Fiber and spinning
preparation for

recycled materials



TRÜTZSCHLER SPINNING

Sustainable yarn









Giving new life to textile waste reduces the environmental impact of our industry – and can provide attractive business models. Trützschler is able to provide a complete line-up of technologically leading machinery that is specifically developed for rotor and ring yarns from recycled materials.

Optimized machine settings and configurations across the Trützschler fiber and spinning preparation processes ensure uniform fiber characteristics and reliable spinning performance.

truecycled®

Get more info about TRUECYCLED on our website

Top-notch fabric recycling

TRUECYCLED stands for state-of-the-art recycling installations from Trützschler that enable manufacturers to achieve a high-quality end-product from hard waste. The reproducible manufacturing process is based on Trützschler's technological recommendations and a Trützschler machinery line-up that ensures ideal results from recycled materials.









In a recent collaboration with a fashion company that aimed to make use of pre-consumer waste, Trützschler achieved a ring yarn containing 60 % pre-consumer waste. A true TRUECYCLED product! Trützschler customers and partners can use the TRUECYCLED brand for both the process and the end-product, as long as it contains a significant amount of textile waste.

Recycling of PET bottles

PET bottles can be shredded into flakes and the polymers can then be dissolved by melting. These dissolved polymers form the pulp that is used to produce new fibers or directly produce a new web. These reclaimed fibers can be processed on Trützschler spinning and nonwovens systems, just like virgin polyester.

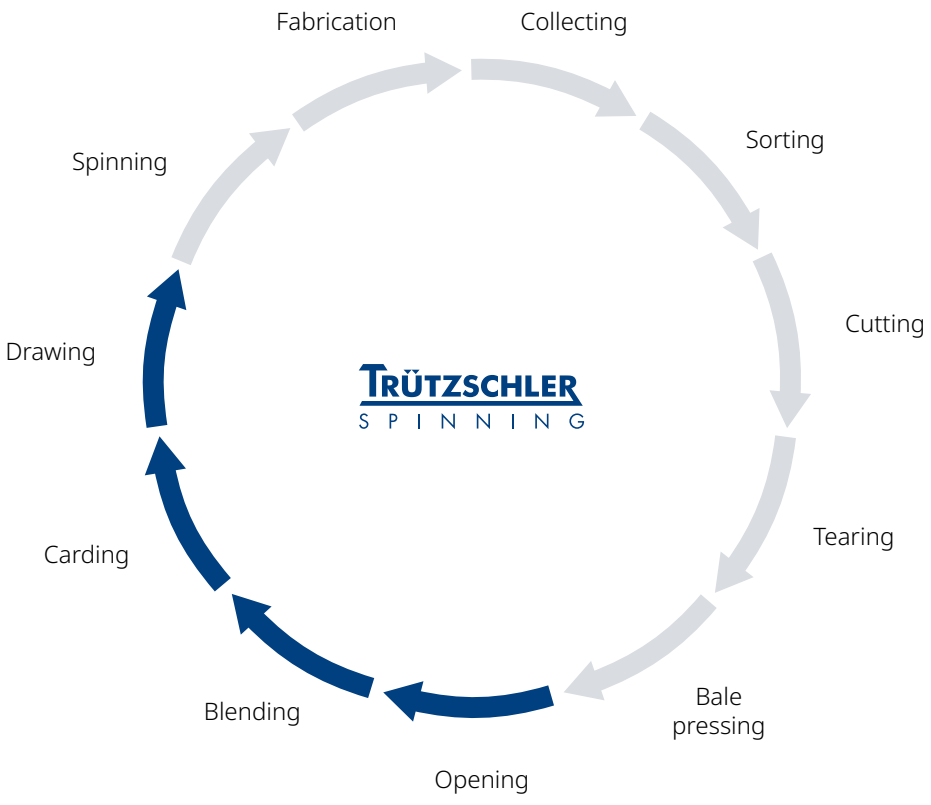




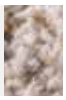
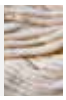
Creating clarity for recycling

Upcycling, recycling, better utilization of raw materials... These are big buzzwords right now – but what do they really mean? For Trützschler, sustainability begins with preventing unnecessary cotton waste in spinning preparation using WASTECONTROL sensor technology. Trützschler machines also make it possible to utilize even highly soiled cotton separations (like those from the blowroom) for yarn manufacturing. Used and unused textiles are becoming an economical and sought-after raw material because they can be reprocessed into quality yarns with our technology.

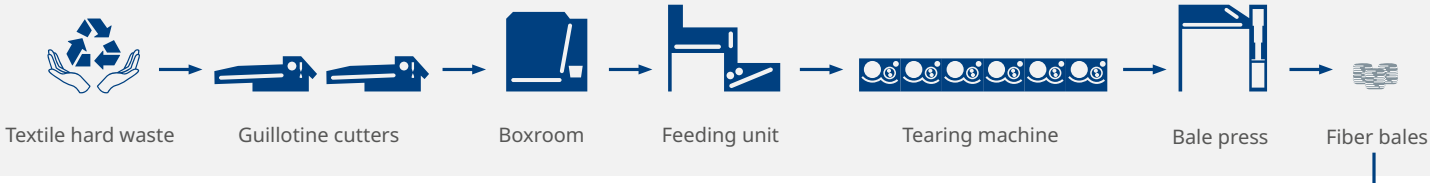
Textile circular economy

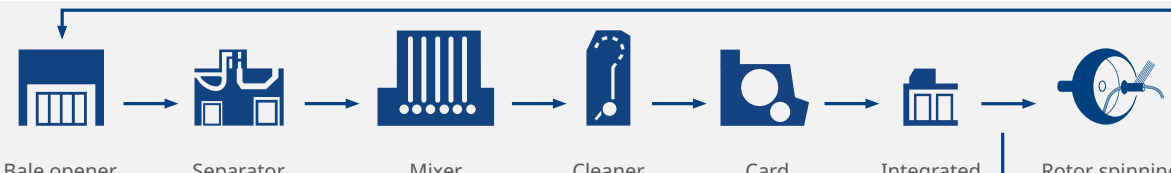


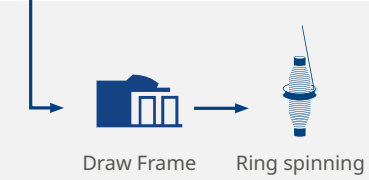
Type of texile waste

	Soft waste		Hard waste	
	Card and blow room waste	Noil	Pre-consumer	Post-consumer
Examples	Blow room tufts 	Comber noil 	Threads 	Used textiles 
	Card waste 		Fabrics (incl. selvage) 	Unused textiles 
	Sliver / lap waste 		Tailor waste 	

An example of a state-of-the-art recycling process







Key: Textile hard waste | Guillotine cutters | Boxroom | Feeding unit
Tearing machine | Bale press | Fiber bales
Bale opener BO-P | Separator SP-MF | Mixer MX-U10 | Cleaner CL-U | Card TC 30R*i*
Integrated Draw Frame IDF 3 | Rotor spinning
Draw Frame TD 10 | Ring spinning

Optimum opening, cleaning & blending of secondary fibers

Blowroom lines for recycling textile waste

The technological challenges in the processing of secondary fibers from shredded textile waste are considerable: All particles of yarn and woven fabric must be opened reliably or separated off. Trützschler blowroom lines for recycling feature flexible setting options and intelligent processes, facilitating perfect opening, cleaning and blending of synthetic and cotton secondary fibers. They also prevent unnecessary waste or new short fibers from being produced.



Portal Bale Opener BO-P

25 – 40 % better blending: The Portal Bale Opener provides very large working widths of 2,900 mm and 3,500 mm for 5 to 6 bales next to each other. The two opening rolls with higher teeth density produces smaller tufts for a gentle opening process. This is the perfect foundation for homogeneous blending in the blowroom.



Proper protection for lines: Multi Functional Separator SP-MF

Adding waste significantly increases the risk of foreign parts in the material. The SP-MF reliably detects heavy parts as well as metal parts and separates them off. If required, it can also be equipped with spark detection and extinguishing.



Maximum process reliability





The perfect blend with Universal Mixer MX-U 10

The Mixer MX-U 10 features 10 chambers which are filled from above one by one and emptied simultaneously from below with 10 individual opening units. This principle guarantees that the blend has maximum homogeneity. It runs highly efficiently thanks to a closed air circuit which also uses the conveying air to transfer the tufts at the same time.



Universal Cleaner CL-U, stainless steel version

This cleaner can be used for almost all types of cotton. It features integrated dust extraction which is important for rotor spinning. All material carrying parts are made of high-grade stainless steel. This equipment prevents the accumulation of reviving agent and thus makes for significantly more reliable fiber conveying.

INOX

Stainless steel equipment for reduced adhesion of reviving agent



Using textile waste intelligently

The intelligent Card TC 30R^{i} for Recycling

Spinning straw into gold? That's only possible in fairy tales. However, using textile waste to create new values is now reality: The intelligent Card TC 30R^{i} for Recycling converts secondary fibers into quality slivers for new yarns.







More quality and productivity

The intelligent card TC 30R^{i} with the Gap Optimizer T-GO for Recycling automatically and precisely sets the carding gap to ideally suit the respective changing production conditions. The results achieved by customers show that this leads to quality and productivity increases in a double-digit percentage range.

Gentle and effective cleaning

The new mote knife system PMS 2 allows even more flexible settings for waste separation at the licker-in. The special recycling knife with TC 30R^{i} improves the separation of foreign particles and minimizes the loss of good fibers.





Rugged and reliable in every application

Shredded waste can affect material-carrying components and lead to fiber adhesions and blockages. On the TC 30R^{i} for Recycling this is unlikely: All material-carrying components are made of stainless steel. At the same time, the rugged construction guarantees reliable performance in demanding applications.

INOX

Stainless steel equipment for reduced adhesion of reviving agent



Individual and flexible

The MULTI WEBCLEAN system facilitates quick, flexible and individual adjustment to different recycling applications. In the pre-carding and post-carding zones of the main cylinder, eight elements can be configured variably as carding strip, cover section or cleaning element with suction hood.



Well advised and perfectly set

Trützschler has years of experience in textiles recycling. Our installations are characterized by particularly variable setting options. We support our customers with recommendations for ideal configurations and clothings.

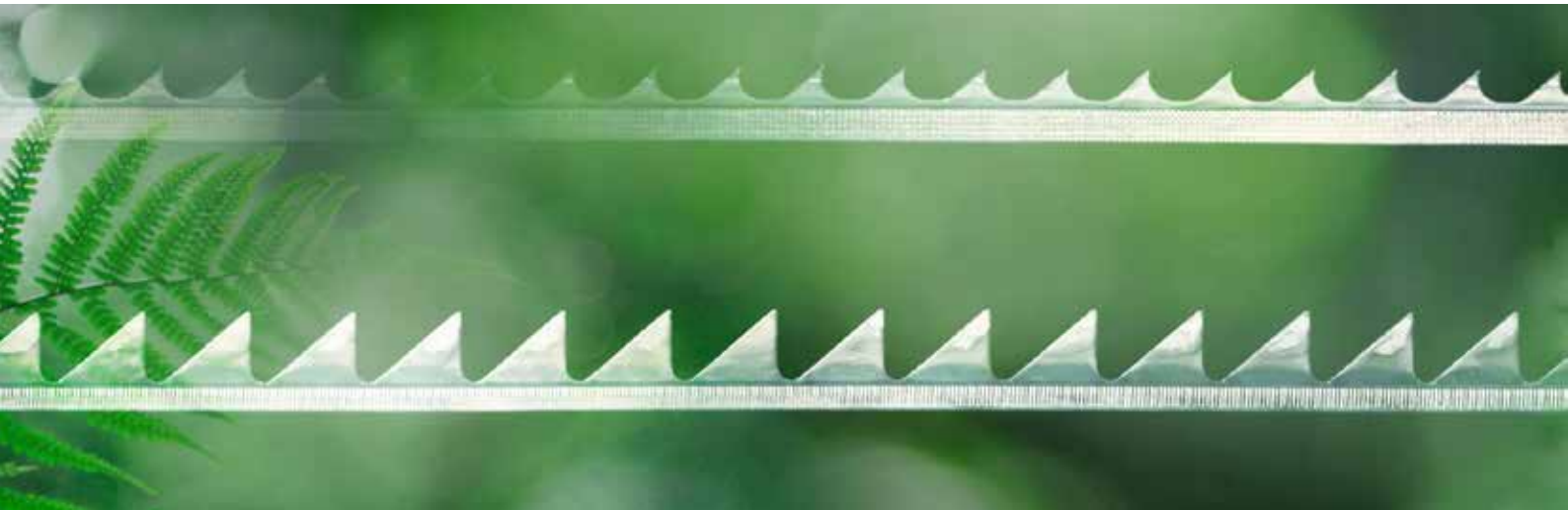
Clothing for recycling

Sustainable Recycling Solutions

Recycling yarns is more demanding than it appears. That's why Trützschler Card Clothing offers a comprehensive range of specially engineered wires—designed to meet even the most challenging recycling applications. Optimized for Trützschler machines, these wires are essential for unlocking the full performance potential of the TC 30R^{i} card for Recycling. Different aspects of the clothings are key, depending on which recycled material is to be processed.

Requirements for shredded textile waste

Soft waste, from spinning preparation, requires wires with fewer tips to prevent fiber clogging and ensure smooth release. Here, the focus is on the produced quality and removal of trash, neps, seed coats and other particles. Hard waste, such as non-opened yarn and fabric pieces, needs wires with the right front angle and long-term stability to avoid poor yarn quality and potential machine damage. For each waste form, our durable wires ensure optimal performance and sustainability.



Perfect Fitting

Each recycled material presents unique processing demands. That's why the design and characteristics of the wire play a crucial role in achieving optimal results. The SUPERTIP wire generation, made of high-strength steels, delivers exceptional durability and extra-long service life. With Trützschler's tailored solutions, you can count on consistent quality and efficiency—no matter the material.

Flat top for recycling

MAGNOTOP/PRECISETOP 45R
Perfect for all recycled fibers,regenerated clothes, OE-yarn = Ne 20. Delivers the highest cleaning efficiency and superior durability. The ideal choice for the TC 19R^{i}.



Cylinder wires for recycling



The Allrounder
(T25.25.060.0727.13/X2)
Achieves high production rates over 100kg/h. Ideal for both soft (up to 50%) and hard waste (up to 80%).



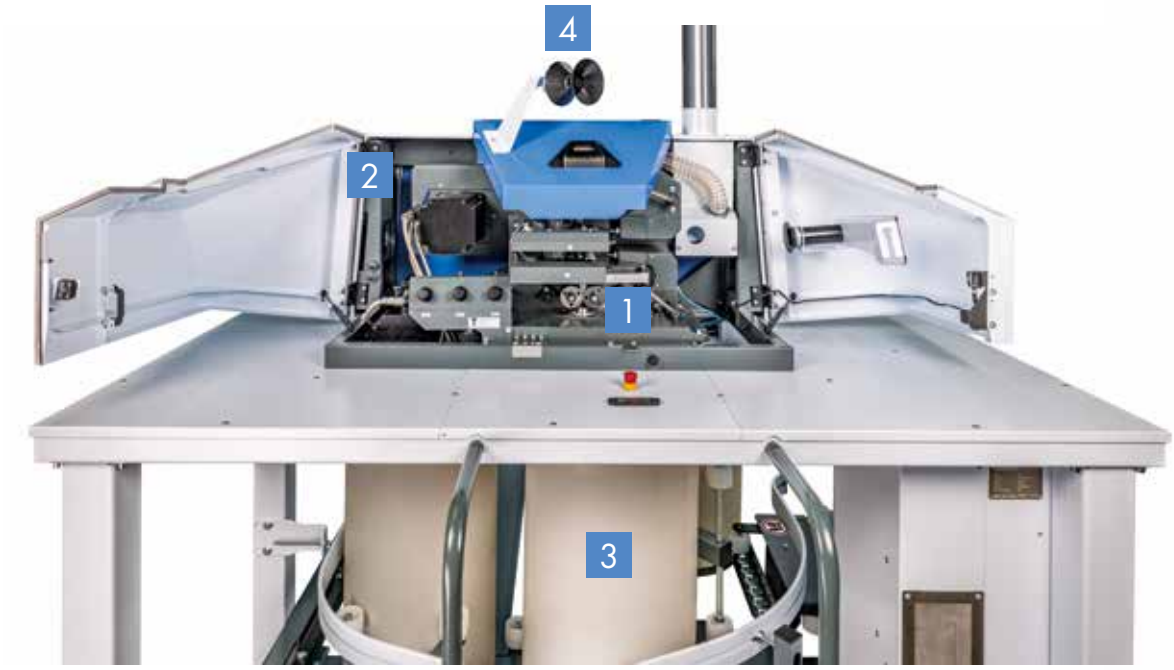
High Resistance
(T25.25.070.0636.12/X2)
Perfect for high percentages of hard waste. Features enhanced durability for a longer lifetime.



Standard Performance
(T20.25.050.0806.07/X2)
Supports medium production rates up to 100 kg/h. Suitable for viscose and blends with soft waste up to 50% and hard waste less than 80%.

IDF 3: Shorter process, better quality

Decades of experience with IDF technology have demonstrated that the higher the short fiber content, the better the result with one IDF compared to conventional two draw frame passages.





The new measuring system



Easy accessto the system



Can changer becomes a game-changer



QUICK START saves valuable time during automatic piecing



The shortest path to perfect yarn quality

With its gentle and secure fiber guidance while drafting, the IDF 3 delivers perfectly homogeneous sliver. This further stabilizes the drafting process and significantly reduces yarn imperfections.



Higher productivity, lower costs

Can changing speeds stay at the high level of 300 m/min – resulting in four times faster delivery speed during can change and 3% efficiency increase. Operating costs are reduced due to decreased consumption of compressed air.



Easier than ever to operate

Save time for the things that matter: QUICK START the IDF 3 after sliver breaks. The user-focused new design allows easy access to every part because the IDF opens up fully.




MYTRÜTZSCHLER
Hello Jane!
Jane Doe
Dashboard
Orders
Shipments
My machines
Documents
Orders
1
5
Shipments
3
7
Cases
2
4
Payments
556,21
Your personal Sales Manager
Max Schmitz
Trützschler Group SE
Your personal Service Manager
Ashok Kumar
Trützschler Group SE
Contact us
Request service
Troubleshooting
Question
Analytics
ORDER DATE
DELIVERY NAME
ORDER ID
CUSTOMER REFERENCE
ORDER TYPE
ORDER STATUS
23. September
Jane Doe Textil
SPO-2544875
ID4525842
Order
01. August
Jane Doe Textil
SPO-2544874
ID4525842
Order
17. July
Jane Doe Textil
SPO-2544868
ID4525842
Order

The seamless access to your digital world of Trützschler



With My Trützschler, you gain full transparency into your business processes while accessing personalized content. Thanks to intelligently connected applications, you stay informed about the latest updates and ensure a smooth and efficient flow of information. Our My Identity single sign-on feature ensures effortless access to all services — no more hassle with multiple logins. Our digital solutions give you complete access to innovative technology and unparalleled service, empowering you to take your production processes to the next level.

MyMill

Save time and costs with quick data collection and background monitoring that enables you to focus on things that really need your attention. Transparent data analysis and internal benchmarking improve performance and reduce maintenance needs. Make data-based decisions and optimize your processes!

My Shop

Our web shop enables you to order selected machine parts and components online quick, convenient, and accessible from anywhere. Just a few clicks ensure your Trützschler technology stays future ready. Boost efficiency with innovative upgrades: T-Tuning parts.

Training

Speed up troubleshooting of machine downtimes with our new online training platform. It enhances your skills quickly from anywhere, anytime to unlock the full potential of your machines.

More information:

TRÜTZSCHLER SPINNING

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

TRÜTZSCHLER NONWOVENS

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 CARD CLOTHING

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

www.truetzschler.com