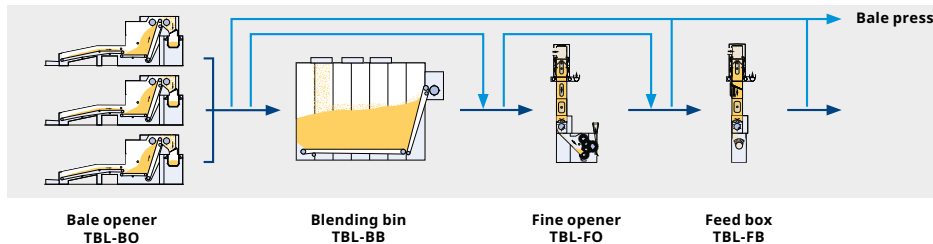


Efficiently translate your ideas into successful products in our NCTC. Make decisions based on your firsthand experiences with our cutting-edge and meticulously engineered systems.

## T-BLEND: flexible, high-performing fiber preparation

The T-BLEND equipment in our NCTC is designed to handle both coarse fibers for needle-punched nonwovens and a broad range of natural, man-made and high-performance fibers for hydroentangled products.

New possibilities arise from the hygienic design of the bale openers and their ability to process fiber components down to 50 kg/h. Combined with their well-known dosing accuracy of  $\pm 1\%$ , this enables the processing of microfibers and bi-component fibers into extremely lightweight air-through bonded nonwovens at the NCTC.



VISCOSE,  
LYOCELL



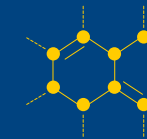
COTTON



NATURAL FIBERS



PULP



SYNTHETIC FIBERS

### Raw materials in the NCTC

- Synthetic fibers such as PET and PP, bicomponent and micro fibers «1dtex
- Cellulosic fibers (viscose and lyocell)
- Performance fibers, e.g. aramides and PTFE
- Cotton fibers – virgin and comber noils
- All kinds of natural fibers (hemp, flax, linen etc)
- Pulp (in cooperation with our partner Voith)

**Challenge us with your fibers!**

## T-SUPREMA needle-punching in the NCTC

Explore the boundless possibilities of the T-SUPREMA needle-punching line at our state-of-the-art technical center. Whether you are delving into geotextiles, filter media, automotive textiles, or other nonwovens tailored for durable end products, our center is equipped to bring your visions to life.

The precise Trützschler NCT-X card, crosslapper, and web drafter deliver high-quality webs for nonwovens spanning a weight range from under 50 to some 2,000 grams per square meter.

Efficient and homogeneous bonding is implemented by a flexible configuration of two needlelooms, a felt drafter and an unwinding station.

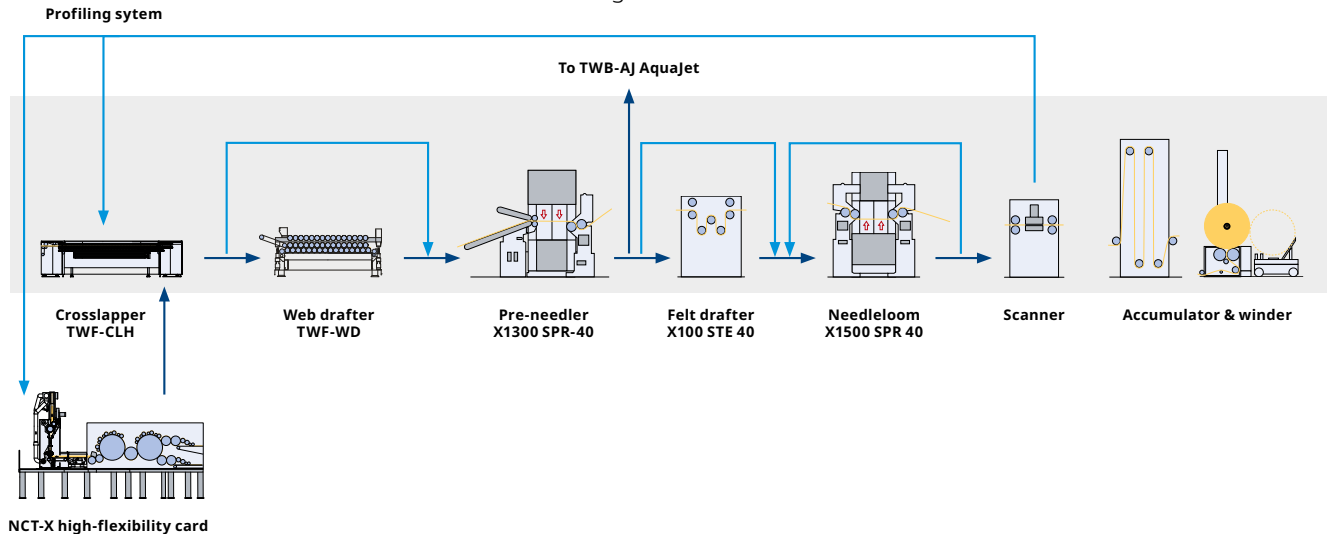
**Working width:** 3,000mm (card)  
4,000mm (needle-punching capacity)

**Simulation of several needlelooms and composite capability by unwinder integration**

**Web weight:** <50 gsm

**Line speed:** up to 40m/min  
(at the winder)

**T-ONE digital solution inside**



## 4 meters working width for a broad range of end products

Market developments indicate a growing demand for needle-punched nonwovens, driven by their unique properties and adaptability. Since its beginnings, the nonwoven industry is focusing on performance while maintaining quality. As all industries will continue to require innovative and new materials, needle-punched nonwovens are positioned to play a key role.

The NCTC is a first address to develop versatile and durable solutions for various technical applications.

## Partnering up with Texnology for T-SUPREMA lines

Trützschler Nonwovens and Texnology joined their respective strengths to offer high-performant but easy to use needle-punching machinery. Our target: make operations as easy as never before.

A cooperation between

**TRÜTZSCHLER**  
NONWOVENS

**TEXNOLOGY**<sup>®</sup>



## Spunlacing in the NCTC

At the core of the hydroentangling line are two different cards and the AquaJet. This adaptable setup, boasting a working width of 1,000mm, enables enhanced performance with production speeds reaching up to 300 meters per minute at the winder. The AquaJet incorporates a versatile application of our well-established

modular design. Consequently, the line is not limited solely to lightweight and medium-weight nonwovens designed for wipes or medical end products. The jet heads are also capable of producing the high-pressure water jets essential for manufacturing robust technical nonwovens, including hot gas filter media.

**Working width:** 1,000mm

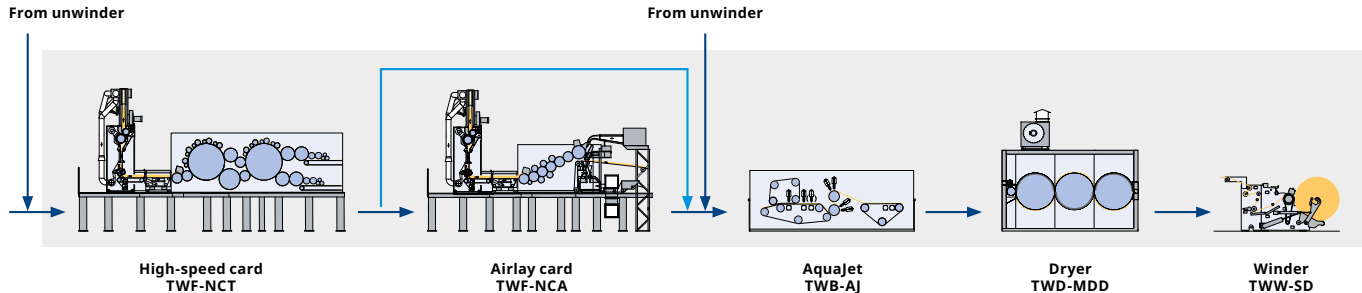
**Line speed:** up to 300m/min  
(at the winder)

**Finishing of pre-bonded, needle-punched nonwovens**

**Composite capabilities:**

Up to 4 unwinding stations in a row for creation/consolidation of any type of composite material, for instance, pulp-based, wet-laid CP materials

**T-ONE digital solution inside**



The pair of cards in the line adeptly handle a diverse array of fibers. Specifically, the NCA airlay card excels in processing short fibers, reaching as low as 12 mm fiber length, while the TWF-NCT card consistently handles both man-made and virgin cotton fibers with extremely high productivity and web quality.

## Developing wipes, hygiene and technical nonwovens

Market prospects for hydroentangled nonwovens are promising because the process delivers unique product properties. Increasing applications in wet and dry wipes, hygiene products, medical textiles, and filtration, along with innovations in fiber technology, are likely to contribute to the continued expansion of the hydroentangled nonwovens market.

Since years Trützschler Nonwovens is actively pursuing solutions for efficiently manufacturing sustainable nonwovens for single-use end products. NCTC customers are able to test environmentally friendly materials and develop energy-efficient processes.

## Partnering up with Voith for pulp-based, hydroentangled nonwovens

Since years Trützschler Nonwovens is actively pursuing solutions for efficiently manufacturing cellulose-based, fully biodegradable single-use end products, especially wet and dry wipes.

A cooperation between

**TRÜTZSCHLER**  
NONWOVENS

**VOITH**





## Air-through bonding (ATB) in the NCTC

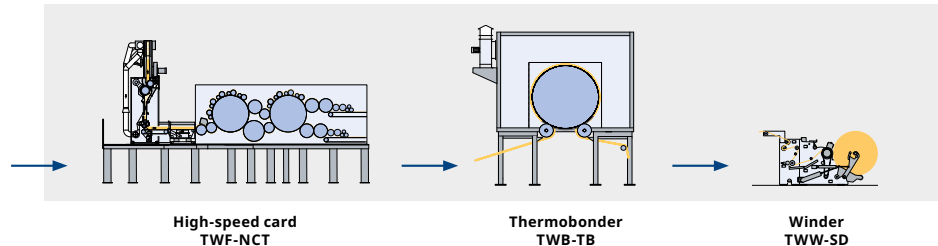
Air-through bonded nonwovens can be found in various applications – for instance in diapers and femcare products (absorbent hygiene), medical products, and filtration.

NCTC's Air-through bonding configuration allows for the production of soft, flexible and bulky nonwovens with specific characteristics tailored to the intended use.

Our ATB line is designed for line speeds of up to 150 m/min.

**NEW**

Develop advanced ATB nonwovens using a broad spectrum of micro-fibers for unmatched softness in diaper backsheets and topsheets.



Working width: 1,000 mm

## T-ONE, a digital solution for product trials

T-ONE is Trützschler Nonwovens' digital solution for collecting, organizing and analyzing all relevant production data. It manages specifications, recipes, roll and sensor data, as well as line performance KPIs, and uses advanced AI algorithms to support simulations and process optimization.

In the NCTC, T-ONE is fully integrated into all machines and laboratory devices, ensuring seamless documentation of every trial. Line configurations, machine settings, sensor signals and measurement results are centrally stored and can be reviewed at any time.

### T-ONE enables:

- Continuous recording of line and sensor data throughout each trial
- Automatic calculation of trial-specific KPIs
- Computer-assisted evaluation to identify improved settings
- Automatic generation of trial reports in various formats

### Legal disclaimer:

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**TRÜTZSCHLER**  
S P I N N I N G

Fiber preparation installations: Tearing line · Bale openers · Mixers  
Cleaners / Openers · Foreign part separators · Dust separators · Tuft blenders  
Waste cleaners | Cards | Draw frames | Combing machines |  
Digital Solutions

**TRÜTZSCHLER**  
N O N W O V E N S

Bale openers | Blending bins | Card feeder | Cards |  
Crosslapper | Wet laying lines | Needle-punching · spunlacing  
and air-through bonding lines | Dryers |  
Finishing and winding solutions

**TRÜTZSCHLER**  
C A R D C L O T H I N G

Metallic wires: Cards · Cards long staple · Cards Nonwovens  
Rotor spinning | Flat tops | Fillets | Carding segments  
Service machines | Digital Solutions | Service 24/7