

TC 30ⁱ



Superior carding: The TC 30ⁱ

A production increase of up to 40% for Man-Made fibers and up to 20% or even more for cotton application – without any compromise in quality – reflects the new performance standard set by TC 30ⁱ.





Best quality from any raw material

Achieve a higher level of performance and quality with 35% more active flats and a 14% extended carding length.



Up to 2% raw material savings

Our proven WASTECONTROL sensor, which permanently monitors the waste quality at the licker-in, is your insurance against unnecessary waste. The new mote knife system PMS2 allows even more flexible settings for waste extraction.



Operator-independent high performance

The TC 30' comes with T-GO, the only proven and automatic gap optimizer for operator-independent efficiency. Quality and productivity can be increased via its flexible features. And it always ensures the optimal carding gap setting.



Less energy consumption

The main reason for the energy efficiency of the TC 30' is the low suction pressure and the low air requirement. At the same time, the need for compressed air has been reduced to a minimum. The TC 30' enables you to achieve higher production rates, which decreases energy consumption per output (kg).



TC 30ⁱ: Highlights

Longer carding length through more active flats – without losing any flexibility in the pre- and post carding, due to a bigger cylinder diameter.



WASTECONTROL

Ideal raw material utilization and minimum good fiber waste



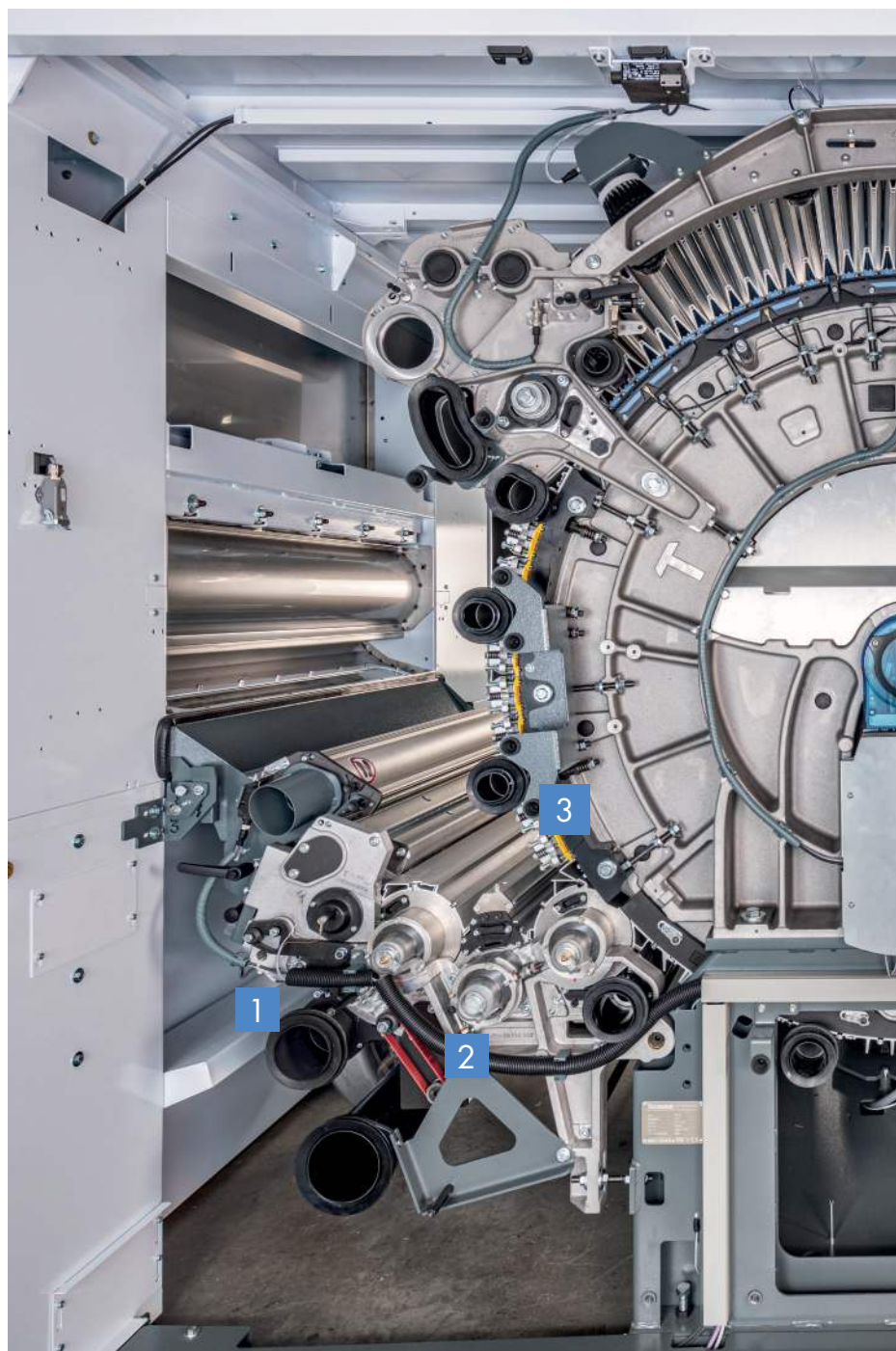
Motorized licker-in mote knife system PMS 2

Latest licker-in technology for even more flexible setting and waste separation



Multi Webclean

Most flexible pre- and post carding area with 16 individual carding or cleaning positions





T-GO Gap Optimizer

Intelligent carding gap optimizer for operator independent high performance



T-CON 4 sensor system

Recording and processing of real-time data from the running card



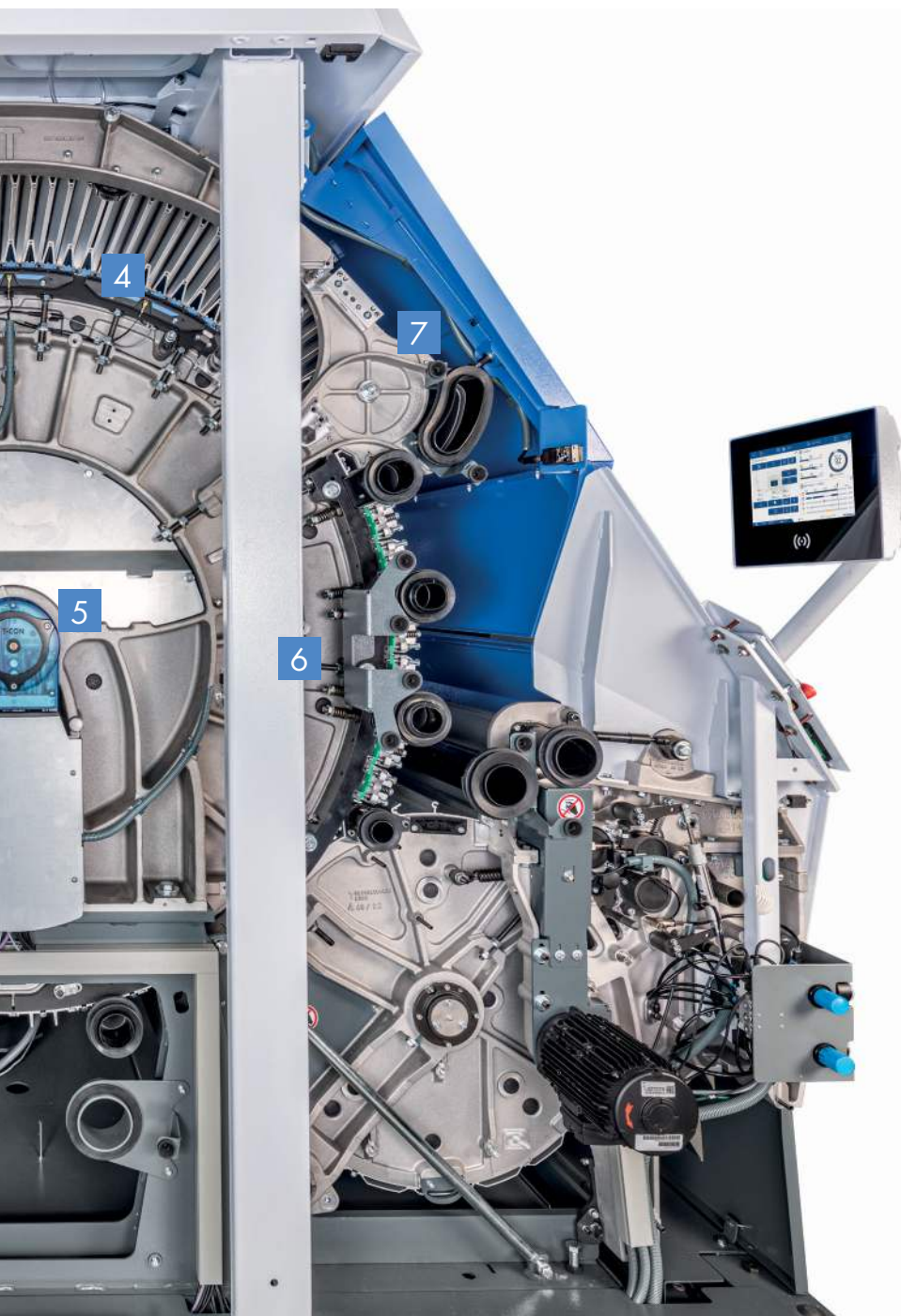
Sustainable waste suction

Customized and energy efficient waste suction solution



Magnotop 3

Simplified change of flat clothings



Extended carding length combined with Gap Optimizer T-GO – The path to success for all applications

A production increase of up to 40% for Man-Made fibers and up to 20% or even more for cotton application – without any compromise in quality – reflects the new performance standard set by TC 30ⁱ.

Achieve a new level of performance and quality with 35% more active flats and a 14% extended carding length. Thanks to its new cylinder diameter, the TC 30ⁱ increases the active carding length without sacrificing flexibility in the pre-and post-carding zones. However, a large active carding area only delivers its full benefit when the carding

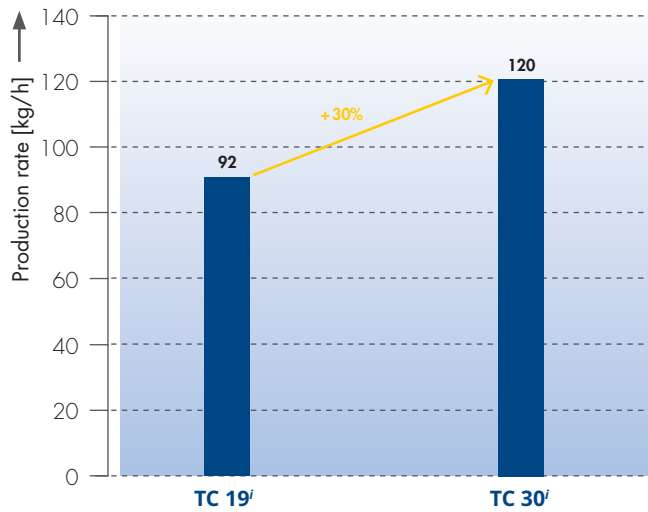
gap is perfectly set. In combination with the unprecedented precision of the Gap Optimizer T-GO, the TC 30ⁱ maintains the optimal carding gap consistently and independently of the operator.

Across numerous markets, the TC 30ⁱ has already set multiple performance records, demonstrating its outstanding success.



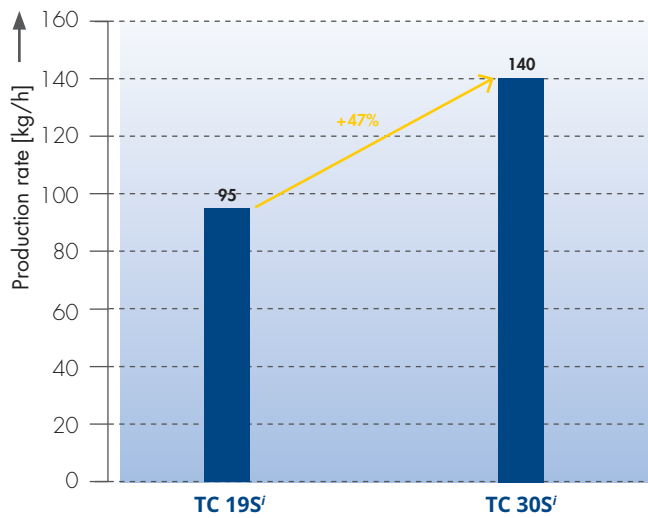
Performance records of TC 30ⁱ:

100% cotton



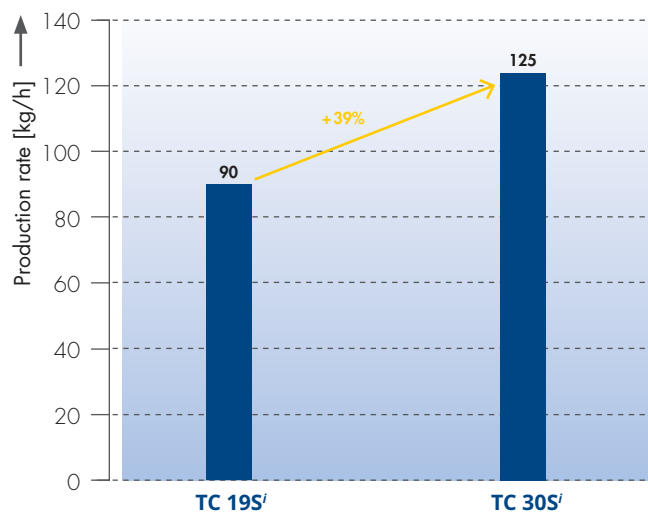
Country Bangladesh
Raw material 100% Cotton
Yarn count Ne 30
Application Ring carded

100% viscose



Country Türkiye
Raw material 100% Viscose
Yarn count Ne 28
Application Vortex

100% polyester



Country Indonesia
Raw material 100% Polyester
Yarn count Ne 30
Application Ring carded



Paper thickness 4/1000" (0.1 mm)

The size of the optimal carding cap of Card TC 30' is 2/1000".
Not even a sheet of paper would fit through.

2/1000" in self-optimizing precision

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 flat clothing.

This is where the quality originates – and the smaller the carding gap in cotton carding, the higher the quality. The Gap Optimizer T-GO automatically sets and keeps a constant minimum carding gap of 2/1000" or even lower, even under changing production conditions.

In this way it is possible to continuously and reliably realize the full quality potential.

More information:



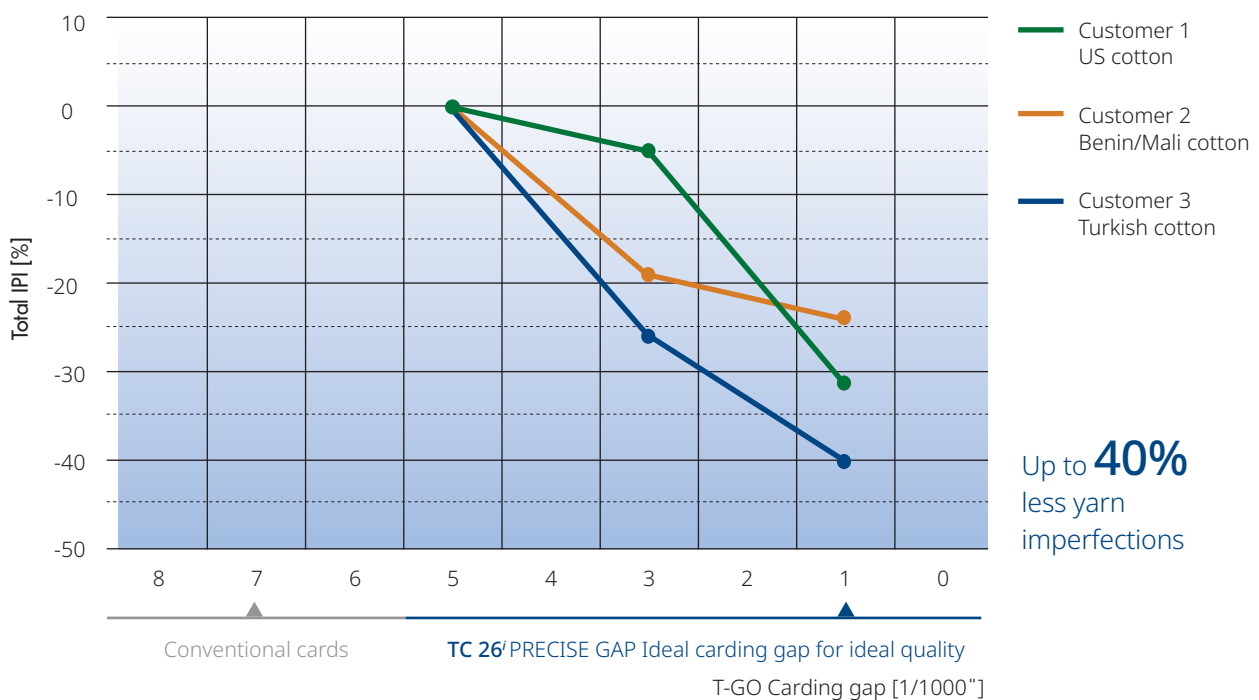
T-GO ensures a constant minimum carding gap of 2/1000" even under changing production conditions.

Up to 40% less yarn imperfections with T-GO

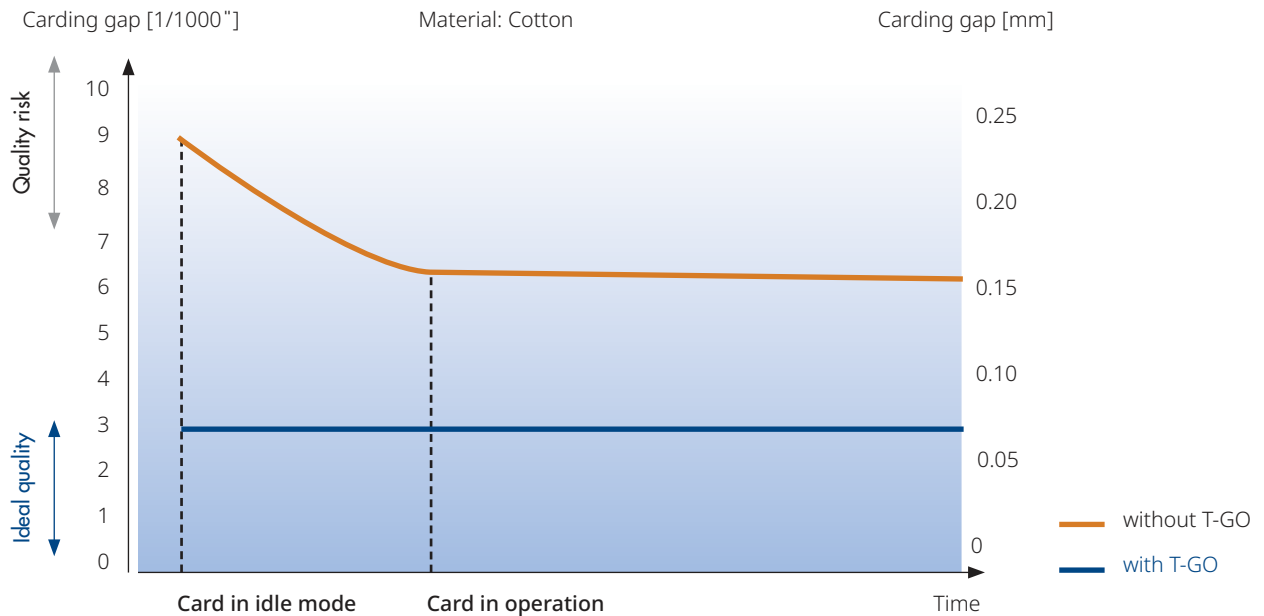
Carding gap optimization with unprecedented precision with Gap Optimizer T-GO

Even an experienced technologist cannot carry out extremely narrow target settings of e.g. 2/1000" with the "cold" card at standstill. Centrifugal forces and expansions due to temperature increase have a considerable influence on this setting and there is the risk of damage to the clothing or the card. With the automatic, constant carding gap setting of T-GO, yarn manufacturers can realize very narrow settings and unprecedented quality and productivity potentials.

Customer example: Carded ring Ne 30, 90 kg/h



Ideal carding gap setting with T-GO



T-GO function sequence

- Before the cylinder starts up, a functional check is carried out
- After the nominal cylinder speed is reached, a reference measurement is carried out
- After the material transport is switched on, T-GO carries out a reference measurement
- After the machine is heated up, T-GO carries out another reference measurement
- Now a permanent leveling according to T-CON data takes place

After switching off and restarting, the steps are repeated.

The result: The card runs constantly with the ideal carding gap setting under all operating conditions – fully automatically without any manual intervention.

The self-optimization responds automatically to changes in important parameters:

- Material properties
- Production level
- Cylinder speed
- Environmental influences such as ambient temperature

Even after maintenance work, such as grinding the flat clothings, T-GO finds the correct setting again.

This line is 2/1000" wide →

2/1000" carding gap

kept constant under all operating conditions
with the Gap Optimizer T-GO

Sustainable waste handling

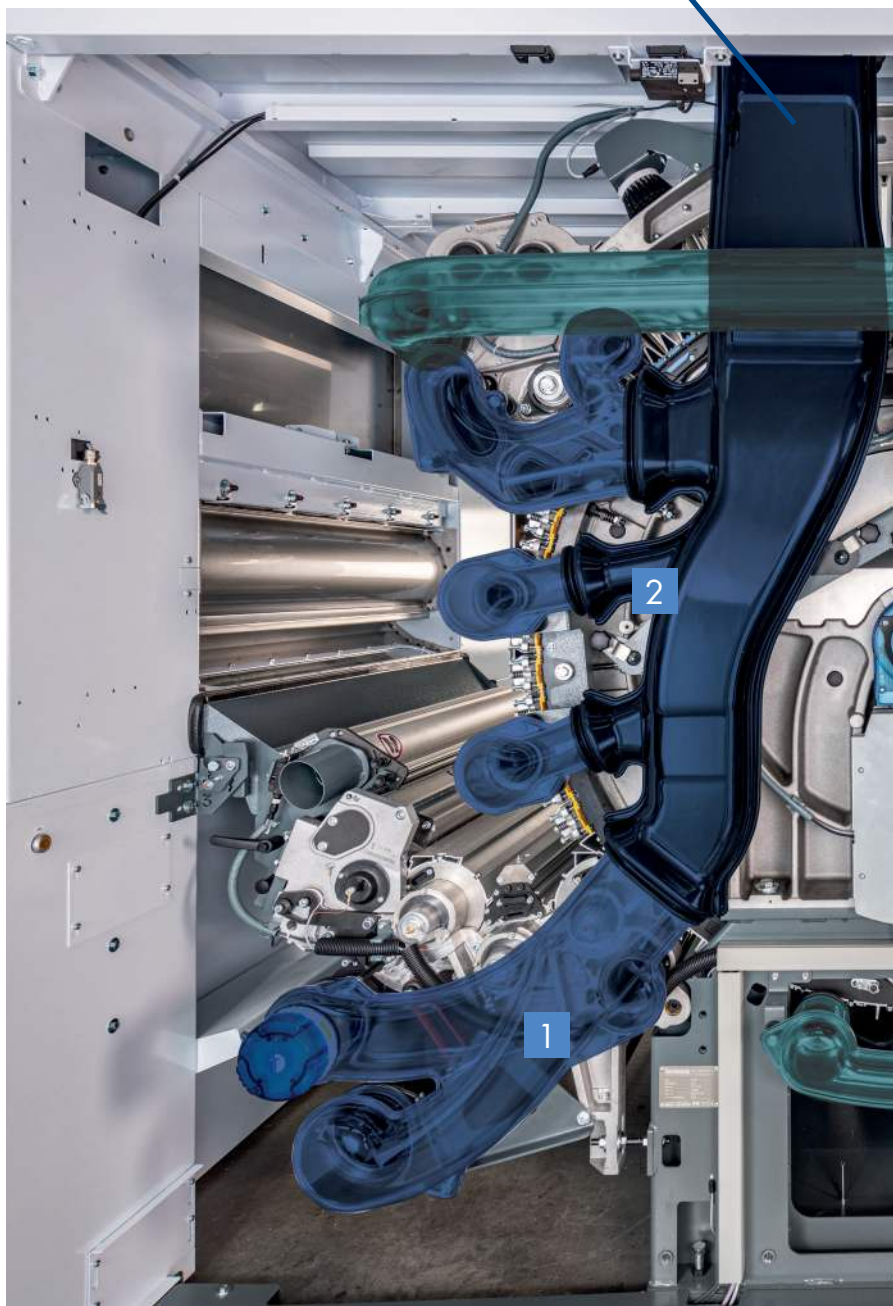
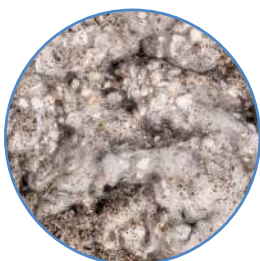
Create more value from waste through a sophisticated waste suction. This makes it possible to reuse more than 50% of card waste. Alternatively, high-quality waste can be sold to third parties for an attractive price.

Significant less
"dark waste"

2 Pre-Carding

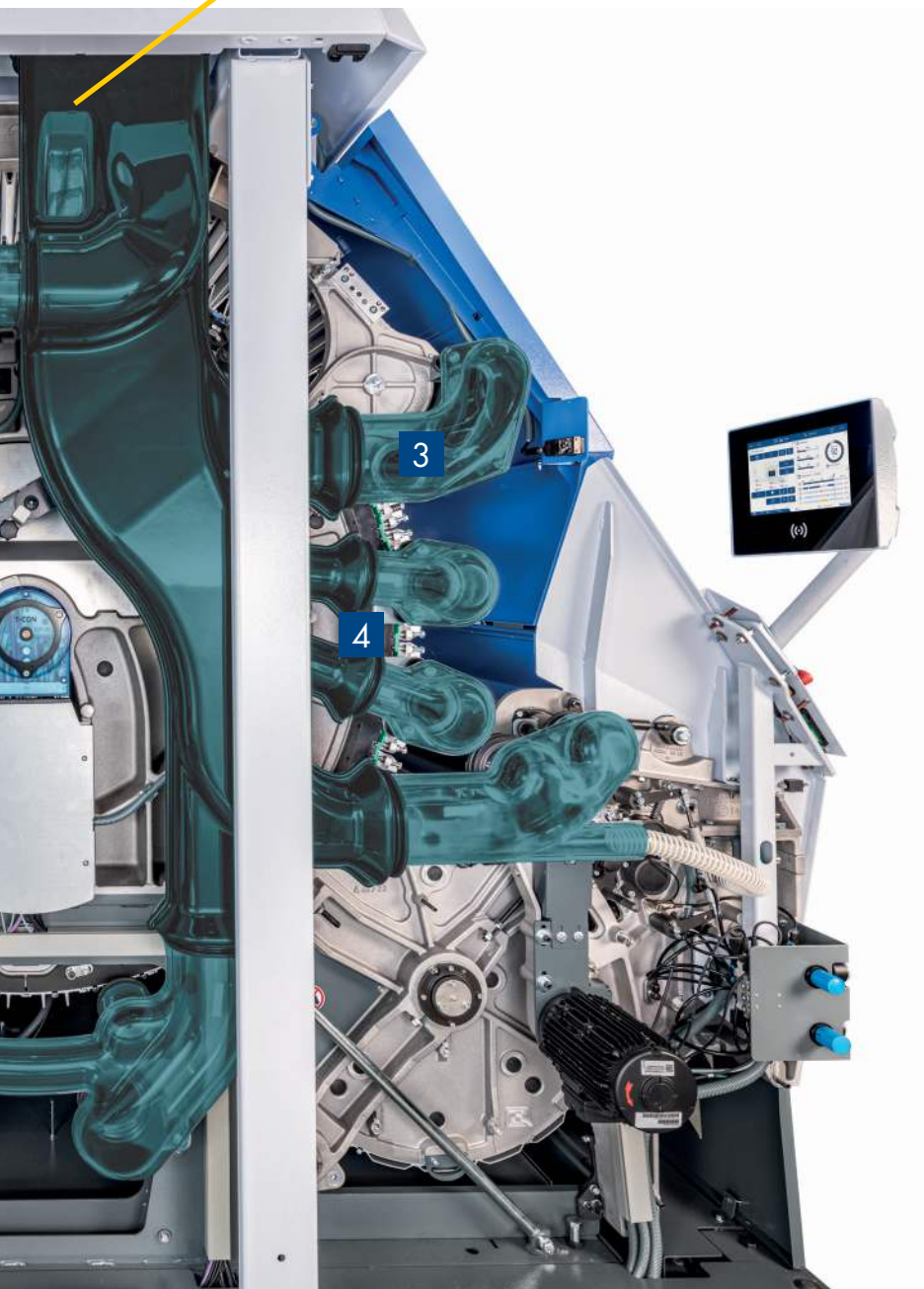


1 Licker-in



Up to 50% of card waste, the "light waste" can be reused

thanks to the waste extraction system in TC 30ⁱ.



3 Flats



4 Post-Carding



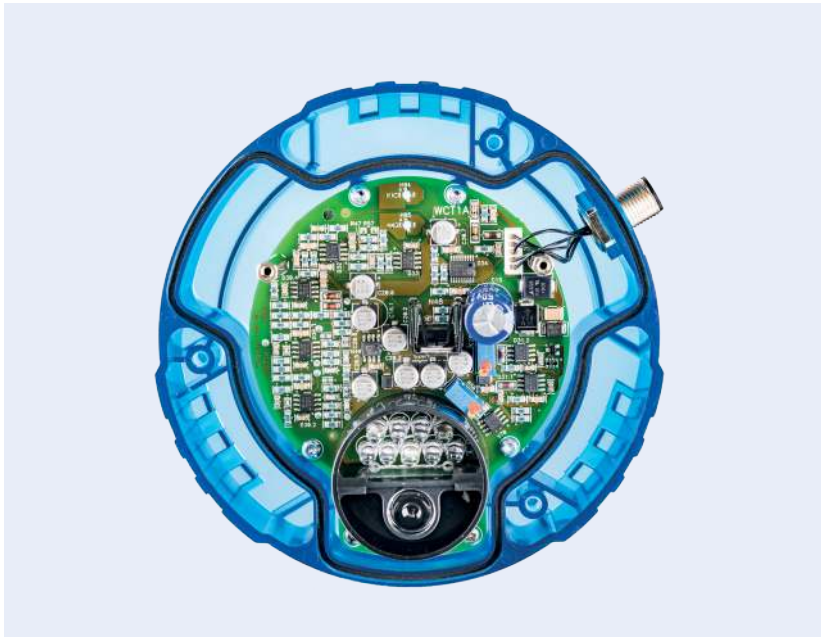
Up to 2% raw material savings

Intelligent waste optimization with WASTECONTROL

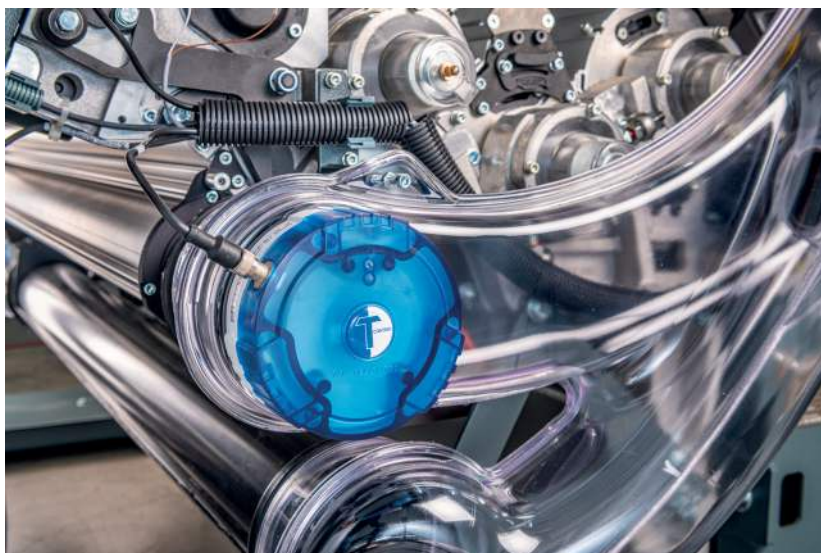
Trützschler cleaners with WASTECONTROL have ensured the best raw material utilization and minimum waste for years. From now on, WASTECONTROL is also part of the intelligent card TC 30ⁱ.

The optical sensor of WASTECONTROL permanently monitors the waste quality at the most important cleaning point, the lick-in. If too many good fibers are registered in the waste, the system optimizes the mote knife setting via the servo motor.

The influence of WASTECONTROL on the cost-effectiveness of carding is tremendous. Savings as 2 percent result already in enormous raw material savings. Whereas on other cards the waste separation is not measurable and cannot be influenced during production, the TC 30ⁱ always works at optimum efficiency thanks to the permanently measured data.



WASTECONTROL sensor



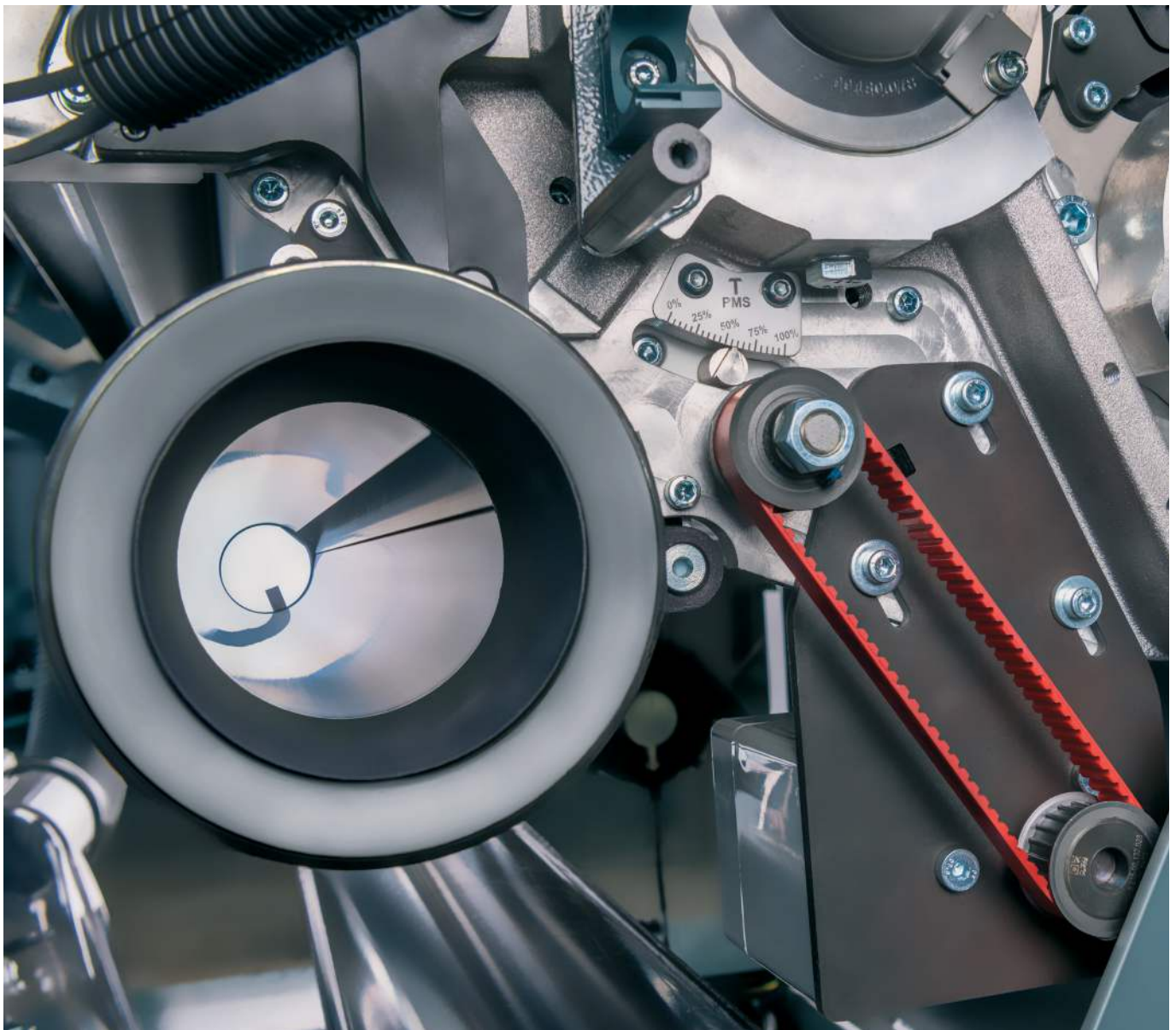
The blue sensor monitors the waste quality and the precision motor adjusts the mote knife if necessary.

New knife setting – PMS 2

The new mote knife system PMS 2 allows more flexible settings for waste extraction.

Better raw material utilization due to:

- broader range of knife settings
 - Closer setting up to 8/1000"
 - 20° setting range
- possibility to finetune trash separation depending on customer requirements and material
- easy adjustment through display in combination with WASTECONTROL setting recommendations





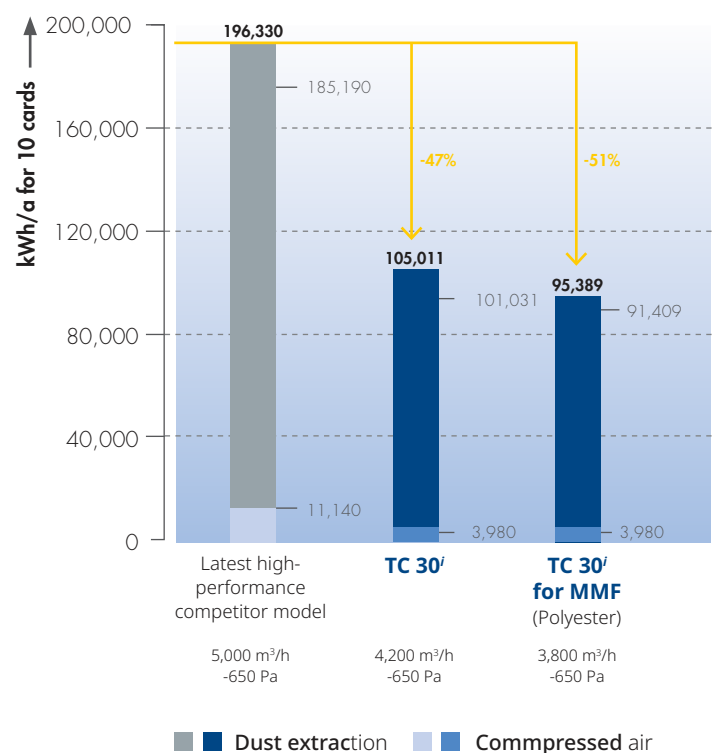
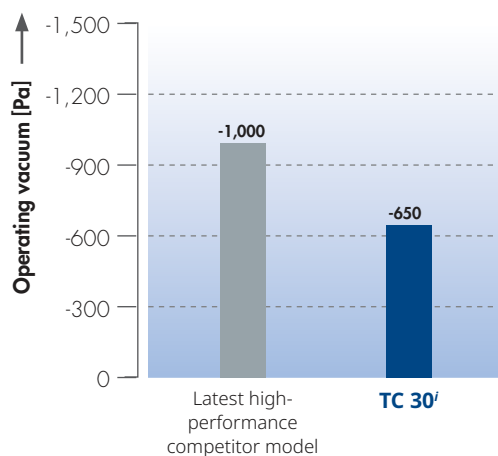
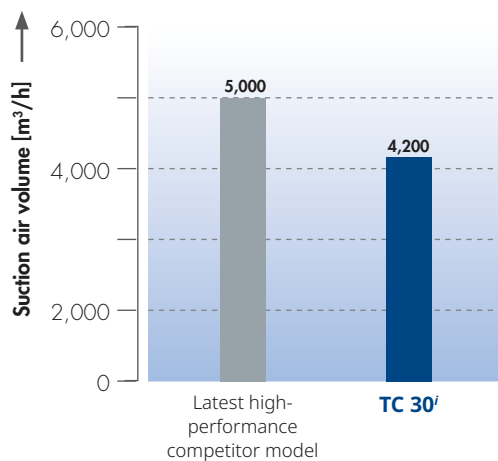
The TC 30ⁱ saves energy and operating costs

The main reason for the energy efficiency of the TC 30ⁱ is the low suction pressure of -650 Pa and the low air requirement of only 4,200 m³/h. At the same time the need for compressed air has been reduced to a minimum.

In the processing of polyester the suction pressure and air requirement of TC 30ⁱ could even be further reduced to -650 Pa and 3,800 m³/h respectively.

These values are valid for all production rates up to the maximum of 300 kg/h.

The low air requirement and thus the required, small-scale filter capacity can only be achieved because each individual duct element is flow-optimized. The impact becomes strikingly obvious in the transparent duct parts of the suction hood while card is in operation.



Example:

10 cards, 8,000 h/year, Cost of energy: 0,09 EUR/kWh Air consumption values valid for all production rates up to 300 kg/h

up to 50% energy saving
for waste suction and compressed air compared to the competition

High performance, low maintenance: MAGNOTOP 3

This is how simple change of flat clothings can be

Maintaining a consistently high quality requires regular change of flat clothings. For this purpose, Trützschler has developed the MAGNOTOP 3 system together with Trützschler Card Clothing. MAGNOTOP 3 eliminates the need for a flats workshop and prolongs the service life by one grinding cycle.

Each simplified clothing change increases the economic advantage

The MAGNOTOP 3 system allows easy and quick change of the flat clothings without tools. This is because the flat clothings are attached to the flat bar by a strong neodymium magnet—not by clips. Depending on labor costs, savings of 300 – 1,100 US\$ per card re-clothing can be realized.

Investments of 170,000 – 210,000 US\$ in a flats workshop are completely eliminated

Use of the MAGNOTOP 3 system also eliminates the otherwise unavoidable extra costs:

- No spare flat sets required
- No service costs for re-clothing
- No transport costs

More information:



The Trützschler flat bar –
proven millions of times

1. Optimized, light-weight aluminum profile
2. Flat clothing
3. Wear-resistant hard metal sliding pins
4. Plastic support
5. The cleaning felt keeps the sliding plastic clean



MAGNOTOP 3



The flat clothings can be replaced without any effort and without any tools.



The flat bars can be inserted into the cams of the toothed belt easily without tools.

Extended service life

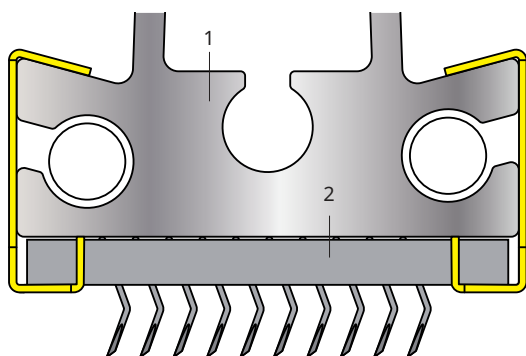
With MAGNOTOP 3, the usual leveling that compensates deformations caused by clip assembly can be eliminated since MAGNOTOP 3 flat clothings automatically ensure a perfect fit.

Overview of MAGNOTOP 3 advantages:

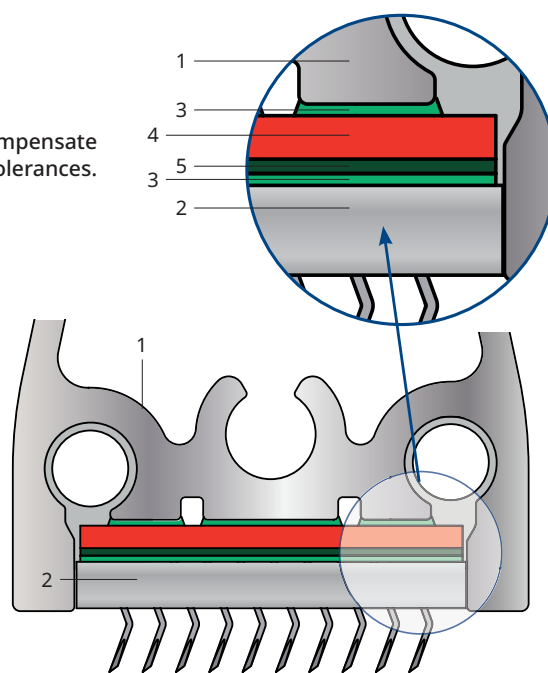
- No investments in a flats workshop, no operating costs, etc.
- No service costs for external service providers
- No investment in one or several spare flat bar sets
- No inventory of spare flat bar sets
- No grinding of flat clothing after re-clothing
- No transport costs, simplified logistics

1. Aluminum flat bar
2. Flat clothing
3. Adhesive and compensation layer
4. Neodymium magnet
5. Thin metal support

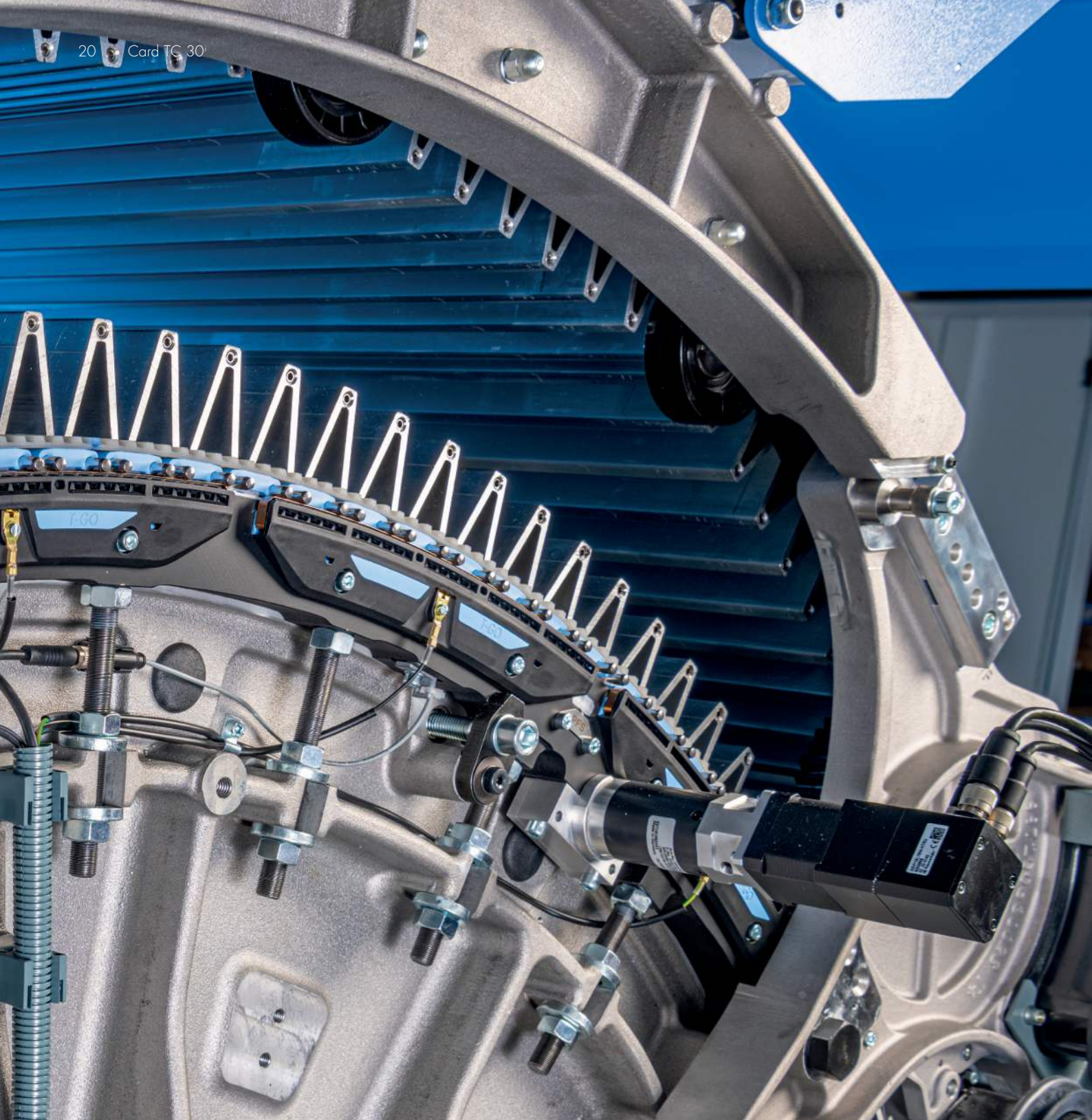
The adhesive layers (3) compensate even the smallest tolerances.



Conventional system with clips



MAGNOTOP 3 system



The right clothing for
every application:
The extensive Trützschler
Card Clothing (TCC)
portfolio



Unbeatable together: Trützschler Cards and Trützschler Card Clothings

The combination for top performance in every application

The diverse clothing portfolio from Trützschler Card Clothing (TCC) is specifically developed and perfectly matched to Trützschler machines and their wide range of applications. The exceptional performance of the Card TC 30ⁱ can only be achieved with Trützschler Card Clothing. Depending on the material being processed, different clothing requirements come into focus. Decades of expertise, ongoing innovation, and close collaboration with our customers ensure that the optimal clothing is selected to meet each customer's unique needs.

PRECISETOP: The flat clothing for the intelligent card TC 30ⁱ

The Gap Optimizer T-GO works only with PRECISTOP from Trützschler. PRECISETOP ensures a high, constant carding performance with high stability and long service life.



PRECISETOP is available in the following versions: PT 30, PT 33S, PT 40, PT 40S, PT 45, PT 52, PT 58

More Durability: Next Level Clothing

SUPERTIP wires boost precision and quality while cutting maintenance by up to 25%. With a service life up to 26% longer than conventional wires, they minimize disruptions and reduce costs. With more than 300 different versions of these wires available, Trützschler is able to provide SUPERTIP wires for licker-in, cylinder and doffer wires, including all card generations



Continuous further development of the manufacturing process ensures a long service life of the clothings

One card for all applications

The next-generation TC 30ⁱ carding machine is available in four versions that are designed for specific processing parameters:

- TC 30ⁱ: For rotor yarns
- TC 30Sⁱ: For Man-Made fiber yarns
- TC 30Rⁱ: For recycled fiber yarns
- TC 30Fⁱ: For ring yarns





Standard equipment for TC 30Sⁱ For Man-Made fiber yarns:



- Single licker-in with stationary flat
- Individual Multi Webclean configuration
- MMF cylinder and doffer wire
- MMF flat clothing
- MMF stationary flats
- Stainless steel package (DFK and feeding chute)

Standard equipment for TC 30Rⁱ For recycled fiber yarns:



- 3 licker-in with stationary flats
- Individual Multi Webclean configuration
- Cylinder and doffer wire for recycling
- Flat tops for recycling
- Stationary flats for recycling
- Special coated aluminum profiles and steel mote knife
- Stainless steel package (DFK and feeding chute)

Standard equipment for TC 30Fⁱ For ring yarns:



- Single licker-in with stationary flat
- Individual Multi Webclean Configuration
- Cylinder and doffer wire for ring yarns
- Flat tops for ring yarns
- Stationary flats for ring yarns

The right sliver coiling system for every application

Trützschler offers tailor-made systems for can filling.
What is your choice?

Trützschler can changer

The sliver coiling systems are controlled by the card control. The operator finds all important data on the colored multi-touch-screen of the card.

The turning devices of the cans are installed under floor. For this reason, the cans can easily be inserted into and removed from the filling station. No step or slope must be overcome. If the floor does not permit installation under floor, then the systems can also be positioned completely above floor.

Coiling Solutions

CCL – Linear Can Changer



Ø 900 mm, Ø 1,000 mm, Ø 1,200 mm

**T-MOVE 2 –
Can Filling Station T-MOVE**



Ø 1,000 mm, Ø 1,200 mm

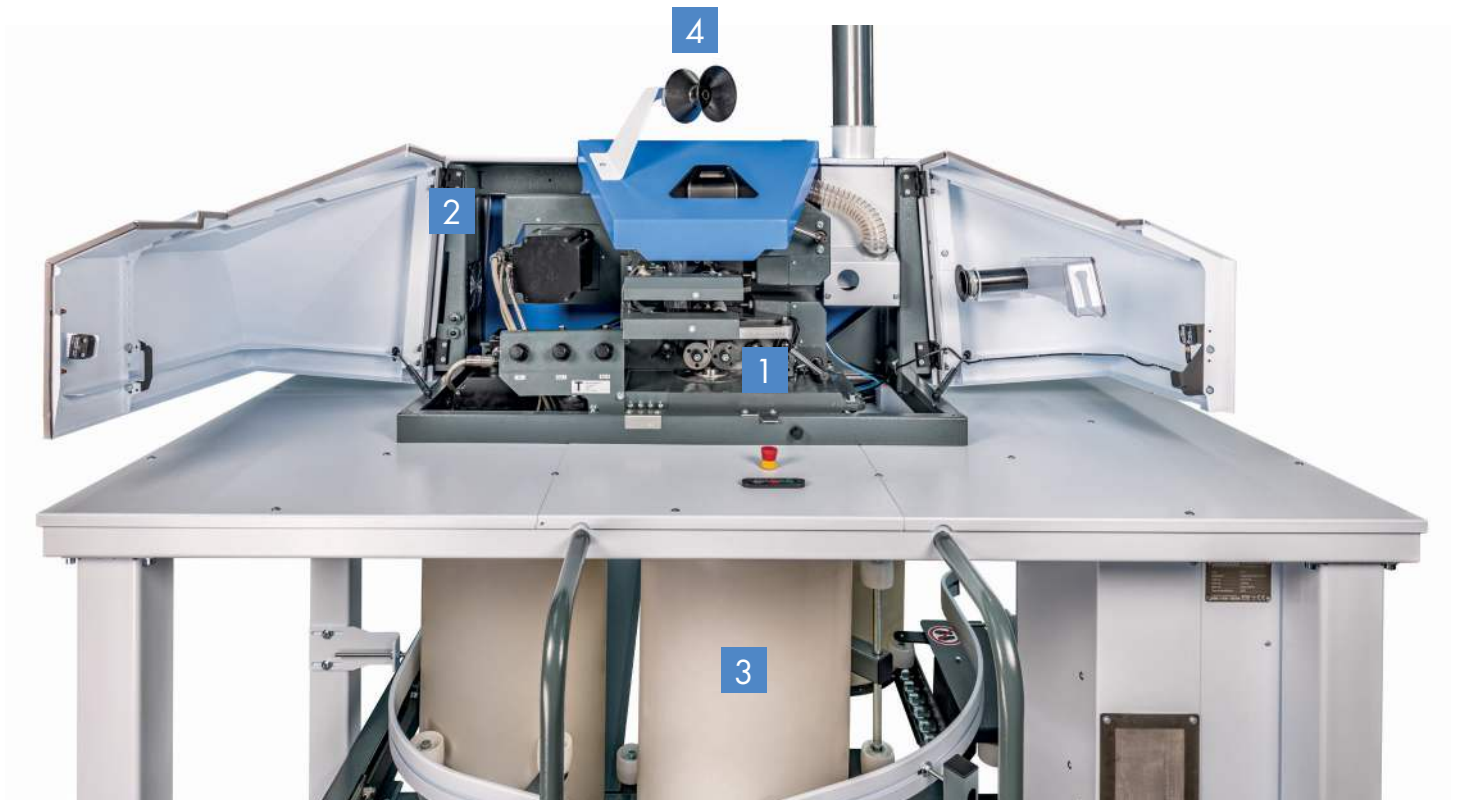
**IDF 3 –
Integrated Draw Frame**



Ø 400 mm, Ø 450 mm, Ø 500 mm, Ø 600 mm, Ø 1,000 mm, Ø 1,200 mm

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 access to the system



Can changer becomes a game-changer

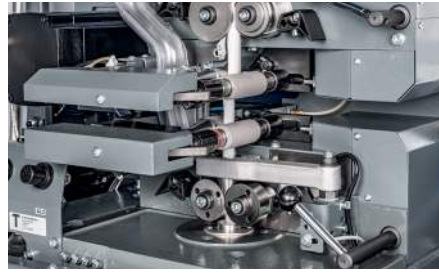


QUICK START saves valuable time during automatic piecing



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.

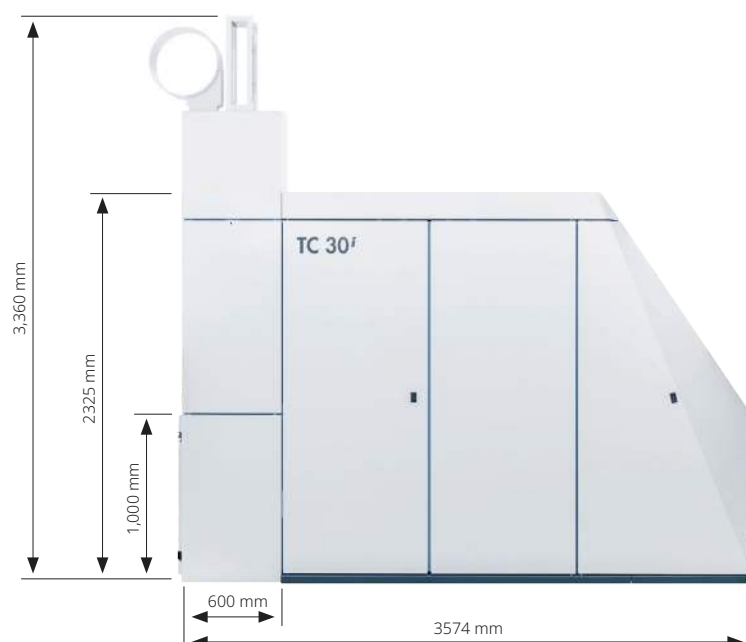


Easier than ever to operate

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.



Technical data



TC 30 ⁱ	
Net weight:	approx. 5,500 kg
Floor load:	approx. 21,000N/m ²
Max. surface pressure per base plate:	72 N/cm ²
Suction (continuous):	4,200 m ³ /h (-650 Pa)
Compressed air consumption:	250 NL/h
Production:	max. 300 kg/h
Delivery speed:	500 m/min

Equipment and options

	Intelligent				Standard			
	TC 30 ⁱ	TC 30F ⁱ	TC 30S ⁱ	TC 30R ⁱ	TC 30	TC 30F	TC 30S	TC 30R
Equipment								
Gap Optimizer T-GO	●	●	●	●	-	-	-	-
WASTECONTROL TC-WCT	●	●	-	-	○	○	-	-
Precision flat adjustment system with 10 spindle flexible bend (range 40/1000")	●	●	●	●	●	●	●	●
Motorised precision flat adjustment system (only with T-GO) TC-PFSM	●	●	●	●	-	-	-	-
PMS 2 with increased setting range and steel knives for recycling applications	●	●	●	●	●	●	●	●
Motorised precision blade adjustment system (2nd generation) TC-PMSM	●	●	●	●	●	●	●	●
Setting Optimizer T-CON 4	●	●	●	●	●	●	●	●
MAGNOTOP 3 aluminum flat bar (replacement for clothing strip at mill) TC-MT	●	●	●	●	●	●	●	●
Piecing aid TC-PD	●	●	●	●	●	●	●	●
Remote indicator T-LED	●	●	●	●	●	●	●	●
Delivery rolls measuring system for long term leveling TC-DM	●	●	●	●	●	●	●	●
Spectrogram analysis, thick spots detection, short-term CV values	●	●	●	●	●	●	●	●
Speed regulation for cylinder and WEBFEED TC-VSD	●	●	●	●	●	●	●	●
High production package (>150kg/h) TC-HP	○	○	○	○	○	○	○	○
Energy measuring device TC-EMG	●	●	●	●	●	●	●	●
Integrated tuft feeder DIRECTFEED with auto-leveler and additional material reserve	●	●	●	●	●	●	●	●
SENSOFEEED PLUS with regulation and thick spots monitoring TC-AL	●	●	●	●	●	●	●	●
Metal detection at feeding TC-MD	●	●	●	●	●	●	●	●
Doffer cover with included suction unit	●	●	●	●	●	●	●	●
Transverse belt sliver former TC-TS	●	●	●	●	●	●	●	●
Vector drives with rotor bearing encoder	●	●	●	●	●	●	●	●
THD-Filter for improved network and plant protection TC-THD	○	○	○	○	○	○	○	○
Supertip clothing	●	●	●	●	●	●	●	●
Safety paneling with function oriented design for optimized operation and maintenance	●	●	●	●	●	●	●	●
Grinding device for cylinder and doffer clothing TC-GD	○	○	○	○	○	○	○	○
Accessories and Tool Box (ATB)	●	●	●	●	●	●	●	●
Connectivity to "My Mill"	●	●	●	●	●	●	●	●

Material-related design								
Natural fibres: Material-carrying parts, powdered	●	●	-	-	●	●	-	-
Synthetic fibres: Material-carrying parts in stainless steel TC-MMF	○	○	●	●	○	○	●	●
Recycled/blends: Special coated aluminium profiles and steel mote knife	-	-	-	●	-	-	-	●

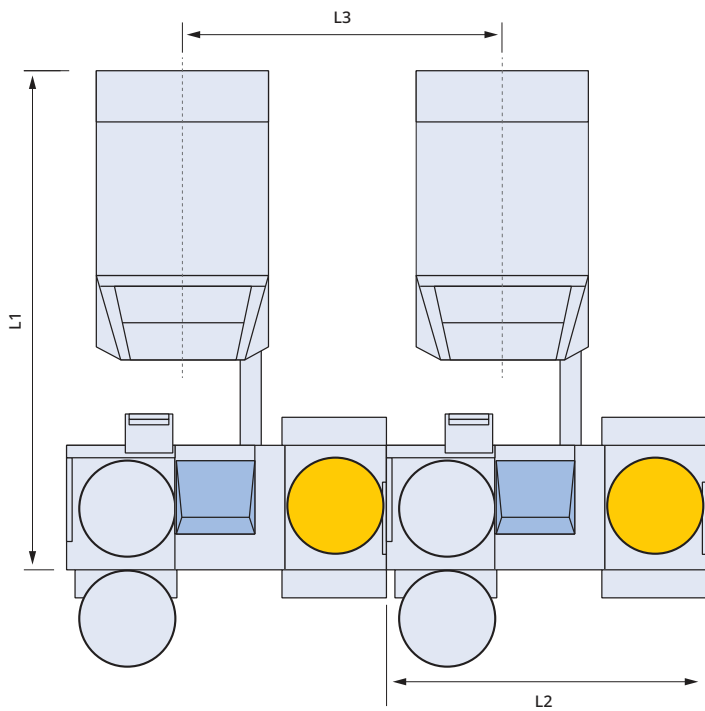
Central suction								
Central suction with waste separation upwards TC-SWSU	○	○	○	○	○	○	○	○
Central suction with waste separation downwards TC-SWSD	○	○	○	○	○	○	○	○
Separate suction upwards TC-SU	○	○	○	○	○	○	○	○
Separate downwards TC-SD	○	○	○	○	○	○	○	○
Separate flat stripe suction upwards TC-FSU	○	○	○	○	○	○	○	○
Separate flat stripe suction downwards TC-FSD	○	○	○	○	○	○	○	○
Suction pressure monitoring (pressure switch)	●	●	●	●	●	●	●	●

● Standard Equipment ○ option - not available

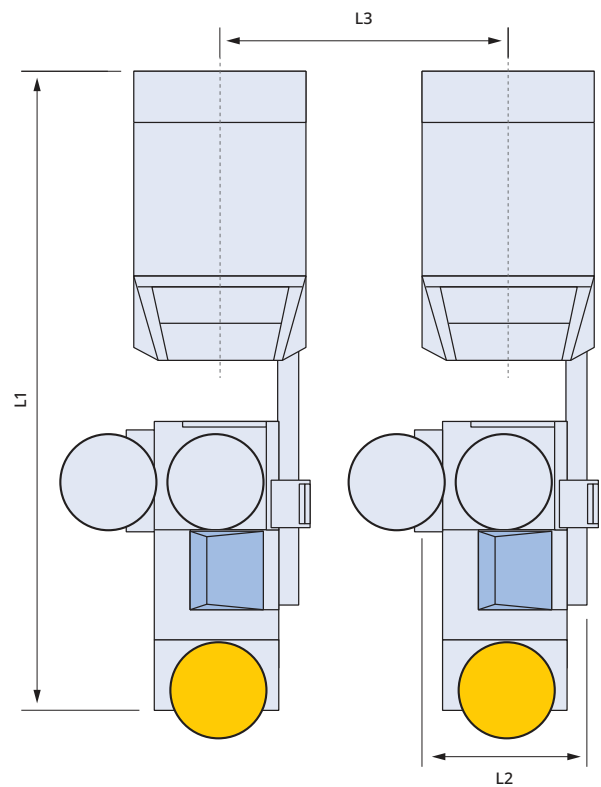
Installation options for TC 30ⁱ and coiling solution

Linear Can Changer CCL

Transverse

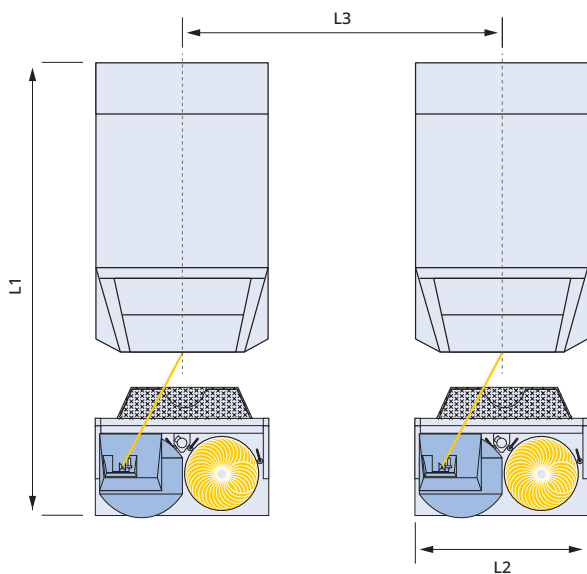


Longitudinal

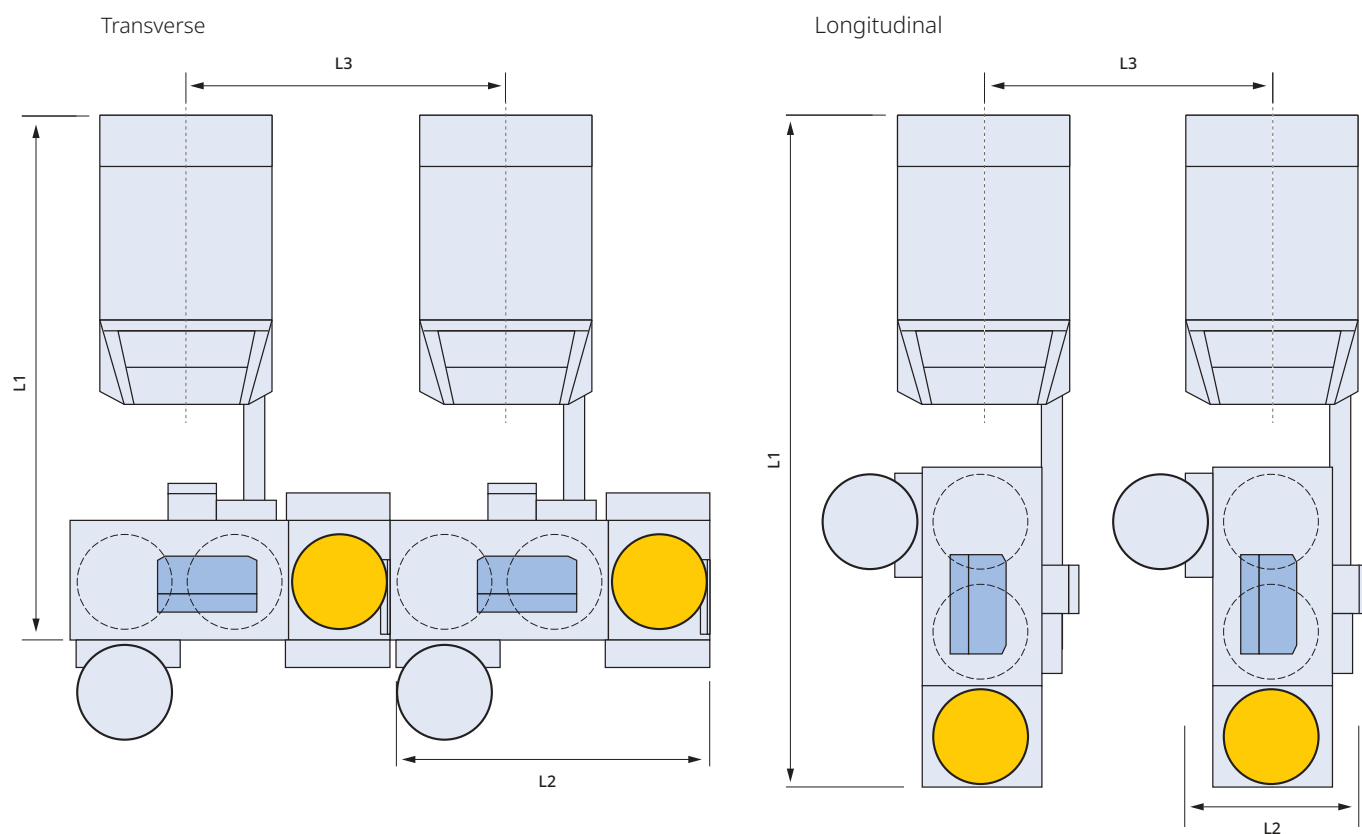


Can filling station T-MOVE

Transverse



IDF 3



		Ø cans mm	Length L1 in mm	Length L2 in mm	Length L3 in mm
Linear Can Changer CCL	Transverse	900	5,995	3,370	3,600
		1,000	5,995	3,370	3,600
		1,200	6,195	3,370	4,000
	Longitudinal	1,200	7,170	2,150	3,600
T-MOVE	Transverse	1,000	6,124	2,602	3,600
		1,200	6,221	3,002	3,600
IDF 3	Transverse	400	8,403	2,140	3,600
		450	8,403	2,140	3,600
		500	8,403	2,140	3,600
		600	8,403	2,340	3,600
		900	6,215	3,370	3,600
		1,000	6,215	3,370	3,600
		1,200	6,415	3,970	4,000
	Longitudinal	1,200	7,170	2,150	3,600



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
S P I N N I N G

Fiber preparation installations: 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 / Mixers | Card feeders | Cards / Crosslappers
Wet laying lines | Hydroentangling, needling, thermo- and chemical
bonding lines | Finishing, drying, winding, slitting machinery |
Digital 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