

Card Optimizer T-Con for TC 03 Cards



T-Con – the ingenious optimisation tool now also for TC 03

The T-Con for the TC carding family was first introduced at ITMA 2007 in Munich. T-Con convinced the experts already in Munich. It is the first system in the world that shows the actual carding distances of the current production conditions on the touch screen. Thus, we refer to T-Con also as „electronic feeler gauge“. Meanwhile, none of the users would want to do without T-Con. For this reason we now also offer T-Con for retrofitting to all Trützschler cards TC 03.

T-Con includes five functions with different effects:

1. T-Con Actual

Every spinning expert knows that carding distances have a significant influence on quality. However, this carding distance is not the one that is set when machine is cold. It is the distance that occurs when machine is warm, e.g. under production conditions.

It is quite surprising that each high production card on the market experiences carding distance differences of up to 10/1000" (0,25 mm) between cold and warm condition. Up to now, this big difference is not being detected and displayed, thus the user is not aware of it. All things considered, this is an unsatisfactory situation.

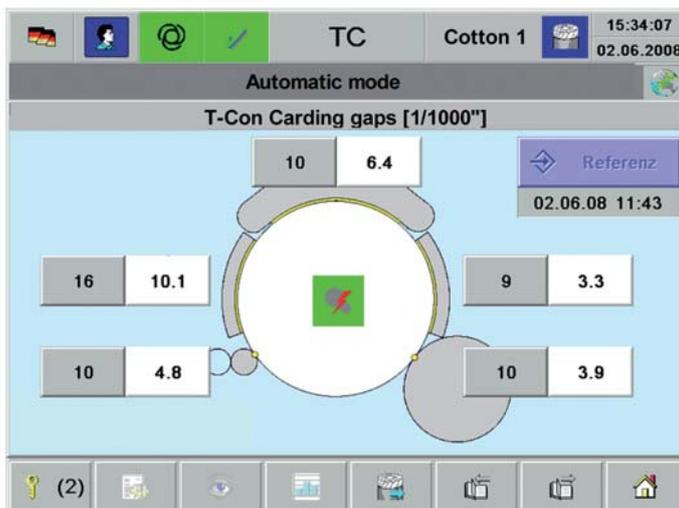
2. T-Con contact monitoring

In addition, T-Con includes a safety system for the card. It prevents serious damage caused by clothing contacts between main cylinder and carding elements surrounding the cylinder. The card production is stopped immediately if there is just minimal contact with the clothing.

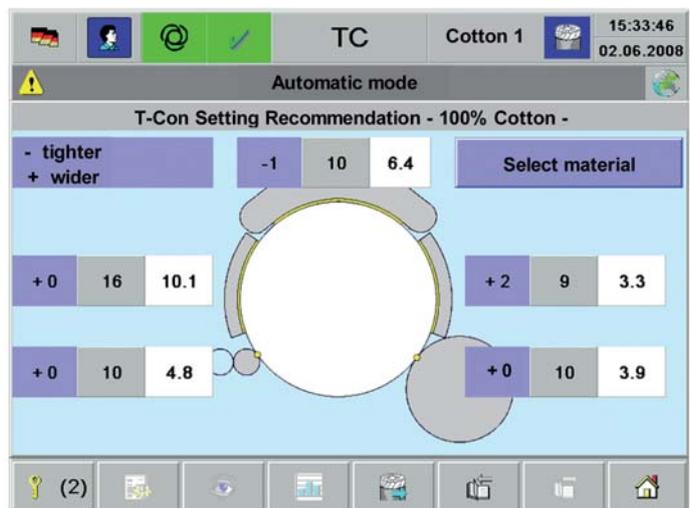
3. T-Con distance optimisation

Based on numerous practical results, we analysed the interrelationships between yarn quality and ACTUAL values. Thus, we are familiar with the values for all carding elements that generate best yarn quality. This know-how is integrated into our card software. Based on the ACTUAL values, the control now displays a recommended distance on the touch screen. A specific recommendation is provided, on which work elements the setting must be increased or decreased and by how much. Complying with this recommended optimisation allows the user to achieve best possible yarn quality. The software distinguishes between three material classes (100% COTTON, 100% PES, 100% CV).

This distance optimisation is an absolute novelty on cards. It represents a great help and simplification for the user. Frequent setting changes and corresponding final spinning are eliminated. With T-Con distance optimisation, Trützschler integrated its extensive know-how for the first time into the card control, useful to every customer.



In addition to the manual settings carried out in cold condition (grey fields: SETTING), the actual values (white field: ACTUAL) of the current operating condition are displayed.

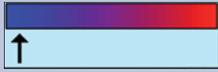


This is a T-Con distance recommendation from actual operation. The blue highlighted numbers show the user in an easy and comprehensible manner on which function elements the carding distance must be increased or decreased by how many /1000 inch. In this case, the flat should be set 1/1000" narrower and the post-carding segments 2/1000" wider. The other settings are alright.

4. Operating state analysis

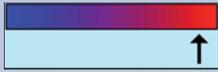
On every card, the temperatures have a large influence on carding distances. Therefore, it is essential to know and display the current operating conditions of the card. T-Con distinguishes between the three operating conditions:

cold:



- Machine must be cold when performing settings with feeler gauges.

warm:



- Access data for distance optimisation on touch screen only in warm operating condition, when carding distances are no longer subject to change.

Transition phase:



- The operating conditions during warm up and cool down are transition phases. In these phases it is not permitted to carry out settings that require feeler gauges. Of course, the reproducible settings with the Precision Flat Setting System PFS and the T-Con-Spacer (see the following section) of the pre and post carding segments can be carried out without any problem.

These operating condition symbols are shown on the T-Con touch screen illustration.

These status analyses that are applied for the first time shed light on the set-up work and allow controlled, precise and reproducible card settings.

5. T-Con Spacer

As a result, distance changes that can solely be determined by the application of feeler gauges shall only be performed when card is cold. Regrettably, it takes up to four hours before a card has cooled down. For the spinning expert, this is often an unacceptable long waiting period. This is why T-Con-Spacer has been developed. T-Con-Spacers look much like thin feeler gauges and are inserted laterally between assembly bend and fixed carding segment; they are automatically fixed by the carding segments. Four different T-Con-Spacers in various thicknesses are available. They each differ by 2/1000 inch.

By replacing these T-Con-Spacers, an absolute distance change of the fixed carding segments to the cylinder is ensured for the first time in any operating condition of the card. There is no simpler and faster way to perform a controlled carding distance change.



T-Con-Spacers are inserted between assembly bend and fixed carding segment and automatically fixed.

Due to the identification colours, the T-Con-Spacers cannot be confused.



Successful in practice

Thanks to these numerous advantages it has been proven in practice that T-Con improves yarn imperfections by approx. 15% and/or results in production advantages. This not only applies to cottons, but also to man-made fibres. The five T-Con functions allow carding at highest level. They facilitate, expedite and define targeted card optimisation as never before. With T-Con, card optimisation is no longer reserved for a few specialists. The success of T-Con during its market introduction has been convincingly established in many spinning mills. The staff in the spinning mill are very impressed by the comprehensive support offered by T-Con. They confirm that with T-Con even less experienced personnel can set the cards with absolutely pleasing yarn results.

Now Trützschler TC 03 Cards also have an accessible and perfect card technology on board.

Card optimisation with T-Con:

- easier
- faster
- more accurate
- more specific

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