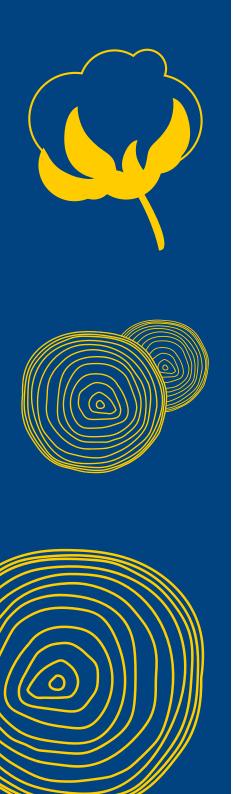
FIBER-BASED





Nonwoven lines

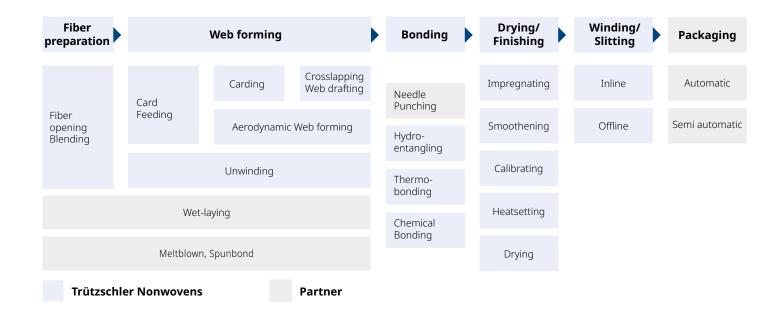
Our passion is machines and everything associated with the economic production of high-quality nonwovens. We love the challenge of opening up new fields of application with new materials and innovative technologies.

When you choose machines and installations from Trützschler Nonwovens, you can be sure that all components – whether supplied by Trützschler Nonwovens or one of our trusted partners – are perfectly coordinated.

We accompany you from planning to commissioning, from fiber opening to the finished nonwoven roll. Are you only interested in individual components from our product range? Welcome – our machines also set standards as solitaires.

Competence along the entire process chain

Our aim is to turn your product ideas into reality. Whatever fiber you use, whatever process you choose, we implement your requirements in a way that ensures optimal production.



Content

- 4 Hydroentangled nonwovens
- 6 Hydroentangling (spunlacing) lines
- 8 Lines for spunlaced cotton nonwovens
- 12 Pulp-based CP and WLS Lines
- 14 Hydroenentangling lines for technical end uses

- 16 T-SUPREMA needle-punching lines
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Legal disclaimer:

The brochure has been compiled to the best of our knowledge and in good faith with the utmost care. However, it may be subject to type errors or technical changes for which we assume no liability. The photos and illustrations are purely informative in nature and in part show special equipment options which do not feature in the standard scope of delivery. We provide no guarantee as to the current nature, correctness, completeness or quality of the information provided. Warranty claims for material or immaterial damage against us or the respective author based on the use or forwarding of the information provided, even if the information is incorrect or incomplete, cannot be asserted. Our provided data is non-binding.

SPUNLACED

NONWOVEN LINES

VISCOSE LYOCELL



PET PP

Hydroentangled nonwovens

Many of Trützschler Nonwovens' core competencies bundle along the spunlaced (hydroentangled) nonwovens value chain.

It's versatility that makes spunlaced nonwovens the fastest growing segment. High-pressure water jets efficiently entangle single fibers – giving the web exactly the strength, thickness, structure and surface asked for by the application. Products range from single-layer, light-weight materials to heavy-weight, multi-layer composites.

Our focus is on complete line concepts with the AquaJet as central unit for entangling and our drum dryers for energy-efficient drying.



The most common end-use for spunlaced nonwovens is wipes. Dry wipes, wet wipes, baby wipes, personal care or household wipes – all these products benefit from the spunlacing process' flexibility.

Hygiene and medical markets ask for several other single-use products. Examples are spunlaced cosmetic pads, beauty masks, baby diaper and femcare top-sheets or wound dressings.

Besides, also durable products often are made from hydroentangled nonwovens. The smooth surface given by the water jets makes for an ideal coating substrate. Pure technical end uses are light-weight geotextiles and filter hoses in hot-gas filtration systems that ask for especially homogeneous, high-strength materials.









Machinery for hydroentangled nonwovens

T-BLEND T-WEB T-BOND T-DRY T-WIND

Fiber preparation – T-BLEND

To ensure a top-quality end product, it is essential to maintain a continuous, uniform material flow from bale opener to the web former. Our modular T-BLEND system allows for high line throughputs. A choice of bale and fine openers, weighing and blending systems as well as accessories for reliable fiber transport opens up the door to individual installations that exactly meet requirements.

Web forming – T-WEB

We provide roller cards for efficiently processing a variety of natural and man-made fibers. Our multi-purpose TWF-NC card is accompanied by the random card TWF-NCR, the airlay solution TWF-NCA and the high-speed variant TWF-NCT. They all offer excellent carding and blending for single-layer, multi-layer, parallel, random or condensed webs. Our program also comprises different crosslappers for forming webs that are particularly wide, thick or virtually isotropic.

Web bonding with AquaJet – T-BOND

The AquaJet is a well-known name and proven in 150 installations world-wide. It's modular design with spunlace drums, compacting and dewatering sections allows for a bonding process exactly matching the fiber blend and the final product.

Web drying – T-DRY

Drum dryers combine a high evaporation capacity with a small footprint. In 1929 we developed the first drum dryer based on the through-air principle – and since then we are constantly optimizing the energy-intensive drying process. Our modular multi-drum dryers (TWD-MDD) and the new vertical dryer TWD-MPD with intermediate chamber are tailor-made to the line's specific requirements.

Web winding – T-WIND

Nonwoven production lines differ greatly – accordingly, we offer various winding technologies. Examples are the TWW-SD master roll winder for offline processes or the fully-automatic TWW-TD turret disc winder with inline slitting capability to produce readyfor-sale nonwoven rolls.

SPUNLACEDNONWOVEN LINES

VISCOSE LYOCELL



PET PP

The classic solution: lines for polyester/viscose fiber blends

The largest segment of spunlaced nonwovens is the wipes market. A blend of viscose and polyester (PET) fibers turned out to be the most convincing raw material. Cost effective polyester fibers give softness while viscose delivers the absorbancy needed for high-quality wipes.

Single-use wet and dry wipes contain petroleum-based PET or PP fibers. They pose a threat to the environment when thrown away carelessly because they disintegrate into micro plastics that stay in the environment for many years.

Sustainable nonwovens from 100% re-generated cellulose fibers

Both viscose and Iyocell fibers are man-made fibers derived from cellulose. Plantation hardwood is firstly chemically processed into dissolved wood pulp and then spun into staple fibers or filament yarns.

Re-generated cellulose fibers come from renewable resources, most often from beechwood, spruce or gum wood. They are 100% biodegradable which qualifies both viscose and lyocell fibers for the production of sustainable nonwovens.

Carded/spunlaced nonwovens from 100% viscose or lyocell fibers are strong, yet soft and absorb liquids quickly – a good choice for baby, personal care or medical wipes.

Solutions for spunlaced nonwovens from man-made fibers

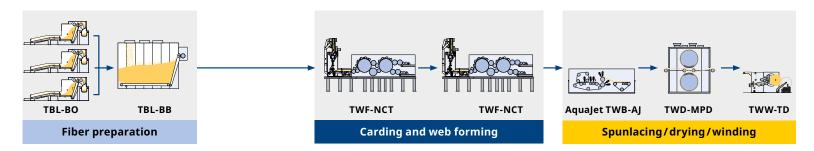
High-speed lines for hydroentangled nonwovens

Raw material: viscose, lyocell, PET and/or PP fibers

Web weights: 30 – 100 gsm

Output: more than 20,000 tons/year (depending on fiber type, web weight and working width)

End products: dry and wet baby and body wipes; medical textiles







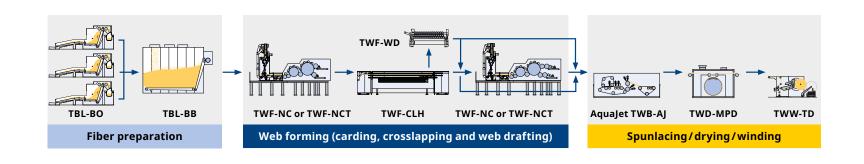
Crosslapping line with NC cards

Raw material: viscose, lyocell, PET and/or PP fibers

Web weights: 30 – 100 gsm

Output: more than 8,000 tons/year (depending on fiber type, web weight and working width)

End products: dry and moist baby and body wipes; medical textiles, cosmetic beauty masks.







SPUNLACED

NONWOVENS LINES
FROM COTTON
AND NATURAL FIBERS



Lines for cotton nonwovens

Consumers love cotton fibers and their soft, luxurious touch. Not only the skin-friendly characteristic of cotton fibers is an advantage. Due to their irregular shape, they also pick up dirt very well. Moreover, the fibers absorb liquids quickly due to the swelling behavior.

All these properties make cotton an excellent choice for hygiene single-use products such as wet and dry wipes, femcare products, cosmetic pads and wound dressings.

Cotton fiber quality, end product and process requirements differ significantly. For this reason, Trützschler Nonwovens offers several machines and line configurations for efficiently processing

- · virgin cotton,
- · bleached and unbleached qualities,
- blends from virgin material and comber noils and even
- 100% noils

Solutions for hemp, flax and natural fibers

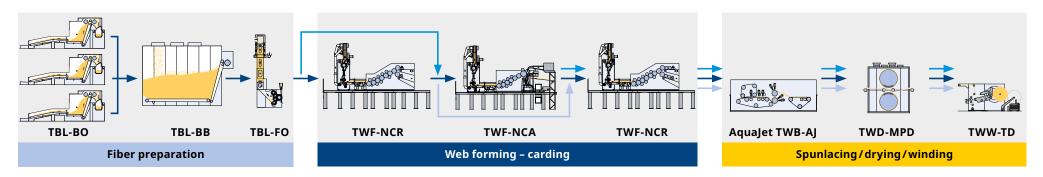
Thousands of years ago natural fibers from plants and animals were the first materials used for manual felting. Today, hemp, jute, nettle, pineapple and other fibers are turned into environmentally friendly solutions for durable or single use nonwovens.

Both hydroentangling and the flexible needle-punching process deliver innovative, biodegradable products. These provide a performance as good as or even better than conventional nonwovens containing synthetic fibers.

Cotton lines I

Flexible production lines for cotton nonwovens

End products: cotton wipes and cosmetic pads



→ Inline configuration with two NCR random cards:

Web weight: 35 – 120 gsm Line speed: 60 – 180 m/min



→ Inline configuration with one airlay and one random card:

Web weight: 35 – 120 gsm Line speed: 60 – 120 m/min



Inline configuration with two random and one airlay card:

Web weight: 130 – 400 gsm Line speed: 15 – 60 m/min



SPUNLACED

NONWOVENS LINES FROM COTTON



Cotton lines II

Crosslapper lines for isotropic nonwovens

Nearly isotropic webs with a high random layer are formed by a combination of NCR card and crosslapper.

Web weight: 35 – 50 gsm Line speed: 20 – 40 m/min

End products: cotton wipes and outer layers of cosmetic pads





Small capacity lines with Trützschler flat top cards

Flat top cards are known for their ability to reduce the nep content in cotton fiber tufts. Gentle carding and web forming results in spotless, homogeneous webs.



Web weights: 130 – 300 gsm Line speed: up to 35 m/min





Larger capacity lines with flat top and roller cards

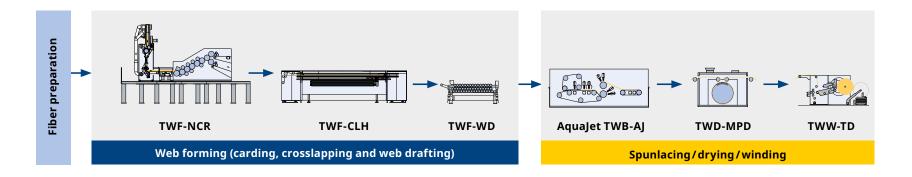
The combination of flat top and roller cards increases throughput and guarantees a high web quality.

Cosmetic pads:

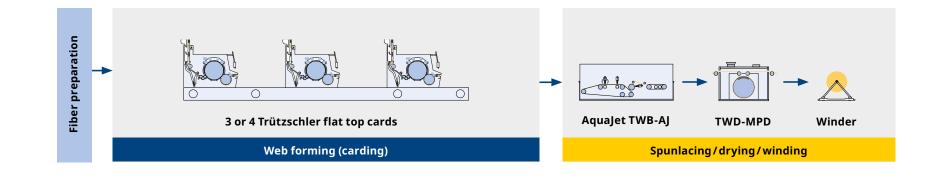
Web weights: 130 – 300 gsm Line speed: up to 50 m/min



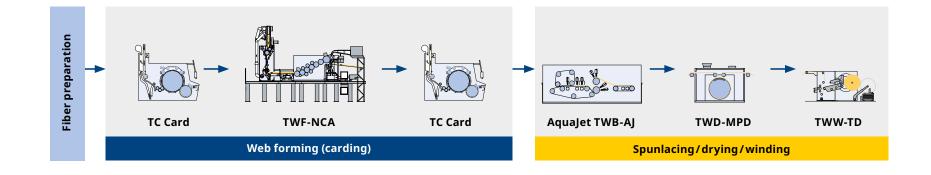












SPUNLACED

NONWOVENS LINES FROM WOOD PULP (WLS AND CP)



Nonwovens with paper-grade wood pulp

Paper-grade pulp – for instance NBSK (Northern Bleached Softwood Kraft) – is a cost effective material for highly-functional, sustainable nonwovens. Basis is a wet-laid web. In the WLS (Wet-Laid/Spunlaced) process, a blend of pulp and short viscose, lyocell or PET fibers is dispersed in water and laid down on a wire belt. A highly randomly oriented web forms.

The CP (Carded/Pulp) technology combines the wet-laid ply from 100% pulp with a carded web from standard viscose or lyocell fibers. When these layers are hydroentangled by high-pressure water jets, plain, structured or perforated nonwovens result. Both WLS and CP are high-productivity processes that reach production speeds of 300 m/min at the winder.

Typical end products

WLS already is the technology of choice for producing moist toilet tissue (MTT). Higher-strength nonwovens can also be produced by changing line settings.

CP products give excellent baby and body wipes. They combine the advantages of pulp (cost effective, voluminous and absorbent) with those of lyocell or viscose fibers (sufficient strength and softness).

Teaming up with Voith, leading partner to the paper industry

When an end product requires wet-laying, Trützschler Nonwovens closely cooperates with Voith. The company is a specialist for wet-laying machinery including the entire water treatment system.









WLS: lines for flushable wipes or baby/body wipes

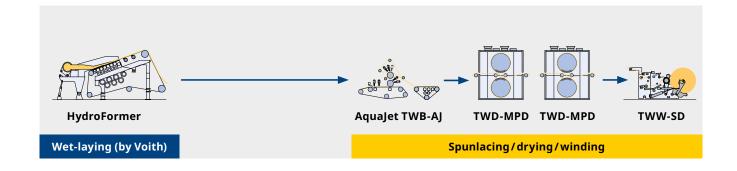
Raw material: paper-grade wood pulp, re-generated

cellulose fibers (viscose, lyocell)

Web weights: some 50 gsm
Line speed: up to 300 m/min

End products: flushable wipes (MTT);

baby and body wipes



CP: lines for carded/pulp wipes, flexible lines for WLS nonwovens, carded/spunlaced nonwovens and CP products

Raw material: paper-grade wood pulp, re-generated

cellulose fibers (viscose, lyocell), PET fibers

Web weights: some 50 gsm with a pulp ply

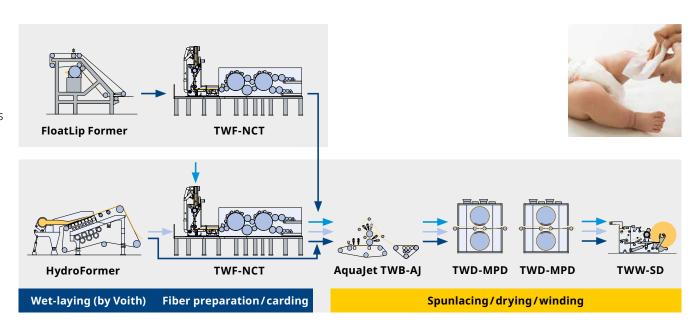
of more than 25 gsm

Line speed: up to 300 m/min

End products: baby and body wipes;

flushable wipes (MTT)

without card



SPUNLACED TECHNICAL NONWOVENS

PET PP PA PPS PTFE etc.

Spunlacing lines for technical applications

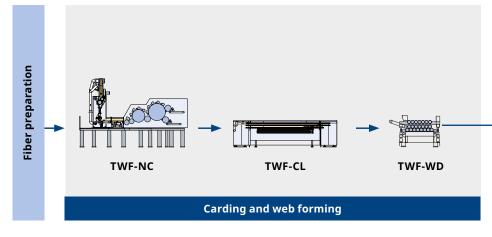




Durable end uses of hydroentangled nonwovens

In contrast to disposable nonwoven products, industrial applications ask for high performance during the entire long lifetime.

Besides high tenacity, the nonwovens' (surface) homogeneity becomes a crucial requirement to prevent early performance losses. Hydroentangled nonwovens make for excellent coating substrates, automotive interior textiles or hot-gas filter hoses.



For coating substrates:

Web weight: 100 – 150 gsm

Fiber used: PET

For light/medium weight filtration media:

Web weight: up to more than 1,000 gsm

Fiber used: PET, PP, aramide, PPS, PTFE, glass, ceramic fibers

For visible automotive textiles:

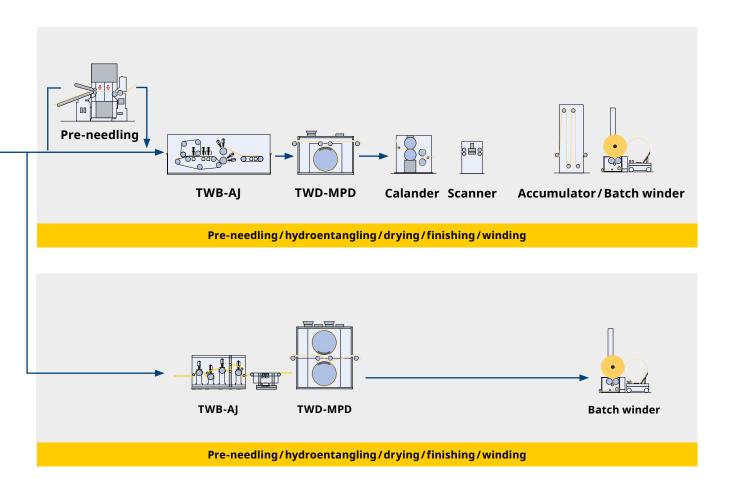
Web weight: from below 100 up to 1,500 gsm

Fiber used: PP, PA, PET

For heavy weight filter media (hot-gas filtration):

Web weight: several hundred to more than 1,000 gsm

Fiber used: PET, PP, aramide, PPS, PTFE, glass, ceramic fibers



PRODUCTION LINES FOR

NEEDLE-PUNCHED NONWOVENS T-SUPREMA

Needle-punched nonwovens

The largest fiber-based nonwovens segment is needle-punched nonwovens. Growth is fueled by innovative technical applications and new fiber materials.

A variety of fibers can be processed. Thousands of steel needles in a needleloom entangle man-made fibers such as polyester and polypropylene, high performance fibers (Aramid fibers, PPS...), natural fibers (cotton, wool, hemp, flax, etc.) and even recycled, glass or metal fibers.

Typical end products

Needle-punched nonwovens are optimally suited for many industrial applications. High strength and low elongation in longitudinal and transverse direction provide geotextiles, filter media, automotive textiles and technical felts with high durability.

Partnering up with Texnology s.r.l.

Trützschler Nonwovens and Texnology joined their respective strengths to offer the needle-punching line you are looking for. Our target: make operations as easy as never before.





A cooperation between

About Texnology s.r.l.

Core business is the manufacturing of crosslappers, drafting systems and needlelooms. The product portfolio is rounded off by accessories, tools and spare parts.

Nevertheless, Texnology is also able to supply complete nonwoven lines. Today about 180 plants for needling, thermobonding, hydroentangling and chemical bonding are counted all over the world.

Texnology's foundation dates back the 1950s when Vani Olivo started a nonwoven business. With a 40-year background in nonwovens production, Texnology successfully began constructing nonwoven machinery in the 90's.

Machinery for needle-punched nonwovens

and T-WEB needlelooms

To ensure a top-quality end product, it is essential to maintain a continuous, uniform material flow from bale opener to the web former. Trützschler Nonwovens' bale and fine openers, weighing and blending systems ensure reliable fiber transport even in high throughput lines.

The various roller cards – the multi-purpose card TWF-NC, the random card TWF-NCR and the high-speed variant TWF-NCT efficiently process natural, man-made and performance fibers.

Crosslapping, web turning and web drafting establish the web weight, working width and fiber orientation needed. These components are provided on a case-to-case basis by either Texnology s.r.l. or by Trützschler Nonwovens.

Texnology's machinery is designed for three major goals: minimized stand still times, a high product quality and ease-of-use.

Smart designs minimize stress on components thus reducing or even preventing vibrations, noise, leakage, wear and tear. The modular built allows for easy accessibility and effortless maintenance. Optional features such as suction units for the needling zone further help to keep uptime high.

The six single and double board needleloom types come in working widths up to 12 meters. Needlelooms with a revolutionary elliptical needling movement are available as well. In addition to the comprehensive product portfolio, different needle densities, stroke amplitudes and stroke frequencies etc. ensure perfect adaptability to customers' requirements.

To ensure efficient further processing we team up with trusted partners to supply exactly those components needed for manufacturing top-quality needle-punched end products. Concerning calanders, stenters or batch winder, we have best partners at hand to discuss and implement your requirements.

PRODUCTION LINES FOR

NEEDLE-PUNCHED NONWOVENS T-SUPREMA

Geotextiles by T-SUPREMA lines





Needle-punched geotextiles

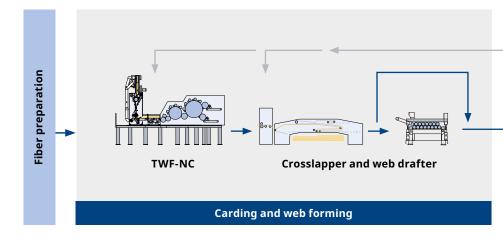
Geotextiles serve many purposes. When it is about long-term drainage or soil layer separation in dikes, landfills or tunnel constructions, needle-punched nonwovens from synthetic fibers come into play. Elongation, shear and puncture resistance, hydraulic performance as well as resistance to chemical and biological degradation become crucial properties.

Other applications, for instance temporary road construction, bank and coastal protection or gardening, ask for needle-punched materials from natural fibers. When they biodegrade over time, no micro plastics enter the environment.

Web weights: below 100 and up to 3,000 gsm Fiber used: PP, PET, PA, recycled fibers,

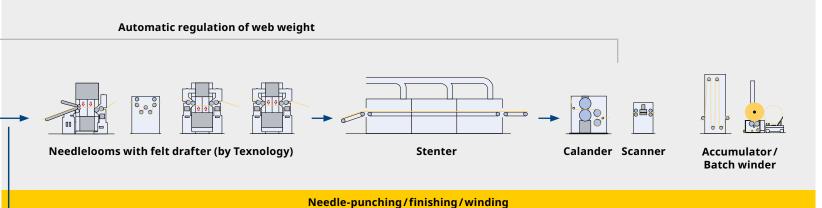
shoddy (CO) and natural fibers

(e.g. jute, coconut fibers)



T-SUPREMA line for light weight geotextiles:

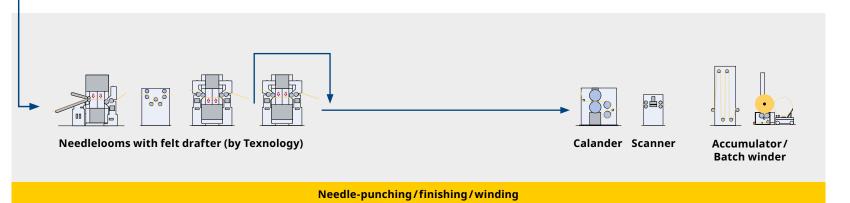
Web weight:90 to 300 gsmFibers:mainly PPProduct width:up to 6,500 mmFiber length:up to 100 mm



Treedic parising, mising, mian

T-SUPREMA line for heavy weight geotextiles:

Web weight:300 to 1,500 gsmFibers:PET, recycling fibersProduct width:up to 7,000 mmFiber length:up to 100-120 mm



PRODUCTION LINES FOR

NEEDLE-PUNCHED NONWOVENS T-SUPREMA

Filter media by T-SUPREMA lines



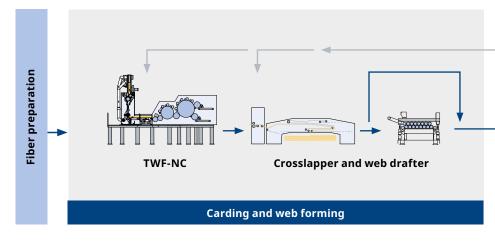


Needle-punched nonwovens in filtration

Needle-punched materials filtration media are essential to protect against pollution. They play a major role in both air and liquid filtration.

Everday products are air purifiers, automotive cabin air filters and HVAC (Heating, Ventilation and Air Conditionin) systems. Hot-gas filtration in cement kilns and waste invineration plants is a prominent industrial application.

Needle-punched felts also offer a high separation efficiency of dirt particles in liquids. A typical end use is belt filtration of cooling lubricants in mechanical treatment processes such as grinding.

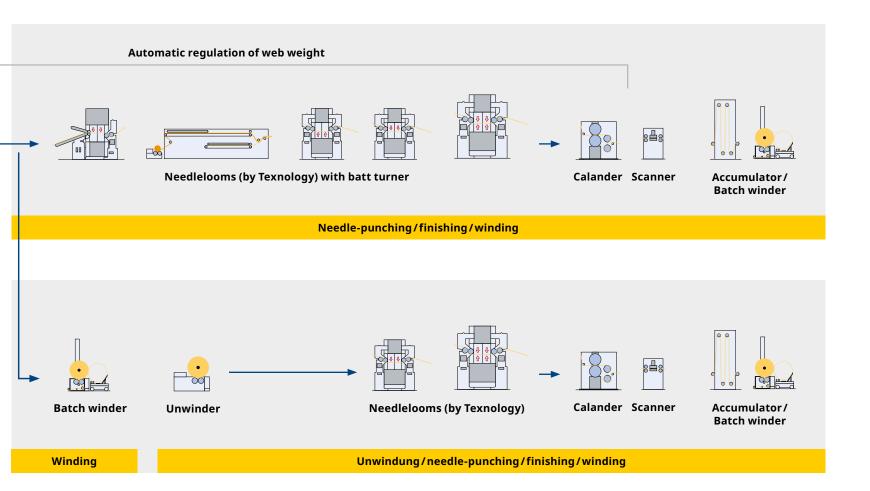


Typical web weights: below 100 and up to more

than 1,000 gsm

Fiber used: PET, PP, Aramid, PPS, PTFE,

glass, ceramic fibers



PRODUCTION LINES FOR

NEEDLE-PUNCHED NONWOVENS T-SUPREMA

Automotive, technical felts and specialities





Needle-punched automotive textiles

Applications range from decorative elements (headliner, trim etc.) to acoustic insulation and structural foam alternatives.

Web weights: below 100 and up to 1,500 gsm

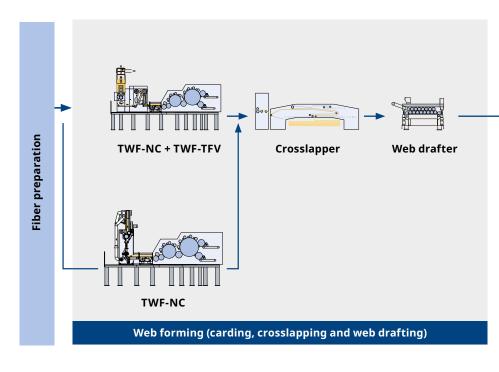
for visible and up to 2,000 gsm

for non-visible components

Fiber used: PP, PA, PET for visible components

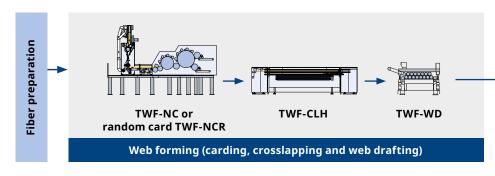
hemp, jute, flax, PP, PA, PET, glass fibers and recycled material for

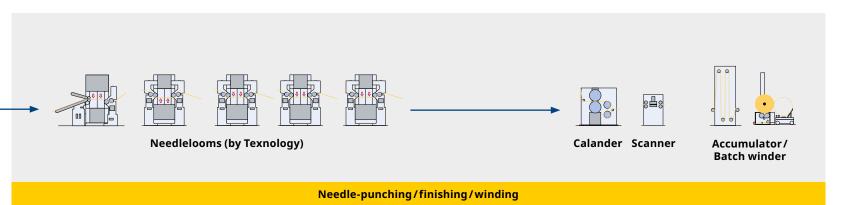
non-visible components

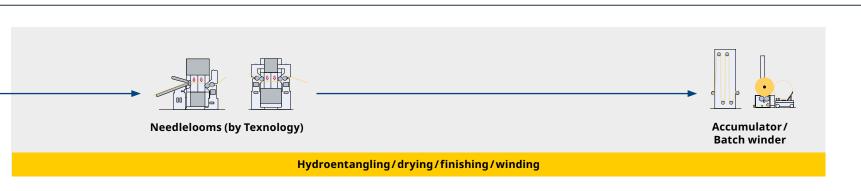


Special applications

Often needle-punched nonwovens serve specific requirements in niche applications. We love to find the perfect solutions for your product ideas.







APPLICATIONS NEEDLE-PUNCHING

LINES FOR SPECIAL

Solutions for recycled fibers



More than 60 million tons of man-made and natural fibers are produced each year. And each year several million tons of used textiles are disposed to landfill.

Textile recycling is the next big thing to come. Today, a handful of industrial-scale recycling technologies are mature enough to give used textiles a new life.

Our approach

In a first step Trützschler Nonwovens concentrates on re-using post-industrial waste, so

called soft waste. T-SUPREMA lines for recycled materials are fed by recycled fiber bales manufactured by our partner's tearing line.

The first step: a tearing line

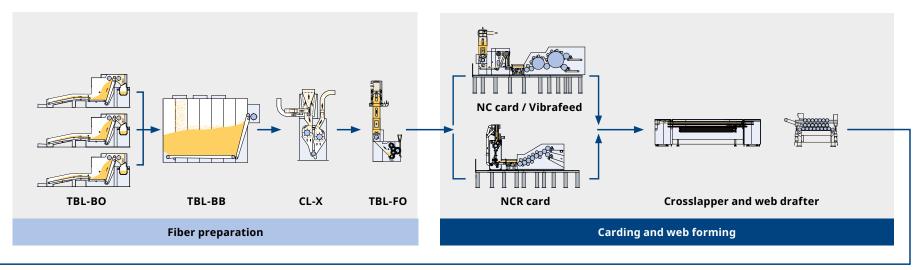
Post-industrial waste contains neither buttons, zippers or seams. It's just fabric that needs to be cut into small pieces, mixed and fed to the tearing machine. Up to 6 opening sections with powerful filters pre-open the fabric pieces, extract dust and smallest chunks and feed the bale press with high-quality reclaimed fibers.

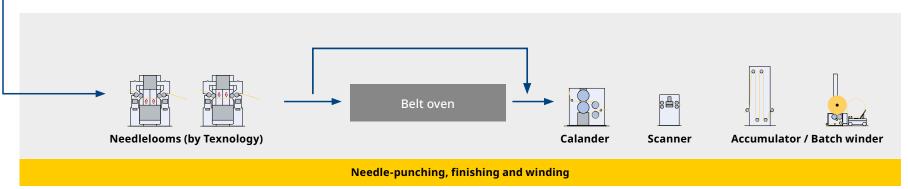


T-SUPREMA line for reclaimed fibers:

Web weight: up to 1.500 gsm Product width: up to 6.000 mm

Applications: construction, home interior (insulation, protection)





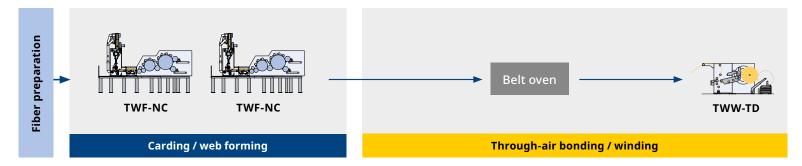
PRODUCTION LINES FOR
THROUGH-AIR AND
CHEMICAL BONDING
NONWOVENS

Through-air and chemically bonded nonwovens

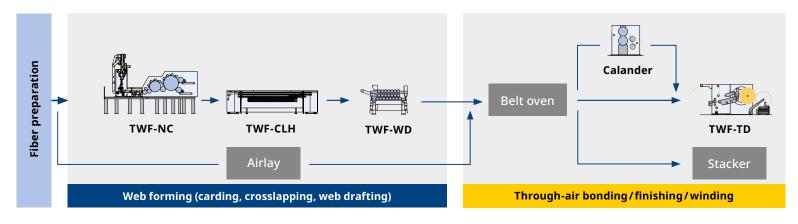
Thermo- and chemical bonding processes "glue" the loose fibers in the web. Fibers used are either bi-component qualities or blends of polymer-based fibers with different melting points.

In through-air bonding, the hot air in the thermobonder or belt oven surpasses the web, some fibers melt and glue the fiber junctions. In chemical bonding processes, liquid or foam-based binders impregnate the web. In the oven the chemical binder also glues single fibers. Hygiene end uses are top sheet and ADL, the Acquisition- and Distribution Layer in diapers. Industrial applications of through-air bonded nonwovens are insulations and filter media.

Through-air bonding line for HVAC filter applications



Through-air bonding line for high-loft nonwovens



Machinery for through-air and chemically bonded nonwovens

Fiber preparation and web forming - T-BLEND and T-WEB

The T-BLEND components maintain a continuous, uniform material flow from the bale opener to the web former. Efficient processing of the bi-component and man-made fibers used is ensured by the TWF-NC multi-purpose card.

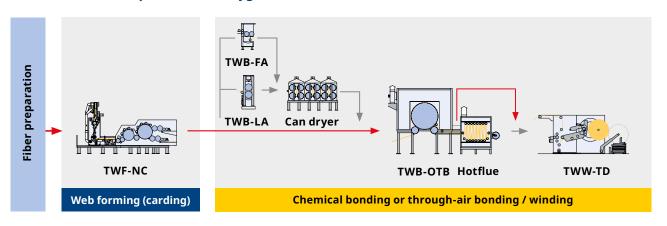
Web bonding with a thermobonder - T-BOND

Trützschler Nonwovens' Omega-shaped thermobonder for through-air bonding offers excellent temperature uniformity for homogeneous web bonding and energy efficiency for low conversion costs.

Web bonding with foulards and ovens - T-BOND

Trützschler Nonwovens offers both liquid and foam foulards. While foam-based processes reduce the amount of binders needed, liquid foulards are especially suited for high-speed installations. The foulard is followed by a can dryer, a drum oven and a hot flue to ensure complete drying.

Flexible line for the production of hygiene nonwovens



Process for through-air bonded nonwovens
 End products: top sheets, ADL (Aguisition & Distribution Layer);

Process for binder bonded nonwovens
 End products: ADL (Aquisition & Distribution Layer);
 without hotflue also for interlinings

Interfacing & Historization Quality Control & SPC Management of Recipes **KPI & Continuous Improvement Process Documentation** Monitoring & **Energy Management Process Optimization** T-ONE modules for systematic and simplified work routines basic package

T-ONE – increasing production performance

T-ONE delivers direct benefit to line operators, quality engineers, product developers and the management.

A digital working environment for the entire production

Various software modules not only digitalize work routines but also collect and file all relevant production data (specifications, roll measurements, recipes and changes, line performance KPIs, sensor data etc.).

Moreover, T-ONE implements powerful AI-based algorithms for line simulations and optimizations.

An open client-server system

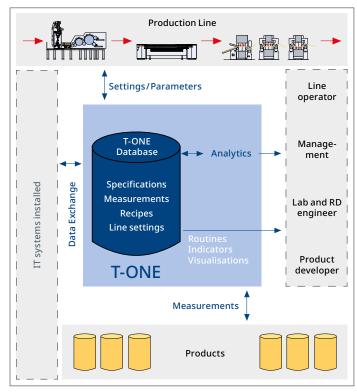
T-ONE's architecture and its refined user management give 100% control over all data. The heart is a data-base installed on one of your (virtual) servers. The clients are windows-based computers. As an open system T-ONE not only neatlessly fits into your existing IT environment but is also able to communicate with every open machine in the production line.

Setting up a T-ONE project

The software will be customized to your production line and your specific requirements, to IT systems already installed and even to the ERP system if desired.

Benefits of working with T-ONE

- Save money by systematically reducing energy consumption
- Save resources support routine tasks (e.g. quality control) and save up to 40% time by the digitalized recipe management
- Focus on important things continuously monitor line efficiency, take action and keep track of improvement work
- Stay informed visualize product quality and detect rising issues in advance
- Accelerate complex work analyze line settings, simulate line behavior and get advise on better machine settings
- $\boldsymbol{\cdot}$ Access all production related actual and historic data





In Egelsbach, Germany, your ideas become reality. Fast and reliable. Just 15 kilometres away from Frankfurt/Main Airport 28 multi-functional line configurations await you.

Fully equipped playground

NCTC - the largest nonwovens trial center of its kind - is equipped with laboratory and testing capabilities. Moreover, it features a showroom with hundreds of nonwoven materials.

On the playground

More than 5,000 square metres are dedicated to two independent nonwoven lines for:

- · Carded/spunlaced,
- · Wet-laid/spunlaced and
- Through-air bonded products
- Crosslapped/needle-punched nonwovens

Both lines feature the whole range of Trützschler Nonwovens' equipment.

Opportunities galore!

Running to full capacity?

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

In doubt about performance promised?

Pay NCTC a visit and put our machines through their paces.

Pressed for optimized processes?

Discuss with experienced experts and develop the optimum manufacturing process.

No time to train new people?

Send them to NCTC for thorough qualification and focused hands-on training.

In search for future-fit products?

Take advantage of our profound knowledge and partnerships.

In need for test material?

If you think about entering the new markets Trützschler Nonwovens is able to provide roll goods for testing.









We are always at your side

Your equipment has a high utilization and sometimes operates under tough operating conditions therefore we recommend regular inspection, maintenance, and repair to keep its performance high.

The Trützschler service offers specialized solutions to help maintain your operations. The provision of original parts, repair and maintenance maximizes up time and performance. Engineers in Trützschler's worldwide service network have specialist skills and expertise to save you time and resources.

Moreover, let us give you peace of mind. With Trützschler service contracts maintenance and maintenance costs become predictable. We'll take care of your service schedule so your equipment is always operating at peak efficiency.

Contact us directly at spareparts-tnw@truetzschler.de

or contact your local Trützschler service organisation

After Sales Service

Choose our individual and specialized services:

- Inspections and assessments
- Plant efficiency consulting
- Service agreements
- Smart remote services
- Upgrades and modernizations
- Original spare and wear parts
- Trainings on-the-job and inhouse







It's your choice

Inspections, audits and repair services

To reduce future unplanned shutdowns, we recommend regular mechanical and operational checks. Our engineers work in accordance to original supplier manuals and help de-bottle-necking the line. Our global service network is happy to support your plant manager.

Service contracts

Setting up a regular scheduled service including remote support not only giuarantees an efficient and reliable production. Service contracts also result in transparent and predictable maintenance costs.

Modifications

Our nonwoven lines are designed for over decades. But technology advances open up new opportunities. To keep your system up-to date, we offer various upgrades.

Trainings

Our NCTC Technical Center in Egelsbach allows for training your staff even before your new line has been started up. Before handing over the line – and also at any later date – we offer extensive trainings on-the-job.

Original parts

We believe in original parts to keep line performance high. Let's talk about your individual needs. Our high-quality parts packages assure the machines' long-time value retention.





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 NONWOVENS

Bale openers/mixers | Card feeders | Cards/crosslappers Wet-laying lines | Hydroentangling, needle-punching, thermo- and chemical bonding lines | Finishing, drying, winding machinery | Digital Solutions



Carpet yarn systems (BCF) · Industrial yarn systems | Digital Solutions

TRÜTZSCHLER

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