# THE TRUE WAY TO YOUR **AIRJET YARN**





C|D|**E**|S|P|R|T

# Leading edge for airjet yarns

Particularly in the spinning mill with its numerous machines, reduced process stages quickly multiply to great economic advantages.

The Truetzschler spinning preparation gives you the option to drastically shorten the preparation process on IDF 2 and autoleveller draw frame. But even when using the classic process with three passages you can increase productivity thanks to the efficient TWIN BUT INDEPENDENT concept.

# MORE EFFICIENCY





TWIN BUT INDEPENDENT breaker draw frame concept with higher efficiencies



Reduced personnel requirements due to fewer process stages or larger cans



T-BLEND installation for 100 % accurate blending ratios for airjet blend yarns

Better quality through fewer piec-

for the 3-passage process



Stainless steel equipment in the blowroom and TC 19<sup>*i*</sup> for lower adhesion of finishing agents. Our modular concept offers flexible adaptation to your requirements also for cotton



Multidimensional savings potential in airjet spinning is only possible with the first intelligent card TC 19<sup>i</sup> in combination with the Integrated Draw Frame IDF 2



30 % lower deflection angle than the competition for better fiber guidance on the TD draw frames



# The best process for your yarn

## 100% viscose / 100% polyester - shortened

#### Preparation has never been that short

Process shortening with only one draw frame passage for airjet yarns is only possible thanks to the Integrated Draw Frame IDF 2. In combination with the intelligent card TC  $19^i$  you get the most economical airjet yarn this way. Ne 10 - Ne 40





### 100% man-made fibers – 3 passages

#### Customised man-made fiber opening for perfect carding and drafting

The modular Truetzschler blowroom offers customised solutions for your requirements. Especially the stainless steel equipment in the blowroom and card allow a trouble-free production of man-made fibers.



## 100% cotton – 3 passages

## The perfect cotton installation from bale opening to combing and draw frame

The cotton is gently opened in precisely synchronised machines. The self-optimization functions of our machines and the focus on resource-conserving production make the difference in your raw material utilization and yarn quality, especially when processing cotton. The use of the economical JUMBO CAN is therefore particularly recommended here.





**EFFICIENCY OUALITY** 

## Tuft blending

#### The perfect blend

Our T-BLEND installation enables homogeneous and economical blending of fiber tufts at an exact blending ratio thanks to the weighing process. If you would like to blend combed cotton as tuft, the Comber TCO 21 offers the possibility of returning the material as tuft to the blowroom.



Accurate blending ratios



## Draw frame blend

#### Flexible installations for your airjet yarn

Flexibility is the keyword for many of our customers. Thus, Truetzschler offers tailor-made installations for your end product with the modular blowroom concept. Those who also count on flexibility in the process stages will find the right solutions with the Truetzschler draw frames. Thanks to the TWIN BUT INDEPENDENT concept, even different materials or process stages can be run on one breaker draw frame.



Fiber guidance due to smaller deflection angles



# Flexible production and optimal use of resources

Truetzschler blowroom concepts are ideally suited for airjet yarns thanks to their flexibility and simultaneous focus on resource-saving material use. Thanks to self-adjusting functions such as WASTECONTROL, we offer the most economical way to your yarn quality.



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#### Stainless steel equipment of the blowroom for manmade fiber processing

The finishing agents of man-made fibers often react aggressively to paint and other sensitive surfaces. With the Truetzschler spinning machines it is possible to make the vulnerable parts from stainless steel.





#### Up to 50% more working width for higher production rates

With 2,900mm or 3,500mm, the Portal Bale Opener BO-P offers very large working widths for flexible bale placement. The tufts are gently and uniformly worked off at up to 2,500 kg/h or 3,000 kg/h. Thanks to the new portal concept it is possible to lay down 5 – 7 bales side by side. This alone results in 25 – 40 % better blending.



Tuft Blending System T-BLEND



#### Only T-BLEND has this to offer

Self-optimization of the weight Precision mass measurement Automatic taring – simple calibration High capacities up to 2,000 kg/h Up to 6 components in the blend Smallest blending ratios of up to 1 %

## Optimal combination of modules

With the precisely coordinated machines of the Truetzschler blowroom, you decide the optimum combination of modules. Opener, multi function separator, pre-cleaner, various mixers, universal cleaner, T-SCAN and dust removal.



# Carding has never been more intelligent

In addition to the universal intelligent Truetzschler Card TC 19<sup>*i*</sup>, they are also available in special versions for synthetic and fine cotton yarns. The T-GO system for self-optimizing carding gap adjustment guarantees an always optimal carding gap for all fibers and thus a constant guality.



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#### Special surface finish for gentle opening

The stainless steel design of the trunks and the WEBFEED with its largesize single roll are essential for processing of man-made fibers. A special surface finish and the durable needles ensure a gentle opening. Compared to metallic clothings, the service life of needles is about twenty times longer.



Optimized version of the TC 19<sup>*i*</sup> for manmade fibers with stainless steel equipment and one licker-in



#### Application-related pre-opening with the WEBFEED

**3 licker-in:** For cotton, the pre-opening unit with three licker-ins enables a high level of opening even at maximum production rates. The first licker-in is designed as needle roll.

**1 licker-in:** The right solution for LS and ELS cotton during moderate card productions.

This larger needle licker-in is also used for man-made fiber carding across the entire production spectrum. Special needling and the innovative surface finish allow yarn improvements of up to 30 % for IPI.



#### Small sliver counts at high production rates

The optimum width leads to a particularly good card performance. Thanks to our optimum cylinder width, we can run significantly smaller sliver counts with the same doffer assignment as the competition. Due to the perfect web doffing, high delivery speeds are still possible with small sliver counts. To ensure the right production!





#### The first self-optimizing card

The carding gap is optimally adjusted at all times. The intelligent concept is made possible by the three components:

- Gap Optimizer T-GO optimum carding gap even under changing production conditions
- WASTECONTROL best raw material utilisation and minimum waste
- Reliable NEPCONTROL continuous monitoring of the nep level in the card sliver



#### Perfectly adaptable clothings

The selection of the clothings is perfectly adapted to the respective use or the planned application range. This also applies to the different number and design of the carding and cleaning segments.



# T-GO – where less is more!

Increase in quality and productivity with Gap Optimizer T-GO. When the cotton fibers work their way from the bale to the yarn, the key point for yarn quality lies between the cylinder clothing and flats clothing. This is where the quality originates – and the smaller the carding gap in cotton carding, the higher the quality.



#### Thinner than a sheet of paper

The ideal carding gap for cotton carding is about  $3/1,000^{"}$ , that is less than the thickness of a piece of paper ( $4/1,000^{"}$ ).





## Delivery of full quality and productivity potential thanks to Gap Optimizer T-GO

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# Permanent / automatic adjustment of the ideal carding gap

Even an experienced technologist cannot carry out extremely narrow TARGET settings of e.g. 3/1000" with the "cold" card at standstill, because centrifugal forces and expansions due to the temperate increase have a considerable influence on this setting. In addition, a carding gap set once without T-GO results in a "blind flight" in terms of quality in the downstream production process.

# The shortest way for airjet yarns

Particularly in the spinning mill with its numerous machines, reduced process stages quickly multiply to great economic advantages. The two world market leaders – Truetzschler in the field of spinning preparation and Muratec in the field of airjet spinning machines – have developed a new, more economical preparation procedure together with only one instead of three draw frame passages: IDF VORTEX SPINNING.



#### Improvement of quality

Fewer cans also means fewer sliver piecings. This is a very important quality aspect. Every sliver piecing is a potential yarn imperfection. A production of 21 tons of yarn results in a reduction of 900 sliver piecings per day.

#### Savings at a glance:

HLER

13 % less space requirement in spinning4 % less energy consumption9 % less exhaust air consumption900 less sliver piecings per day

## Reduced can movements and sliver piecings

#### Standard process: 3 passage draw frame

IDF VORTEX SPINNING: only one passage draw frame



Left: the conventional process with 3 draw frame passages Right: the shortened process: Card with IDF and one autoleveller draw frame passage

# TRÜTZSCHLER + MUratec



#### Fewer cuts - higher yarn production

A higher profitability in spinning means a higher yarn production per day. Yarn clearer cuts have a great influence on the efficiency of a spinning machine. In spinning tests with viscose for Ne 30, yarn clearer cuts could be significantly reduced with the new IDF VORTEX SPINNING.

#### **Process approval:**

- 100 % viscose (rayon)
- 100 % polyester
- Yarn count: Ne 10 Ne 40

# High production – low IPI's

With the Truetzschler Draw Frames TD 9T and TD 10 you always make the right choice!



- Excellent fiber integration mainly on the web edges
- Reliable fiber guidance at high speeds
- Fewer laps on top rolls to protect the roll coatings

Total IPI Ne 40 100% viscose, 3 passages



## **30% fewer deflection angles than the competition**

Special drafting system technology ideal for sliver count and optimum fiber integration. Reliable guidance of the edge fibers leads to optimum fiber integration, even at the highest speeds.

#### Increased speed and quality

Especially in the airjet process, slight drafts on the spinning machine have a positive effect on the yarn properties. Due to the gentle sliver deflection, low sliver numbers can be easily run at high speeds on Truetzschler lines. Tests showed better IPI and clearer cuts at higher speeds on our draw frames compared to the competition.





#### **Reliable draw frame blend**

In contrast to contact rolls, the optical Truetzschler sensors protect against operating errors, as they function even when the pressure rolls are not used. The intelligent individual sliver monitoring with SMART sensors is explicitly advantageous if the three draw frame passages are also used for blending. Here, the reliable detection of sliver breaks is essential for the blending ratio.

#### Operating states always in view

With the Truetzschler remote display T-LED, the quality is always in view. Here you can see the visualisation of the sliver count variation A% with freely selectable quality limits. If there is a warning for a possible pending machine stop or a machine malfunction, the machine automatically switches to the corresponding status displays.

# Individual blending of cotton

A logical consequence of the annual growth in world fiber volume is the increasing use of blend yarns, with cotton, particularly combed cotton, playing an ever greater role. For this reason, the TCO 21 now has the option of sliver suction. This allows the combed fibers to be extracted and mixed with other fibers in the blowroom via a T-BLEND installation.



#### **Highest precision**

On the TCO 21, the detaching rolls are driven by two highly dynamic servo motors. The movement of the combing components is generated by two coupled maintenance-free drives. This guarantees the highest precision in the movement of the combing elements at each head. Decoupling the highly dynamic motion sequence of the detaching rolls from the main shaft allows fully automatic optimization of the piecing time.



#### Precisely maintained sliver count

If your process is designed for draw frame blends, the Truetzschler comber with the unique COUNT CONTROL levelling system offers important assistance. Long-wave sliver count variations are measured with the TCO-DM measuring system and compensated by the control system, thus maintaining the exact sliver count and ensuring that your blend is always right.

Cotton opening and cleaning line





#### **Automatic material request**

Cards

TC 19<sup>i</sup>

BL-TC

The necessary production of the machine is transmitted to the combing machines via material requirements of the blowroom. If there is no material requirement, the comber stops automatically to prevent problems in the blowroom.





Autoleveller Draw Frame TD 10-600C

Spinning process

2<sup>nd</sup> draw frame 3<sup>rd</sup> draw frame passage passage Tuft blending Draw frame blend

The advantages of the tuft blend in comparison to the often common draw frame blend are easy to see.



# More productivity through true greatness

The use of JUMBO CANS makes sense for processes with many stages. Using larger cans can save considerable operating costs.

In the example of an airjet spinning mill with a capacity of 4,000 t/a (500 kg/h), the personnel costs for can transport can be cut in half. In practical terms, the staff can be reduced by seven persons in this spinning mill.

> 50 % savings in personnel costs through the use of JUMBO CANS for the 3-passage process. A full JUMBO CAN can be moved with a traction force of only about 8 kg.



Better quality through fewer piecings, less operating effort and higher efficiency with the JUMBO CAN for the 3-passage process.







# Digital solutions: Always and everywhere informed

With Trützschler technology, you can further extend your lead also in the course of digitization. Our digital solutions enable you to generate profits faster, bundle resources, optimize processes and save costs with little effort. They are as easy to use as an app and work even if you do not use only Trützschler technology.

More information:





More



#### **My Mill**

The all-in-one platform: Whether information about your production, quality, maintenance or simply a complete overview - with My Mill your possibilities are almost limitless.

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Our digital services are cloud-based and extremely secure. We rely solely on the highest security standards because data security is just as important to us as it is to you.





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## TRÜTZSCHLER

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** 

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