TRÜTZSCHLER SPINNING

cards


TRÜTZSCHLER

TC 15: Your benefits at one glance

30 - 50% higher productivity*:

Working width of 1,28 m for higher productivity without compromising on precision

*Compared with Truetzschler Card TC10, depending on different raw material and spinning process.

Constant, high sliver quality:

Made possible by next generation CLASSIC TOP 2 flat bars

Digital Mill Monitoring System „My Mill“:

The information you need to optimize ressources and processes

Low maintenance and operator-friendly:

Almost no sliver breaks with new web doffing unit

Efficiency boost:

Select from a broad portfolio of coiling systems to accelerate delivery

Discovering Technology

We are motivated to provide you with measurable advantages for your daily operation in terms of quality and economic efficiency. But what exactly does it take to help spinning mills produce the highest possible quality at an economical level? Often the solution lies not in the whole, but rather in the sum of the details. For this reason we have developed our Card TC 15– the most economic card ever featuring 30 - 50 % more productivity compared with the 1-meter-card TC10.

Fully-integrated Tuft Feeder DIRECTFEED with built-in air volume separator and segmented feed tray
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Flexible Integral Feed Tray SENSOFEED+ for perfect clamping and very precise short-term levelling
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Precision Knife Setting System PMS
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Next generation CLASSIC TOP 2
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Computer control with touch screen
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Mill Monitoring System “My Mill”
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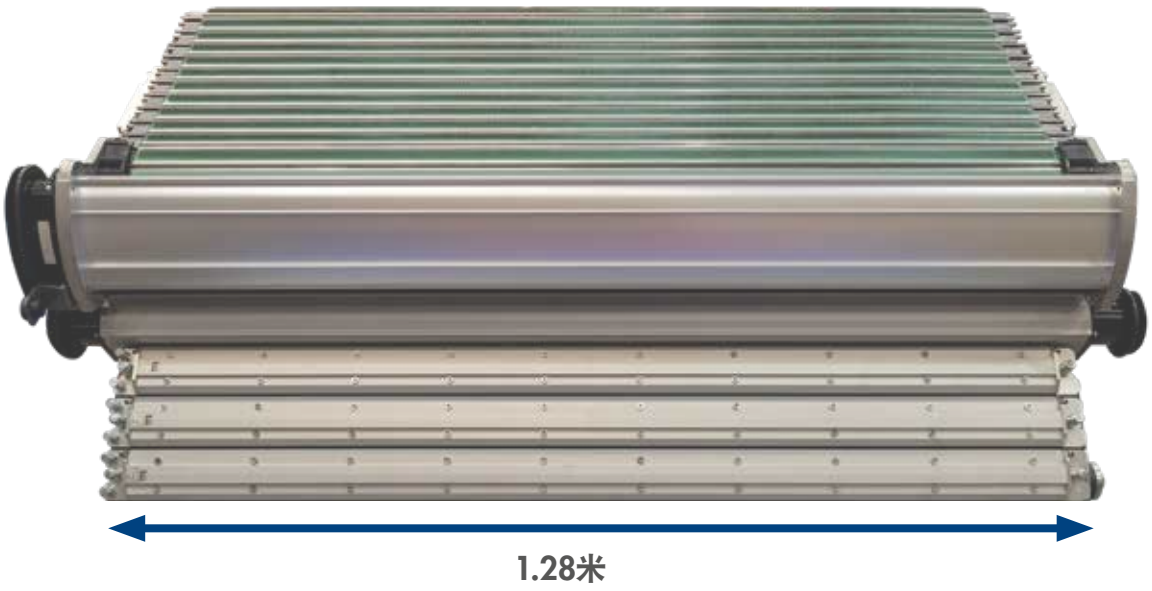
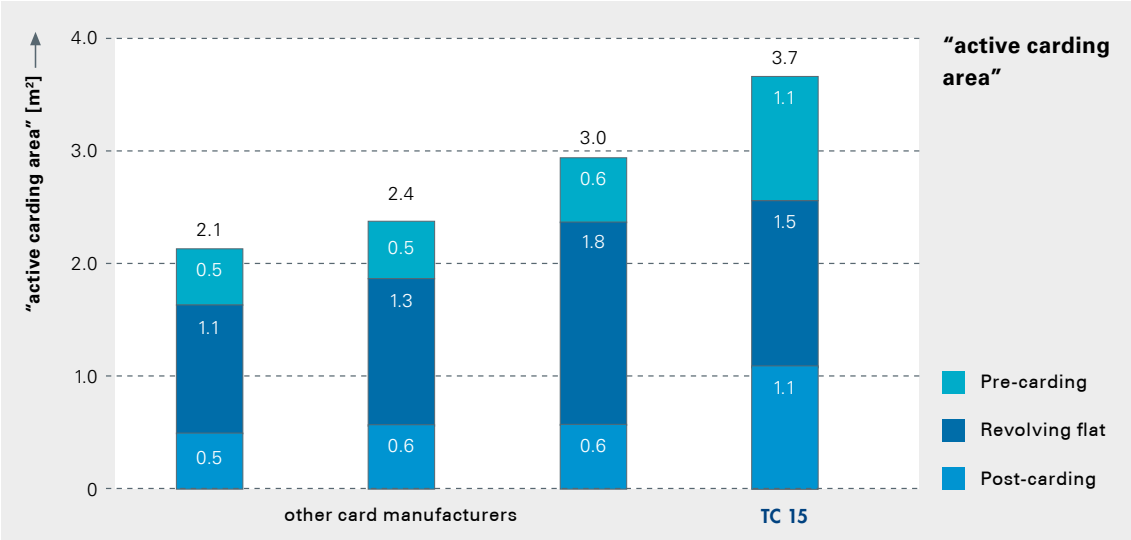
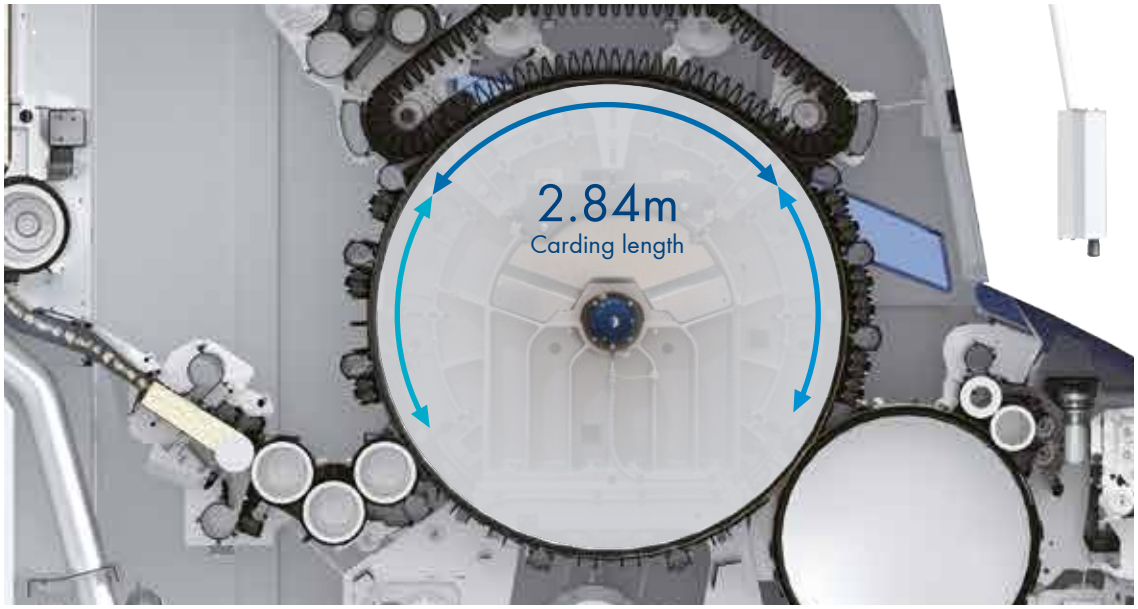
Maximum productivity: "active carding area" of 3.7 m^2



The 1.28 m width of the Truetzschler cards is the result of an intensive development process. Using the current design and production methods, an even larger width would no longer be economical. The precision of the masses to be controlled would be impaired, and thus sliver quality. On the other hand, a smaller width would waste valuable productivity.
During production, a degree of precision was achieved that contributed to increased productivity and at the same time ensured the proverbial Truetzschler sliver quality. Through analysis – among other things with the help of the T-CON measuring data – it was possible to further increase the already significantly improved productivity of the new card generation TC 15 by up to 30 % through higher precision of all working elements, advanced web doffing and optimised clothings.



Maximum quality through the right balance between pre– and post carding zone and the flats

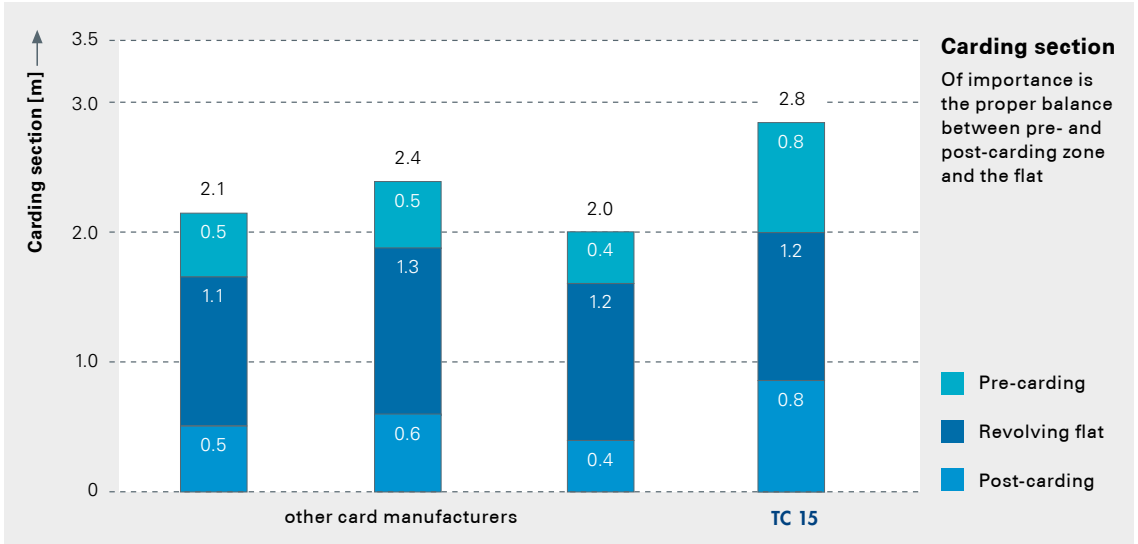


Pre-carding
Revolving flat
Post-carding

The carding length of 2.84 m allows an optimal distribution of the pre-carding area, the revolving flats and the post-carding draw frame. It is here where the maximum quality of the fiber web is generated.

The revolving flat is of particular importance: With an optimal number of flat bars, it is responsible for cleaning as well as extracting neps and short fibers.

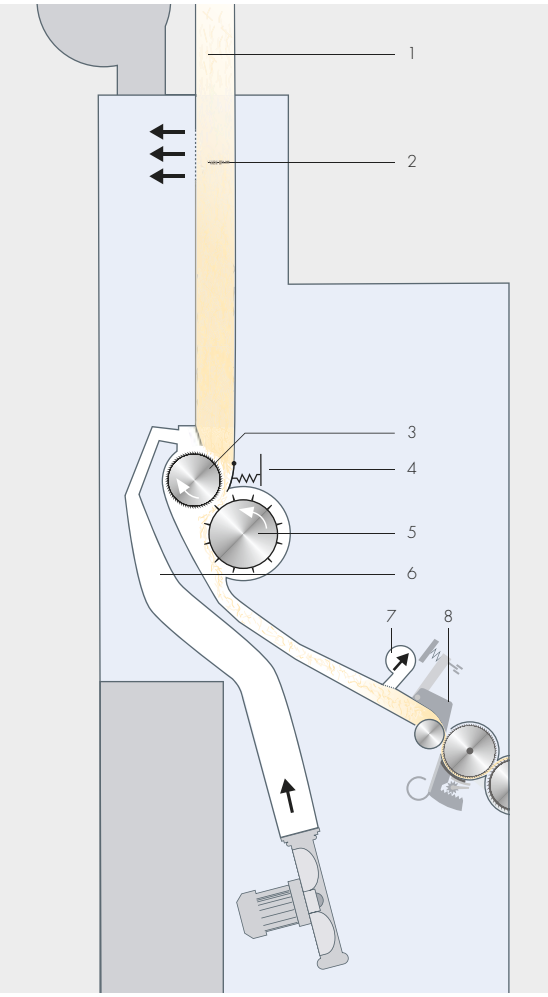
To ensure the optimal function of the revolving flat, the fiber web in the pre-carding area must be perfectly prepared by means of the cleaning and carding elements. For more intensive carding and thus higher productivity, pre-opening is performed at the highest possible level. The large post-carding area ensures an even cleaner sliver and higher fiber parallelism.



DIRECTFEED and SENSOFEED+

Quality begins with optimal tuft feeding

"Quality from the beginning" is one of Truetzschler's maxims. That is why we attach great importance to optimal tuft feeding.



Tuft Feeder DIRECTFEED

1 New high-volume upper trunk
2 Integrated air-volume separator
3 Feed roll, electrically coupled to the feed roll of the card
4 Segmented tray for secure clamping
5 Opening roll with gentle needling
6 Closed air circuit with integrated fan
7 Self cleaning air outlet comb
8 Flexible Feed Tray SENSOFEED+

More than 25,000 cards delivered with DIRECTFEED

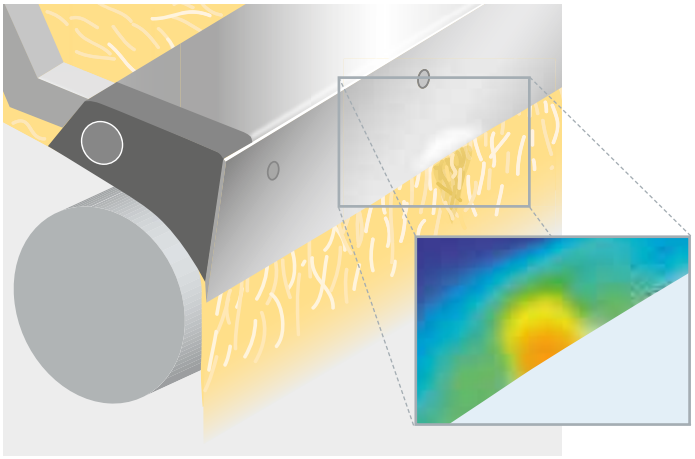
On conventional cards, faulty drafts can occur already during feeding due to wrong or suboptimal settings. The Tuft Feeder DIRECTFEED is an integral part of the TC 15. The delivery roll of tuft feeding and the feed roll of the card are identical, thus the reliable Truetzschler quality starts already with feeding.

The double trunk principle of DIRECTFEED ensures a higher material reserve thanks to a significantly larger volume. The special ge-

ometry of the lower trunk and the extended material fly form the foundation for excellent sliver CV values. The air outlet comb with direct and permanent suction is positioned right in front of the feed roll; it is only here, just a few centimetres in front of the nip line of the feed roll, that the actual web is formed.

SENSOFEED+

The web is fed to the pre-opening unit WEBFEED via the flexible Integral Feed Tray SENSOFEED+. From there the compacted tuft web is guided to the knife-shaped feed tray tip. The material at this top allows a partial elastic deformation during the feeding of material slubs. This deformation is only a few hundredth of a millimetre and has hardly any influence on the overall deflection of the feed tray. Accurate actual values allow efficient short-wave levelling.



The feeding of material slubs leads to a minimal deformation at this point of the tray edge. In the simulation the effective forces are highlighted in colour.

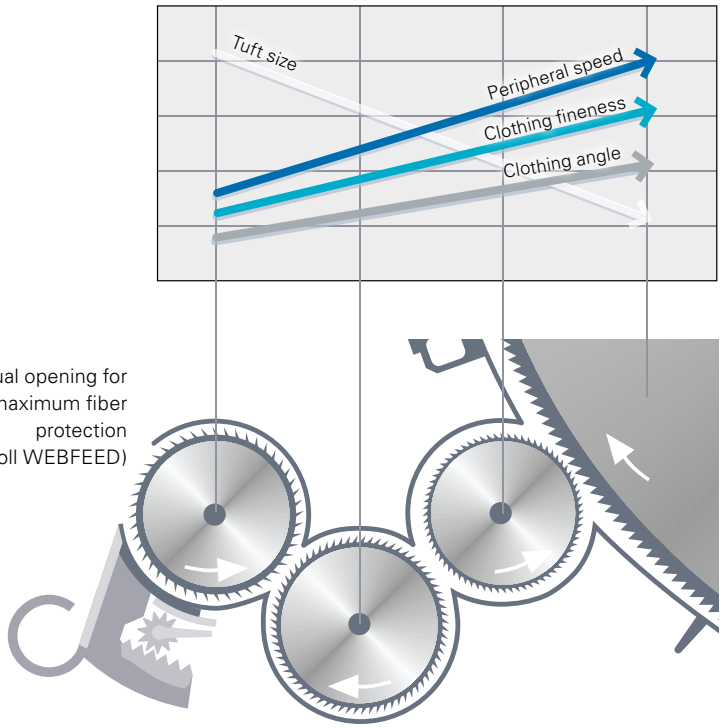
WEBFEED

Gentle and efficient tuft opening

Compared to conventional licker-ins, the WEBFEED system with one large or three smaller opening rolls connected in series ensures that the tufts are opened in a gentle way, resulting in an even and fine web. This fiber pre-opening is of decisive importance to the carding process.

Various arrangements are available:

- **3 rollers – first roller: Needling**
  e.g. cotton at high production rates
- **3 rollers – first roller: Metallic wires**
  e.g. cotton / man-made fiber blend yarns
- **1 large roller: Needling**
  e.g. man-made fibers + ELS cotton



Gradual opening for maximum fiber protection (3-roll WEBFEED)

Twenty-fold durability due to needles made of special steel (as compared to metallic wires)

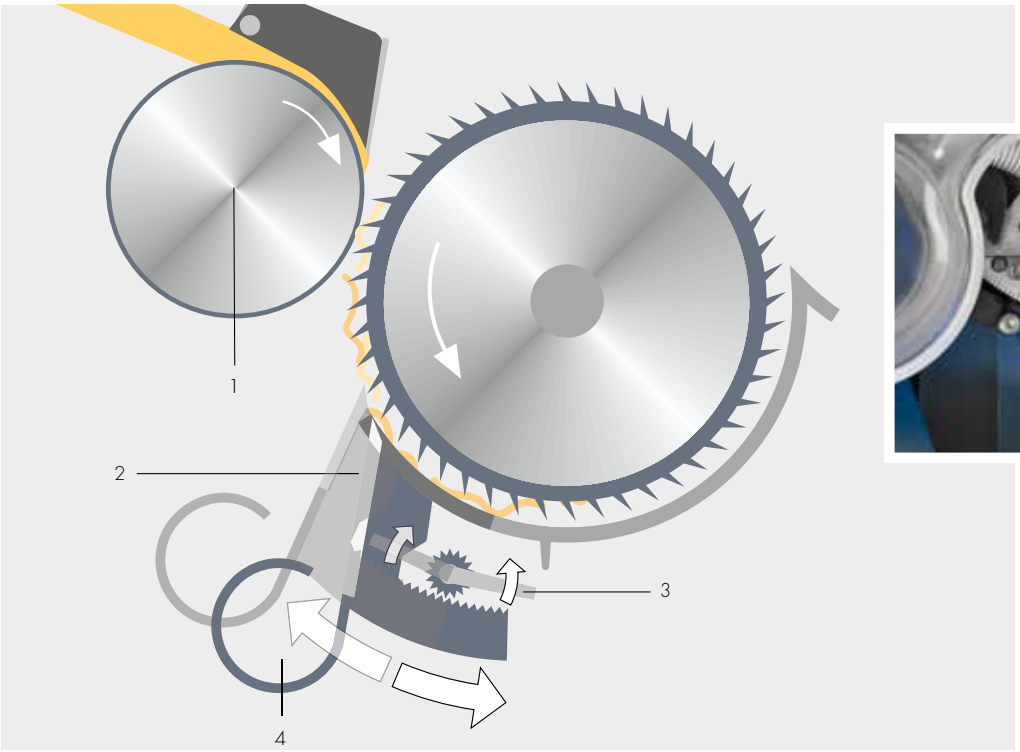
TC–VSD:

Infinitely variable speed control of cylinder

It is no longer limited by the size of the pulley, and there is no need for complicated and time-consuming replacement process. Through the cylinder speed control device TC-VSD, users can quickly and steplessly adjust the cylinder speed according to the yarn type, output and quality requirements by inputting relevant numbers on the card operation screen, so as to realize the process optimization.

Precision Knife Setting System PMS

Adjustment in no time at all



Through the circular adjustment the top edge of the knife always remains at an optimum distance to the needles.

1 Feed roll
2 The adjusting slide moves with the knife on a circular path around the centre of the needle roll
3 With this lever the position of the knife is adjusted in no time at all
4 The permanent suction keeps the card clean in this area as well

The first cleaning zone of the TC 15 lies in the area of the first roll of the WEBFEED system. Here, the reliable Precision Knife Setting System PMS ensures an optimal waste composition.

The mote knife is infinitely adjustable within seconds while card is running. The distance of the knife point to the needles is exactly the same in every position since the knife circles around the centre of the needle roll. A glance into the transparent suction ducts immediately shows the success of the readjustment.

Electric cylinder brake TC–CB

Efficient card stopping and time saving

Unlike the traditional physical brake system, the electric cylinder brake does not contact the surface of the object. By using electromagnetic effect, the braking speed can be adjusted steplessly, thus saving the loss of maintenance and repair. In addition, the quick brake is also convenient for checking the card process setting under the warm machine station.

2–15 minutes for cylinder stopping

With 510 rpm cylinder, the normal stopping time is 30 minutes, however, it only takes 3 minutes by TC-CB

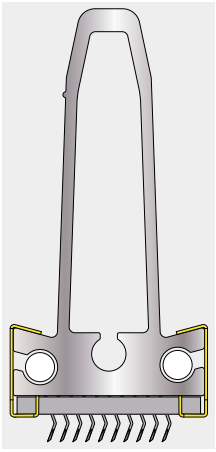
New generation of flat top – CLASSIC TOP 2

Constant, high sliver quality

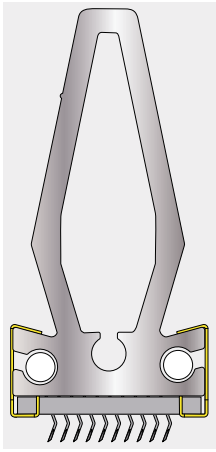
The carding quality is decided in the area of the main cylinder, particularly at flat top area. Truetzschler has developed the new generation CLASSIC TOP2. With robust construction and Truetzschler's flat top Know-how, even at changing environment temperature and production rates, the CLASSIC TOP 2 remains stable, and allows excellent carding results.

More robust and reliable

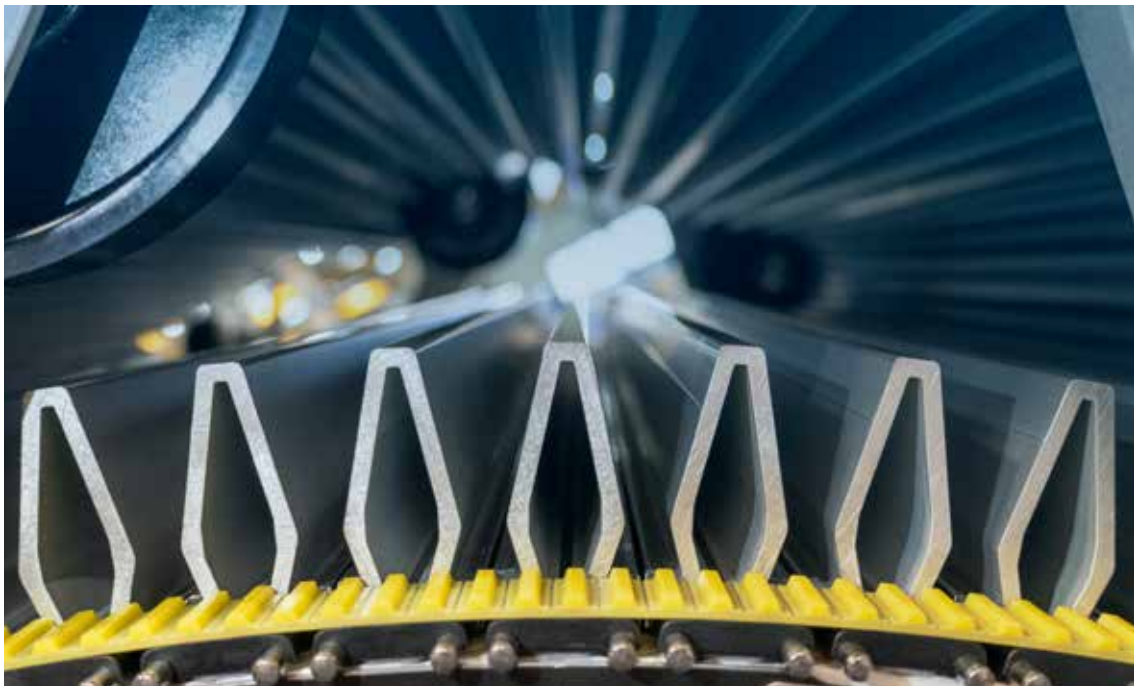
CT2 adopts new optimized geometric structure and thickened plate, which further improves the strength, firmness and deformation resistance.



CT1



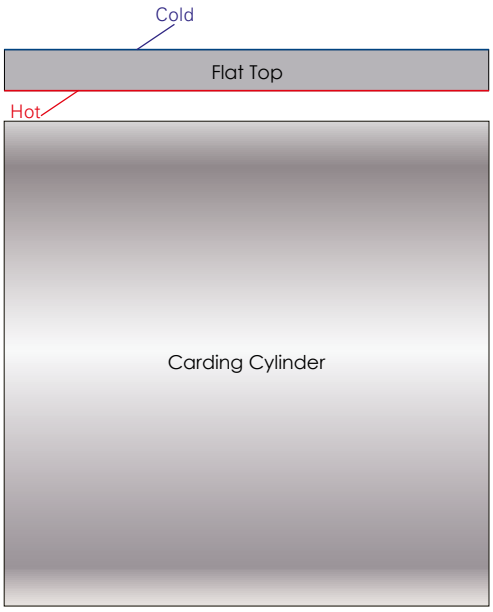
CT2



The new generation of CLASSIC TOP 2

Special design with better performance

In the gap of flat top and cylinder, the actual carding takes place. The carding work with a lot of friction cause the heat at the bottom of the flattop and cold at the top, which results in the blend of flat top during carding process. With more than 10 years Truetzschler know how on flat top for wider cards, the new generation of flat top CT2 with special profile design ensures the flatness of flat top during the operation. With the evenness of flat top at the working length, narrower gap setting, and more evenness and better quality of web is achieved.



Truetzschler CLASSIC TOP 2 keep stable evenness during all operation temperatures.

Fast changing of flat bars

The flat top bars are directly connected via a cam to two toothed belts that ensure perfect guidance, his arrangement has the advantage that a complete flat replacement can be performed by just one person without tools in less than one hour.

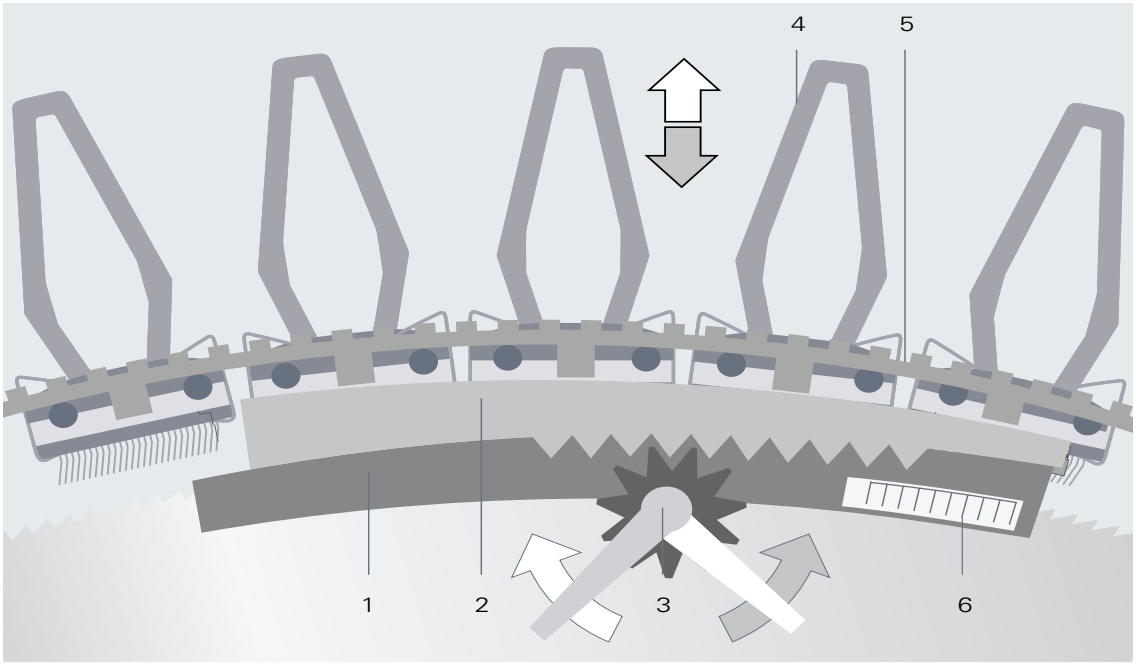
Fast changing of flat top bars

Precision Flat Setting System PFS

Optimisation of flat setting in no time at all

Precision Flat Setting System PFS

1 Metal flexible bend
2 Wear-resistant special plastic slide rail
3 Setting lever
4 High-precision aluminium flat bars
5 Cam toothed belt for the flat drive
6 The distance setting can be read directly from a scale



Automatically faster: Flat setting

Truetzschler developed the Precision Flat Setting System PFS for central adjustment of the whole flat to the cylinder. It adjusts the flat exactly by the specified dimension within seconds. After this setting, the PFS system ensures that the distances throughout the entire service life of a clothing set are precisely maintained.

Once the basic setting has been carried out, only a handle needs to be turned on each side of the card to increase or decrease the distance of all flat bars in working position to the cylinder. A scale shows the current setting in relation to the basic setting.

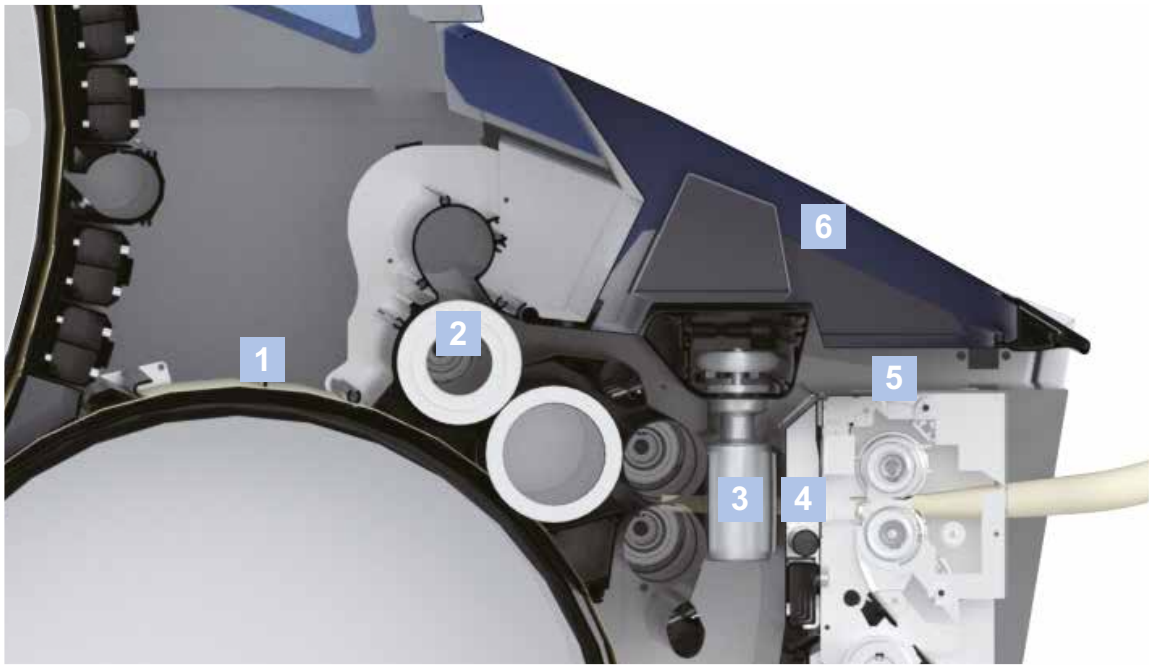
Energy monitoring EMG

EMG is an on-line energy consumption monitoring device, which can calculate energy consumption per unit output by real-time monitoring the change of current and voltage.

As shown in the graphic, the current shift energy consumption and per kilogram sliver energy consumption are clearly displayed on the card screen. Customers could also view and analyze the output and energy consumption data in any period of time by mill monitoring system My Mill.

Low maintenance and operator–friendly

Almost no sliver breaks through advanced web doffing



An integrated pneumatic piecing aid makes the operation of the new web doffing very simple.

New web doffing unit

1 Suction hood
2 Cleaning brush with synthetic bristles
3 Transversal belt system: SPEED BELT
4 Piecing device (semi-automatic)
5 Count control DISK MONITOR
6 Fully integrated and compact design

Functions of the web doffing unit at the card:

- Takeover of web from the doffer
- Web condensing
- Sliver formation
- Seamless quality control of sliver
  – Sliver count variation
  – Evenness
  – Thick places
  – Spectrogram
- Transport of the sliver to sliver coiling system

Reliable control of higher speeds

Higher delivery speeds usually require higher drafts in the area of web formation. But a low draft promotes the evenness of the card sliver. For this reason, importance was attached to gentle web guidance with low drafts during the new development of the unit. Combined with an effective suction, this results in a running behaviour that is nearly free of sliver breaks. An integrated pneumatic piecing aid makes the operation very simple.

Reproducible quality, metre by metre

The tried and tested sliver sensor DISC MONITOR, known from Truetzschler levelling draw frames has been integrated into the new web doffing as well. It measures every metre of card sliver in a reproducible and precise manner before it is deposited into the can. The significantly reduced air consumption results in an economic advantage.

Transversal belt

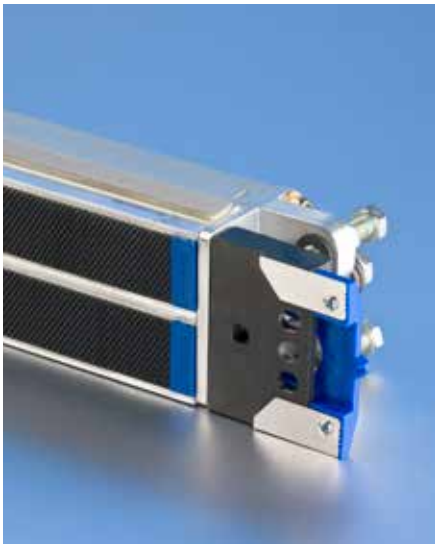
The transversal belt guides the web and reduce the accidental drawing or breaking of the web during the bundling process. It allows higher delivery speeds, and improves the efficiency and output of the carding machine.

MULTI WEBCLEAN

Flexible adjustment of carding conditions

The three elements of the MULTI WEBCLEAN systems

Cleaning element
A mote knife with a hood under permanent suction ensures the separation of small dirt particles, seed coat fragments, dust particles and fiber fragments.



Carding element
The carding element consists of two clothing strips in a support (TWIN TOP), which can be equipped with a number of different clothing types and finenesses, depending on position and fibers.

Cover element
If one of the eight variable positions in the pre-carding and post-carding area is not in use, a cover element is mounted.

The carding conditions must be adjusted depending on fiber, production level and quality desired. To get simple and quick results, the MULTI WEBCLEAN system allows individual attachment of ten special elements each in the pre-carding and post-carding area of the cylinder. Only the first and last element are specified; the remaining eight elements are configured according to the required application.

Depending on application, the MULTI WEBCLEAN consists of the cleaning, carding and cover elements.

Replacement within minutes

Once the elements are precisely adjusted, they can be immediately put into operation again even after removal, without the need for readjustment. Specially developed fixing elements secure the original setting. In principle, any element can be mounted to each of the 16 positions. The card is delivered in a configuration that has been individually specified in advance.

T-CON supplies all relevant values

Measurable increase of perfection and production

To achieve the full potential of a card is the objective of every spinning mill. The key to higher productions and higher quality lies in the optimal setting of the working elements.

On a day-to-day basis, there are numerous factors that can interfere with an optimal production. Even if operation "feels" as though it is running in the optimum manner, there is always undetected potential which is not accessed. The reasons for this are usually quite trivial:

- Card settings performed in cold condition
- Settings based on "empirical values"
- Changes in ambient temperatures.

To counter these interference factors, conventional cards lack the possibility to reliably measure the current status at the relevant points.

The solution lies in the know-how and evaluation

The patented Truetzschler T-CON measures all decisive, actual parameters such as for instance the distances between cylinder, flats and fixed carding elements at all production and quality related points by means of its robust and sensitive sensors. The results appear on the card display and indicate which settings can be improved. There is no easier way to accomplish perfect card settings and thus optimal productivity.

Productions close to the theoretically possible ideal line

T-CON allows tightest settings without making contact with the clothings. The productivity potential of conventional cards is significantly reduced due to overall settings of safety reserves. T-CON, in contrast, offers the possibility to bring productions closer to an ideal line without taking a risk.

Lowering IPI-values in the yarn by 10 %

T-CON also causes an increase in quality: The influence of the conclusions drawn from the measured values can reach all the way to the improvement of yarn quality.

The optimisation options are clearly shown on the screen. The type of fiber and production level are taken into account.

Only T-CON achieves the full potential

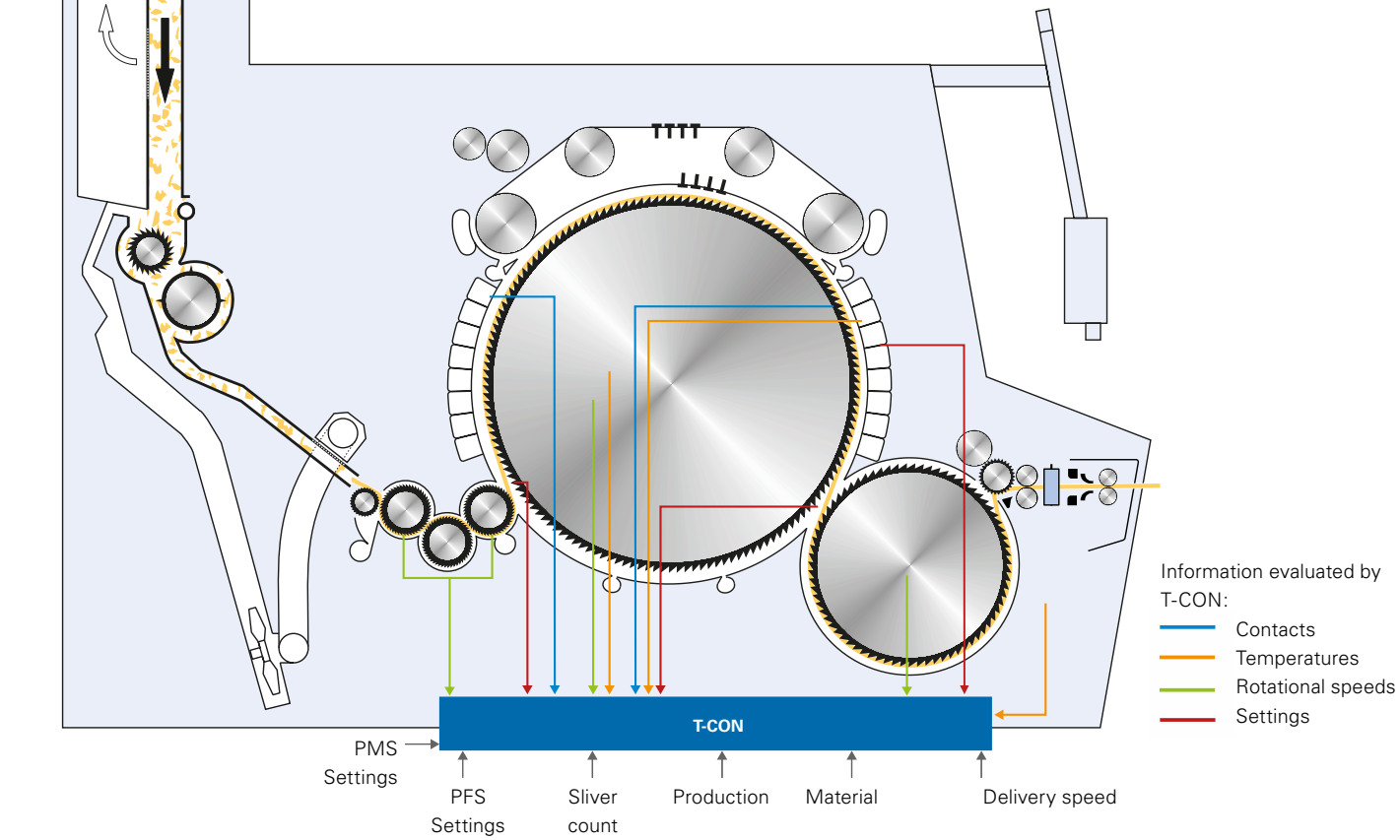
Targeted adjustment of card settings during operation

The distances of the carding elements to each other are the most important settings on the card. They have a major influence on the carding quality and therefore yarn quality. The elements are set while the machine is standing, i.e. in relatively cold condition. During operation, the carding gap of the card is considerably changed, e.g. by centrifugal forces or increases in temperature. The changes which occur during production are unidentified on cards without T-CON and can therefore not be taken into account for quality improvement or production increase. The latest version of the Setting Optimiser T-CON opens up the full potential in carding.

The fields highlighted in blue show the recommended optimisations determined by T-CON.

The five T-CON functions

- T-CON distance optimisation T-CON ACTUAL: Display of the most important process variable for carding quality during operation
- T-CON contact monitoring: Maximum safety against clothing contact
- T-CON distance optimisation: ptimal yarn quality due to correct setting parameters
- T-CON analysis of operating status: Prereq-uisite for controlled setting
- T-CON Spacer: Fast, accurate, reproducible settings



Determining exact carding settings and recommending optimisations

T-CON carries out a permanent analysis of the operating status. Special sensors obtain valuable measured values at all relevant points: e.g. current temperatures or speeds on the rolls.
Through the integration of the T-CON software into the card control it is possible to display the current distances of the carding elements on the screen of the card control. T-CON recommends setting optimisations depending on the fibers that are currently being processed.

Fast and efficient setting optimisation

The flat distance can now be changed within seconds, e.g. via the Precision Flat Setting System PFS, even during production. T-CON determines and displays the new operating condition immediately.
The setting of the stationary carding segments can also be optimised within minutes without measuring tools. To do so, only the T-CON Spacers – precise colour-coded distance elements – have to be replaced.

Reliable protection from clothing damage

T-CON also protects the clothings; if the setting is too narrow, a warning appears. In case the metallic wires of two carding elements actually make contact, the card will be stopped immediately before any damage can occur.

This sensor determines contacts between the carding elements.

CNY 1,904,000

less operating costs 10 % more production
10 % lower IPI values in the yarn

The T-CON Spacers can easily be replaced in just a few simple steps and thus allow a reproducible setting of the carding segments.

This sensor performs contact-less measurement of the cylinder temperature.

Continuous efficient suction

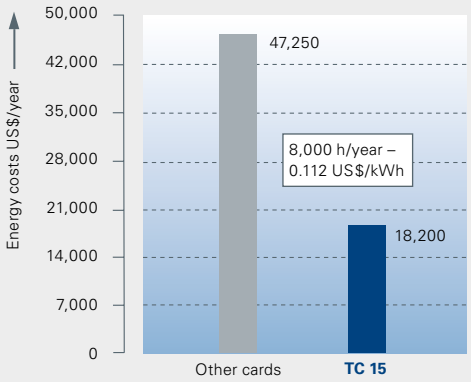
Save operating costs – increase quality

A permanent suction at all relevant points provides optimal dust removal, even under high production conditions. This standard ensures that the TC 15 also features increased cleanliness, cost effectiveness and efficiency.

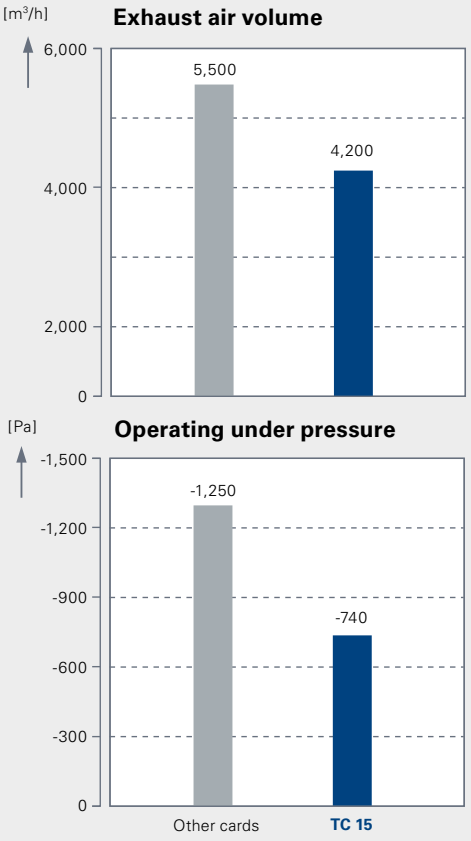
The main reason for the efficiency of the permanent suction is the low operating under pressure of -740 Pa and the low air requirement of only 4,200 m³/h. To allow a realistic comparison of the air requirement with cards from other manufacturers, it must be in relation to card production.

These values are possible because the flow of each individual duct element is optimised. The impact becomes strikingly obvious in the transparent duct parts of the suction hood while card is in operation.

The suction ducts are fastened entirely without tools. Pulling off and putting on takes place via a quick-change system.



In comparison: other cards 5,500 m³/h at -1,250 Pa
TC 15 4,200 m³/h at -740 Pa
Example: 14 cards, 140 kg/h



Low exhaust air volumes and operating under pressures reduce the operating costs considerably.

CNY 197,540

lower annual energy costs of the filters (reduced exhaust air, less under pressures)

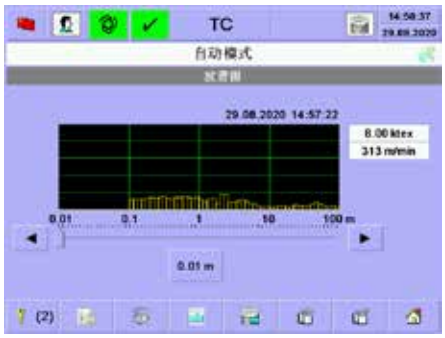
TC 15 control

Reliable and user-friendly

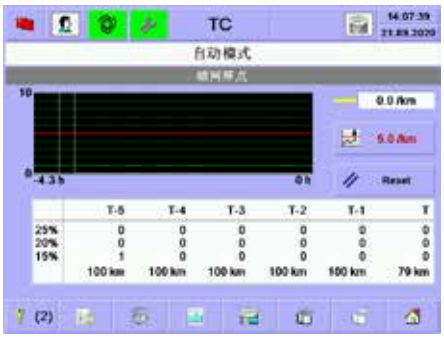
The heart of the card control is a robust industrial computer that works in a reliable and accurate manner even under the most demanding production conditions. Sensor data are safely recorded, displayed and converted into according control commands.

Home page

Draft deviation and CV

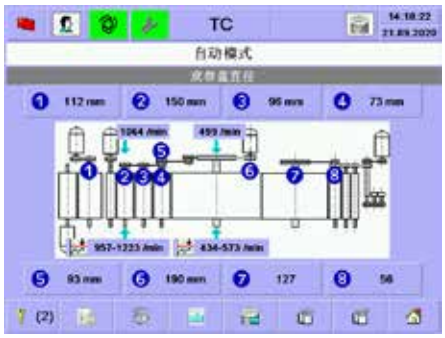


Spectrogram



Thick spots

Energy monitor



Pulley diameter

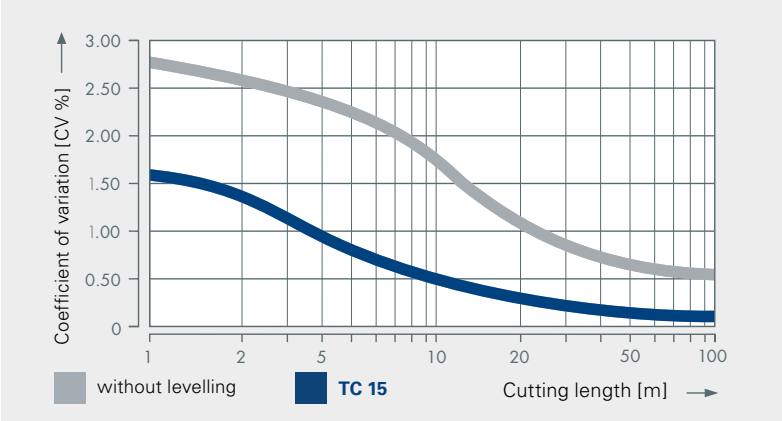
A large touch screen provides operators, maintenance specialists and quality managers either with a clear overview or deep insights into card production at any time.

Easy to understand and individually configurable

The major advantage of monitor control is the language-independent operation via generally understandable symbols, diagrams and pictures. At the same time it is possible to display only those operating functions that are currently necessary or useful. In the event of a malfunction, the point of failure is clearly classified and precisely identified by means of a detailed picture or diagram.

Perfect interaction

Four levelling systems adapted to each other



The TC 15 guarantees excellent values concerning evenness over the entire length spectrum.

For the production of an even card sliver, a number of measures must interact perfectly:

1. Card feeding

In Truetzschler installations, already the material flow to the card is continuously controlled via the CONTIFEED 2 System. Furthermore, the production requirements of all cards of a line influence the production of the last machine in the blow room. This connection contributes to a continuous card feeding, and thus to a sliver evenness.

2. Card feeding

Additional homogenisation is made possible by the double trunk principle of the tuft feeder. Its continuous, pressure-controlled feeding of the upper and lower trunk prevents unevenness of the card sliver, which for instance can occur during start up and shut-down of the card. In such cases the speed of the tuft feeder's feed roll is automatically adjusted to the respective card production.

3. Long-wave levelling

In addition to the sliver mass measured by the DISC MONITOR, the feed roll speed is also measured and controlled via a single sensor. It covers the entire spectrum of the regular card sliver counts.

4. Short-wave levelling

The Card TC 15 is also equipped with a short-wave sliver count levelling. This system, which is already effective for a sliver length of less than 1 m, considerably improves card sliver evenness. While the thickness of the tuft web is constantly scanned by the Integral Feed Tray SENSOFEED+, the card control calculates a possible adjustment of the feed roll speed from the incoming values.

Four levelling systems adapted to each other guarantee a perfectly constant sliver fineness and an excellent evenness.

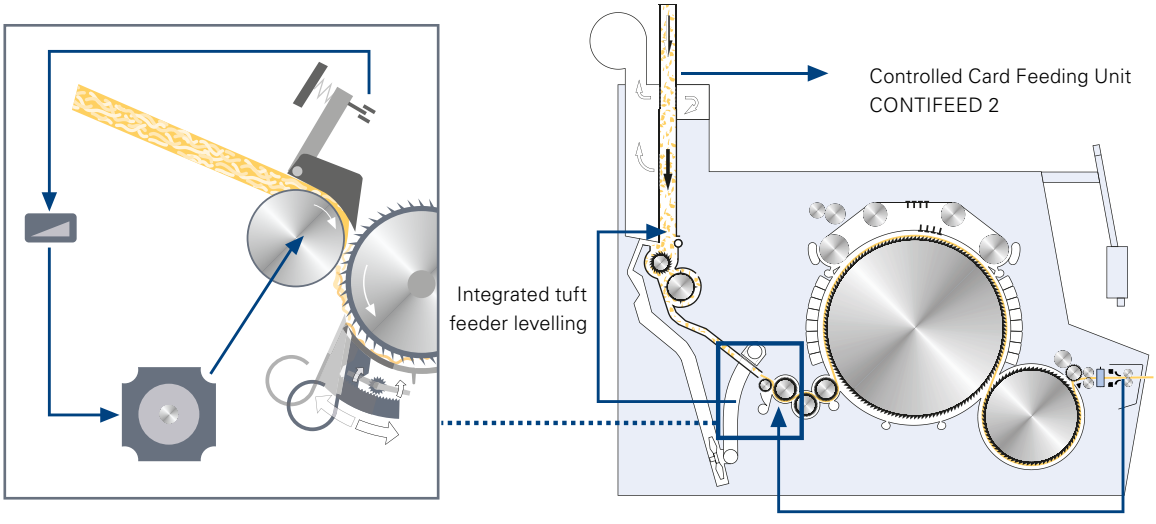


Diagram of short-wave levelling

Long-wave levelling

Efficient maintenance

Quick access from all sides

After removal of the doors, all areas of the card are optimally accessible.

The TC 15 also sets standard for maintenance friendliness:

- Doors can be removed without tools in just a few minutes.
- The drives are concentrated on the right side of the machine.
- The operators are protected by a central safety locking system.
- Very simple replacement of the pre-opening unit WEBFEED because it can be changed in one part.
- The same applies to the Integral Feed Tray SENSOFEED+.
- The complete flat cleaning device and the web doffing can be disassembled within shortest time.
- Since the can changer has no mechanical connection to the card, cleaning work is simplified in addition to operation.
- Conventional drive covers that can obstruct maintenance work are completely eliminated.

Targeted maintenance management

The card control is a valuable tool for the service technician during maintenance tasks, like clothing care or maintenance intervals.

- Example clothing change:
  The card control indicates this early enough on the screen.
- Example error detection and recovery:
  The control offers special tools for this as well.
- Example operating conditions:
  In addition to the distances of the carding elements as determined by the Setting Optimiser T-CON, for instance rotational speeds, speeds or negative pressures are also displayed.

The right sliver coiling system for every application

Truetzschler offers tailor-made systems for can filling. What is your focus?

- The largest possible cans to reduce the number of transports
- High delivery speed during can change
- A version that saves as much space as possible
- Process reduction by Integrated Draw Frame IDF 2
- Preparation for an automatic can transport

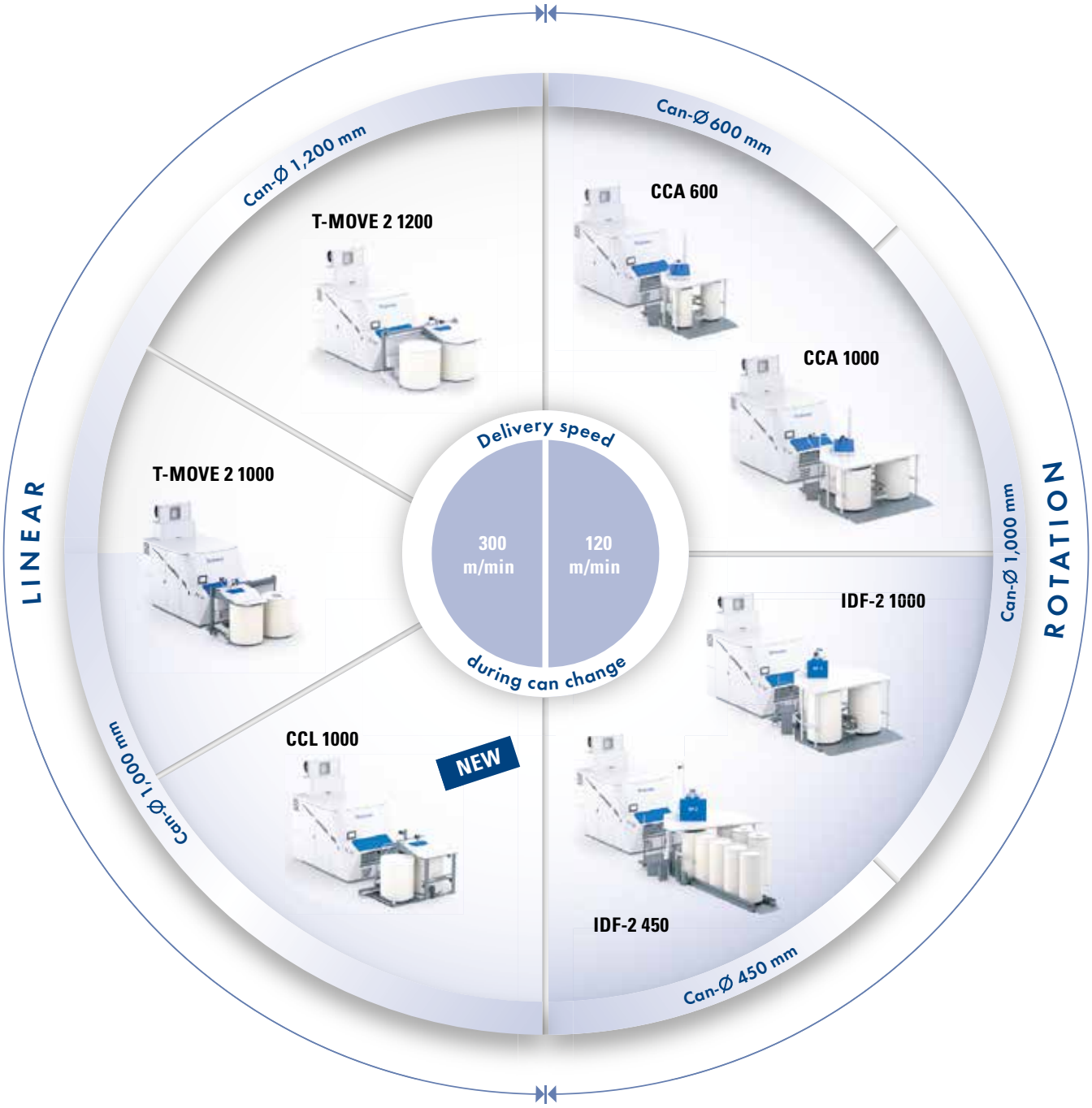
Truetzschler can changer

The sliver coiling systems are controlled by the card control. The operator finds all important data on the coloured touchscreen 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. ➔

Truetzschler can changer

Several systems – whether rotation, linear or integrated sliver coiling – are available for selection:



Can Filling Station T–MOVE 2

Gentler sliver coiling and quicker can change

Gentler sliver coiling

Previously, the can filling quantity was limited by the bulging of the sliver coiling. In the centre, the slivers are stacked on top of each other and are very strongly compacted.

With the new Can Filling Station T-MOVE 2, the coiling of the layers is offset. This prevents pressure marks in the middle. The slivers are subject to less pressure and keep their round cross-section to a great extent. This results in qualitative advantages during processing in the creel and feeding into the drafting system of the downstream draw frame.

The sliver feed moves – the can is stationary

The sliver feed with the sliver coiling plate (moving head) is moved in a straight line at high speed from the full to the empty can. This is usually done without reducing the delivery speed of the cards. Because the full can does not have to be moved quickly during the change, larger cans with more content can be used: The Truetzschler JUMBO CANS with 1,200 mm diameter and up to 1,300 mm height.

In T-MOVE 2, both JUMBO CANS can be placed directly next to each other. This allows a quick change of the empty can and a clearly defined separation of the card sliver.

T-MOVE 2 with JUMBO CANS reduces the effort for can transport to a minimum.

This JUMBO CAN contains 79 kg of card sliver. The test with the hanging scale shows that no more than 6-8 kg of force is required to move the can.

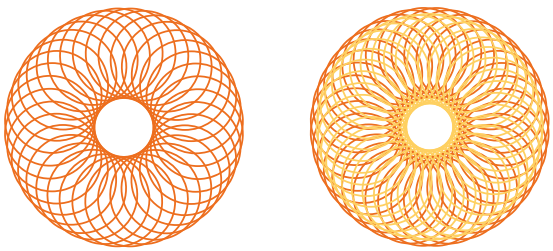
Save space with large cans in the smallest space

Even though the JUMBO CANS have a diameter of 1,200 mm, no greater distance between the cards is necessary.

T-MOVE 2 with 1,200 mm cans requires less space than other can changers with 1,000 mm cans. In addition, T-MOVE 2 allows an operator aisle between the cards and the sliver coiling system. This passage considerably shortens the distance for the operator.

With the new, changing and gentle T-MOVE 2 coiling system, the slivers are subject to less pressure.

On the left, the optimized T-MOVE 2 coiling geometry and on the right, the conventional coiling geometry. Both cans contain 80 kg of card sliver.



After each can rotation, the slivers are coiled with an offset of a few centimetres. As a result, the many crossing points in the middle are not stacked.

Sliver coiling – rotation, linear or integrated

Card installation with Linear Can Changer CCL

CCL: Linear can changer

With the constant delivery speed up to 300m/min, the liner can changer CCL has high efficiency with no speed reduce and no quality loss. It is a space-saving variant for 1,000 mm cans which fits even at minimal card centre distance. Here cans up to 1,500 mm height can be used as well.

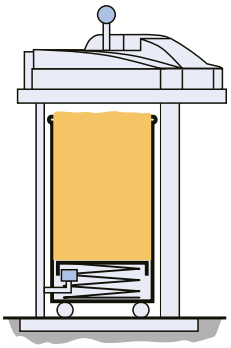
CCA: Rotary can changer

The rotary can changer is available for cans with diameters of 600, 900 and 1000 mm. The can height can be up to max. 1,500 mm. This type of changer is particularly suitable for automatic can transport. The positions for full and empty cans are exactly defined.

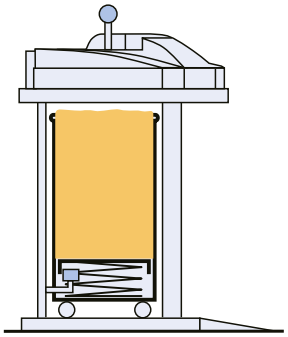
Card installation with Rotary Can Changer CCA

TC-CM : Manual Can Changer

The Manual Can Changer TC-CM is the most space saving solution suitable for the renovation of old workshop with limited space. With the available can diameters of 600, 900 and 1,000mm, the can height can be up to 1,500 mm.



CM under floor



CM over floor

IDF 2: Integrated Draw Frame

The integrated draw frame is used in rotor yarn mills and some applications in air-jet spinning. Here, three different can types are available:

- 1,000 mm round cans
  (If followed by a autoleveller draw frame)
- 450 mm round cans
  (For direct feeding at the rotor spinning ma chine)

IDF 2 installation with 450 mm round cans

Experience full transparency from the beginning

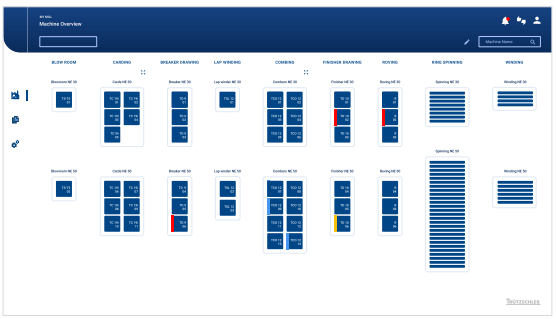
The My Mill Monitoring System shows all current information at a glance.

Current machine data in real time

Whether information about your production, quality, maintenance or simply a complete overview - with My Mill your possibilities are almost limitless: from the complete installation to production lines to detailed analyses at machine level, everything is possible.

Through the detailed analyses with My Mill, you can guarantee a consistently high quality in spinning preparation; because this is where the quality of the end product is produced.

Overview of the entire installation



Faster detection and elimination of malfunctions for consistently high quality.

Optimization

Focus on what's important.

An easy to understand data preparation enables you to discover optimization potentials immediately and to plan your resources sensibly.

Fault statistics, shift data and quality comparisons provide a solid entry point. In addition to Truetzschler machines, My Mill can also be used for data from other manufacturers.

Truetzschler sees itself as an innovation leader and is constantly expanding the scope of cloud-based software. Of course, My Mill provides you with the possibilities of the latest AI systems. In the future, for example, it will be possible to predict the failure of certain components and extremely simplify complicated processes through the automated evaluation of a single photo.

TC 15S

The highly specialised card exclusively for man-made fibers

Usually card development focused primarily on cotton processing. Man-made fibers are processed on only slightly modified cards. However, today the trends towards technical textiles place higher requirements that can only be met by highly specialised cards. The Card TC 15S is the result for man-made fiber processing.

Extremely resistant:
The fiber-guiding elements

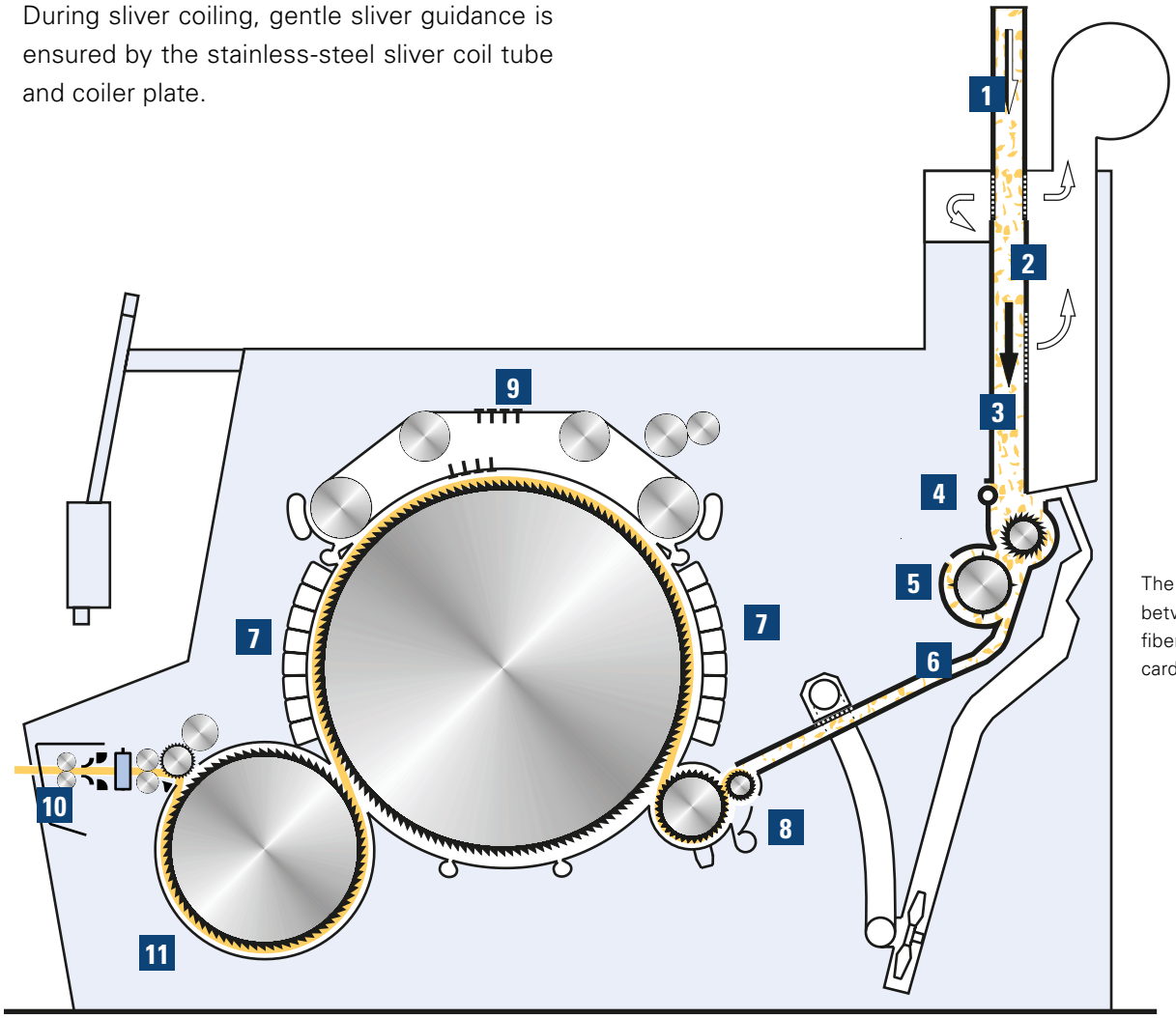
The fiber finish used for many man-made fibers has an aggressive effect on paint and base metals. As a result, paint may peel off and metal surfaces may become sticky, thus impairing optimal fiber flow in the card. This leads to production limits and frequent production interruptions in cleaning work.

On the Truetzschler Card TC 15S, all plates in the tuft feeder and in the transfer section to the card are made of stainless steel. All covering elements relating to cylinder and doffer consist of high-precision aluminium elements. An anodizing process protects these parts from the aggressiveness of man-made fibers. During sliver coiling, gentle sliver guidance is ensured by the stainless-steel sliver coil tube and coiler plate.

11-fold difference: Differences between man-made fiber card and cotton card

1 Stainless steel comb instead of screen fabric
2 Stainless steel cleaning flap
3 Stainless steel reserve trunk
4 Segmented feed tray
5 Special opening rolls for higher speeds
6 Stainless steel reserve trunk
7 More carding and less cleaning elements
8 WEBFEED with a large needle roll
9 Man-Made Fiber T-CON
10 Additional deflection roll
11 New doffer clothing TCC NovoDoff 30[1)]

[1)] protected by patent



The differences between man-made fiber card and cotton card are significant.

TC 15S with modified WEBFEED

Higher performance, quality and service life

The fiber-guiding elements, as in this case the transfer section between DIRECTFEED and card, are made of stainless steel.

The enhanced WEBFEED system for the TC 15S is substantially different from the cotton card. For high production application of cotton, a pre-opener system with three rolls is essential. For processing of man-made fibers there is another solution. The WEBFEED developed for the TC 15S has:

– one large single roll, featuring an approx. 50 % larger diameter
– special needling of the roll
– novel surface finish

Needle roll with significantly increased service life

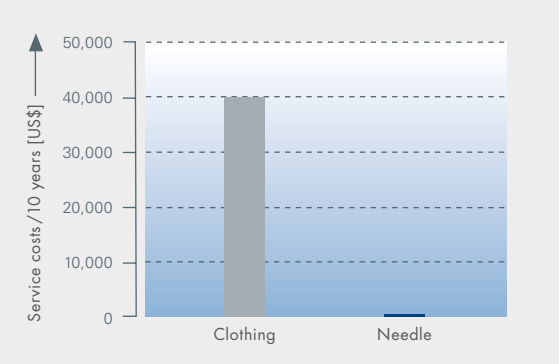
Another advantage of the especially for man-made fiber processing developed needle roll is its significantly longer service life. It is approximately twenty times that of a clothing roll, thus significantly improves efficiency. All of these measures combined contribute to the significant production increases.

Improved quality – 30 % less yarn imperfections

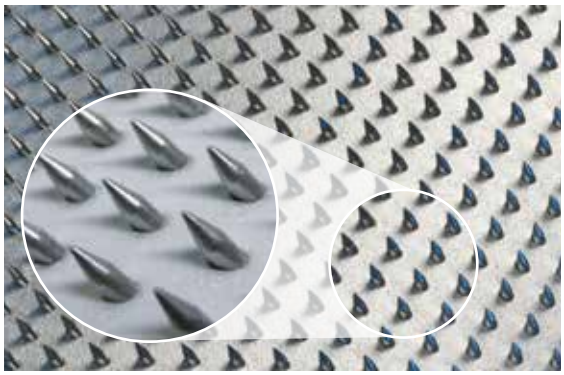
The WEBFEED system of the man-made fiber card allows an improved yarn quality with an average of 30 % less imperfections.

CNY 272,000

savings in service costs over 10 years



In the course of 10 years, the clothings of the licker-in must be re-clothed about 20 times per card. During the same time frame, a needle roll is maintenance free.



Needled Truetzschler pre-opening rolls have a special surface finish.

T–CON for TC 15S

Protecting man-made fibers from damage

Thermal influences aaffect the carding of man-made fibers in a completely different way than the processing of cotton. Without the systematic evaluation of T-CON data from a long series of trials, this would never have been discovered.

For instance, the rule "the tighter the flat setting, the better the result", does not apply to man-made fibers. On the contrary; here it is essential to maintain a certain minimum distance. It prevents electrostatic charges that have a negative effect on carding quality, and subsequently also on yarn quality.

Hence, the T-CON system for man-made fiber carding uses other algorithms and thus provides the basis for precise setting recommendations. The result is a clearly increased production.

TC–MMF

For cotton and man-made fiber blends

On the Truetzschler Card TC 15 with the Optional Set TC-MMF, cotton blends can be processed with polyester, viscose or polyacrylic. The TC-MMF features stainless steel surfaces that take the particular fiber-metal friction values into account. Its clothings are specifically designed for cotton/man-made fiber blends, thus eliminating the settling of finishing. An important distinguishing feature is also the number and type of carding segments of the MULTI WEBCLEAN system. Because the carding of a blend containing polyacrylic fibers requires another configuration than the carding of cotton/viscose.

The Optional Set TC-MMF:

- The fiber-guiding elements in the tuft feeder are made of stainless steel
- Additional carding elements from 90 to 640 points/inch^2
- Special clothings for cylinder, doffer and flat

The clear quality advantages can be confirmed in the laboratory.

More efficiency

Due to fewer process steps

For rotor spinning, a sliver with a lower level of parallelising is of advantage; for this reason, the drafts should be kept small. The one-zone drafting system of the IDF 2 provides an excellent sliver evenness and a significantly better yarn evenness. The better quality is evident in the uniform fabric appearance.

Fewer steps to reach the goal

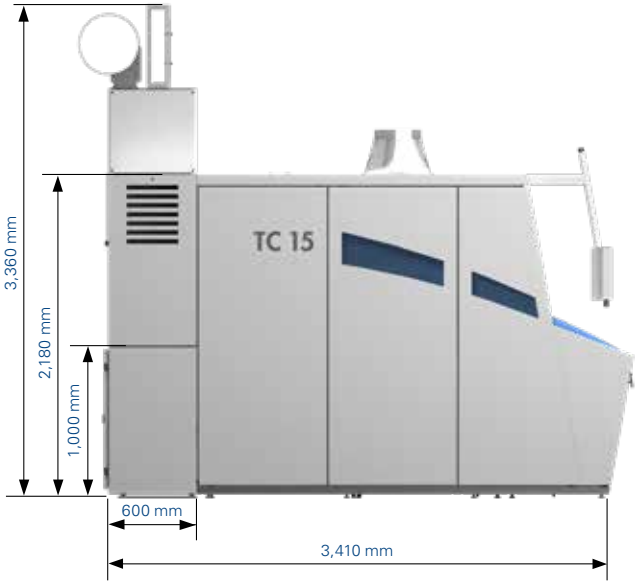
The „best" process steps are those that do not exist in the first place. Thus, problems can be avoided, errors ruled out and money saved. A reduction of draw frame passages is of particular interest in the spinning mill. And this is precisely what the Integrated Draw Frame IDF 2 achieves by direct coupling to the Truetzschler Card TC 15 in the rotor spinning mill. Economic efficiency is improved significantly. Because the Truetzschler card/draw frame couplings combine all the advantages of the Card TC 15 with a proven and reliable draw frame technology, the quality of the rotor-spun yarns is improved as well.

Also shorter spinning process

There is no shorter spinning process than feeding the card sliver directly on the OE rotor spinning machine. This requirement is perfectly met by the Integrated Draw Frame IDF 2.

The Integrated Draw Frame IDF 2 with automatic can changer

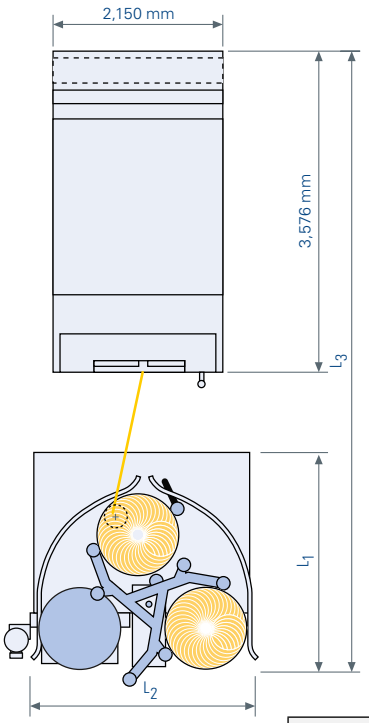
Technical data



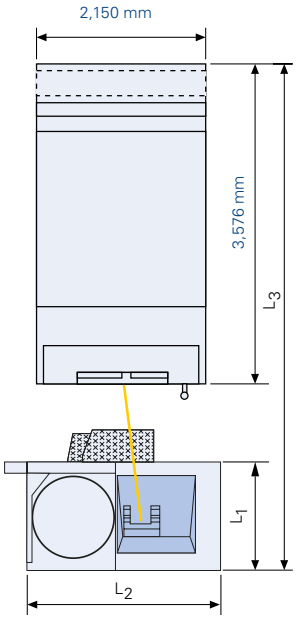
TC 15

Floor load:	approx. 22,540 N/m²
Max. surface pressure per base plate:	approx. 57 N/cm²
Production:	max. 260 kg/h
Suction (continuous):	4,200 m³/h (-740 Pa)
Net weight:	approx. 6,700 kg incl. can changer
Sound pressure level:	67 dB(A) at 100 m/min 73 dB(A) at 250 m/min 78 dB(A) at 500 m/min
Air consumption:	250 NL/h

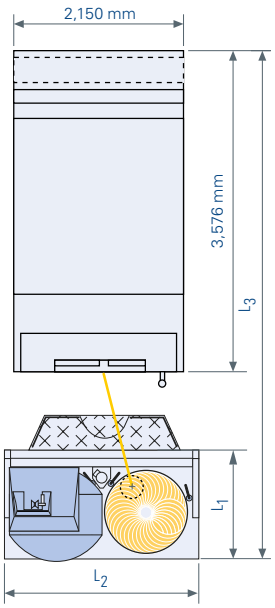
Rotary Can Changer CCA



Linear Can Changer CCL



Can Filling Station T-MOVE 2

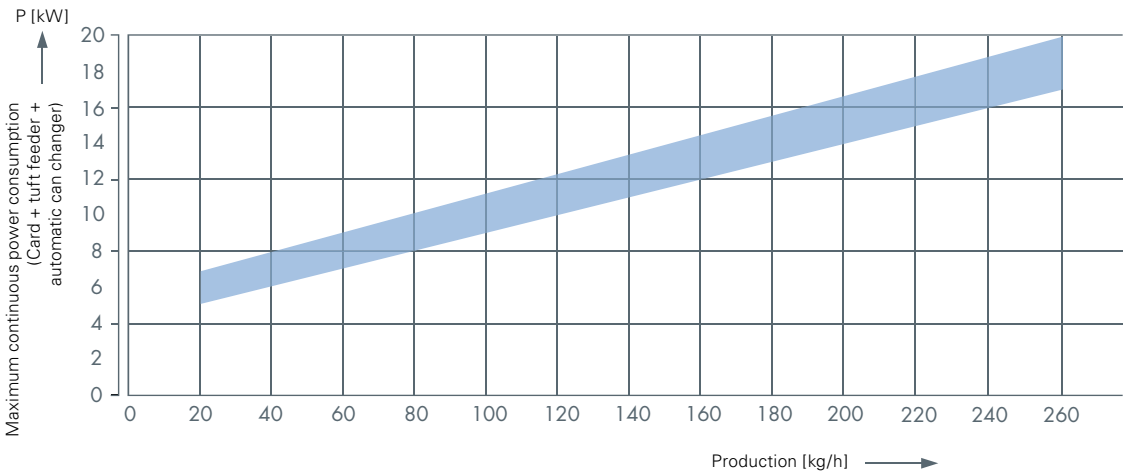


The Can Filling Station T-MOVE can be freely positioned in front of the card since it is not mechanically connected to the card.

	∅ cans mm	L1 [1] mm	L2 mm	L3[2] mm	Height under floor	Height above floor	Can height mm
Rotary Can Changer CCA	600	1,715	1,930	5,455 – 6,345	1,345 – 1,970	1,435 – 2,060	up to max. 1,500
	1,000	2,350	2,750	6,090 – 6,980			
Linear Can Changer CCL	1,000	1,365	2,340	5,995	1,714 – 2,139	1,794 – 2,219	1,075 1,100 1,200 1,225 1,300 1,500
Can Filling Station T-MOVE 2	1,000	1,420	2,400	6,175	1,540	1,600	1,200
	1,200	1,620	2,800	6,375			

[1] without can delivery ramps

[2] depending on width of service aisle between card and can changer (under floor)



Apart from production output, the values for current consumption depend also on the various settings and the material.

Equipments

Standard:

Mechanical Section	
	DIRECTFEED: Tuft feeder with movable feed tray
	WEBFEED system with 1 or 3 licker-ins by wire roller
	PMS: Manual knife adjusting system
	Large cylinder with 5.3 m^2 clothing surface
New	TC-CB: Electronic main cylinder brake
New	CT2: Flat top system
	PFS: Manual flat setting (range 8/1000")
New	Doffer suction hood *
New	Cleaning brush with synthetic bristles *
New	TC-TS: Transversal belt system *
New	Semi-automatic pneumatic piecing aid *
	Monitored continuous central suction above floor
	Central safety locking system
Control system	
	T-CON: Standard setting optimizer
	Computer control with screen
New	EMG: Energy monitoring
	Quality data monitoring
	Spectrogram analysis
	Quality and maintenance management
	Quality data entry and display
	Data exchange via USB stick
	Network connection for communication with LINECOMMANDER
TCC and tools	
	Premium long life clothings made by Truetzschler Card Clothing TCC
Quality control	
	Coordinated levelling systems, long-wave and short-wave
New	DISC MONITOR: Quality sensor *
	SENSOFEED+: Integral tray
	Thick spot monitoring and metal detection in feeding
Coiling system	
New	CCL: Linear can changer for 1,000 mm

* Included in new web doffing system.

Options:

Mechanical Section	
New	WEBFEED system with 1 licker-in by needle roller
New	WEBFEED system with 3 licker-ins, the first one by needle roller
	TC 15S for blending of cotton and man-made fiber with TC-MMF set · The fiber-guiding elements in the tuft feeder by stainless steel · Additional carding elements from 90 to 640 points/$inch^2$ · Special clothings for cylinder, doffer and flat
New	TC-VSD: Infinitely variable speed control of cylinder
	Separate strips suction above or under floor
	TC-MWC 3: Recycling fiber set
	Monitored continuous central suction under floor
	PMS-M: Motorised adjustment for Precision Knife Setting System
	PFS-M: Motorised adjustment for the Precision Flat Setting System
TCC and tools	
	TC-FG: Flat grinding device
	TC-GD: Grinding device for main cylinder and doffer
	TC-ME: Wire mounting equipment
	TC-FMM: Flat top mounting machine
Digital solutions	
New	T-LED: The new remote display
New	Connection of spinning mill monitoring system “My Mill“ and production monitoring app “My Production“
New	Clothing management app “My Wires“
	Ethernet connection
Coiling system	
New	T-MOVE 2: Can filling station for 1,000 mm and 1,200 mm cans
	CCA: Rotary can changer for 600 mm and 1000 mm cans
	TC-CM: Manual coiler for 600, 900 and 1000 mm cans
	IDF 2: Integrated draw frame for round cans

Grinding devices and mounting equipment

Continuity of carding quality

Flat Grinding Device TC-FG

With the new Truetzschler grinding device TC-FG, the activation of flats clothing is now even easier and faster. The grinding roll is perfectly adjusted to the Truetzschler Card TC 15 and provides a precise grinding result.
In addition to being light-weight, the grinding device is also simple to operate. Two adjusting screws allow easy adjustment of the roll to ensure an optimal grinding setting.

Quick and simple activation of flat tops by means of the grinding device TC-FG.

Grinding Device TC-GD for main cylinder and doffer

With the traversing Grinding Device TC-GD, optimum results are achieved when activating the metallic cylinder and doffer wires of the Truetzschler Card TC 15. The wire tips are ground in a smooth and burr-free manner over the entire card width. This leads to best carding results.

The traversing grinding device TC-GD improves carding results for cylinder and doffer.

Truetzschler Flat Top Mounting Machine

Truetzschler Card Flat Top Mounting Machine TC-FMM is used for mounting different types of flats from different brands, enables an easy quick and exact mounting of the flats, significantly reduces the standstill period of the carding machines for the renewal of the card wires.

- Apply to Truetzschler and other brands' flat tops
- Highly precise mounting of flats, improves production quality
- Color touch screen, simple operation
- Festo pneumatic system, excellent equipment quality
- Safe closed structure, easy maintenance
- Safety light curtains, safe security

TC-FMM for mounting different types of flats from different brands.

Wire Mounting Equipment TC-ME

With the comprehensive Truetzschler Wire Mounting Equipment TC-ME, your cards are optimally prepared for clothing and re-clothing:

- a complete tool set for applying Truetzschler card clothing,
- a mounting frame for applying clothing to licker-in and cleaning rolls of cards, and
- an unwinding machine for re-clothing

With the comprehensive Mounting Equipment TC-ME, all cards are optimally prepared for clothing and re-clothing.

The tool set for applying clothing can be used for all Truetzschler cards. It is easy to install and operate, thus ensuring short downtimes. The corresponding T-Winder allows uniform mounting of any clothing type and thickness. Ceramic guide elements in combination with a traveller guide allow a constant winding tension that can be permanently monitored via display.

In case the clothing wire cannot be mounted at the machine itself, there is the possibility to use the supplied mounting frame. The quick-release fastener of the T-Winder allows fast assembly and disassembly.

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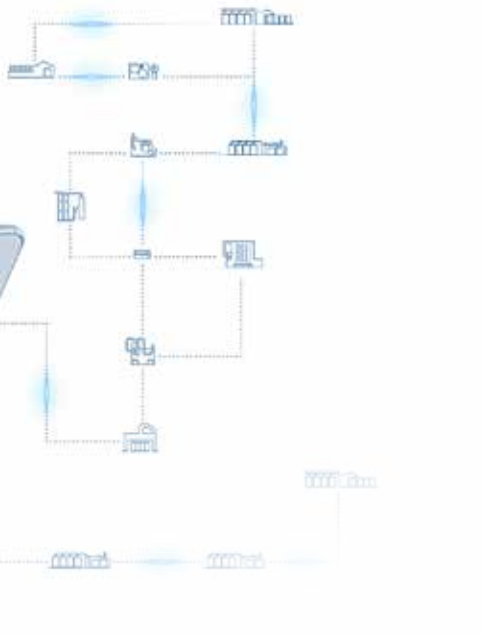

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TRÜTZSCHLER SPINNING

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

TRÜTZSCHLER NONWOVENS

Bale openers/Mixers | Card feeders | Cards/Crosslappers Wet laying lines | Hydroentangling, needling, thermo- and chemical bonding lines | Finishing, drying, winding, slitting machinery

TRÜTZSCHLER MAN-MADE FIBERS

Filament lines: Carpet yarns (BCF) · Industrial yarns

TRÜTZSCHLER CARD CLOTHING

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

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