



Fig. 1: RSB-D 50 draw frame – highest productivity with 1200 m/min delivery speed.

RSB-D 50 Draw Frame: A new dimension in productivity, quality and operation

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The new single-head draw frame generation is characterized by its performance: productivity increase of upto 33%, reduced energy costs, quicker lot change at outstanding sliver quality and easy, intuitive operation.

In the fall of 2016, Rieter introduced the new RSB-D50 single-head draw frame for the first time to a global audience at the exhibitions ITMA Asia in China and ITME in India (Fig.1). The new draw frame generation excels with a multitude of innovative solutions. These reduce costs, increase the quality and simplify operation and maintenance.

Energy saving drive concept ECOized with 25% fewer belts

With the patented drive concept ECOized, 25% of the belts and drive ele-

ments as well as the differential gear are saved compared to the previous model. Two servo-motors drive the drafting system. Unique features are the frequency-controlled drive for the suction

and the individual drive for the coiler. The new drive solution for the coiler leads to straight belt tracking and a far longer lifetime (Fig. 2). The quiet machine is evidence of the low abrasion.



Fig.2: The servomotor for the coiler allows rapid optimization of the speed.

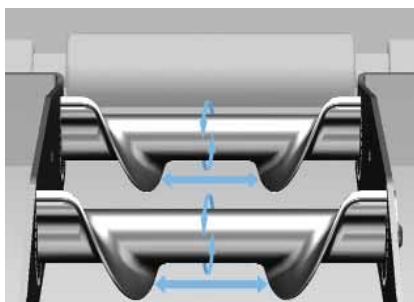


Fig.3: Patented sliver guide for consistent and reproducible quality.

Lower electricity costs per year

The new drive solution generates yearly savings of approximately Euro 1000 for each RSB-D 50. If the saving over the lifetime of the machine is compared with the investment, a very attractive ratio results.

As a standard feature, the draw frames are now equipped with integrated energy measuring. Should a significantly increased power consumption occur, preventive maintenance can be carried out and a breakdown of the machine thus avoided.

Even tougher with power fluctuations

With a short power fluctuation, the control voltage is supplied from the drive converter. This energy store can compensate short-term voltage interruptions and reductions. The draw frame keeps running. With longer interruptions, the draw frame with active autoleveling shuts down in a controlled manner. The web remains in the threaded condition and allows a rapid restart.

Further optimized drafting system engineering

Conventional sliver guides in front of the drafting unit are often wrongly adjusted. The most frequent fault is non-central guidance of the sliver. The new, patented sliver guide guarantees central guidance of the sliver at all times and therefore consistent sliver quality (Fig. 3). The web width is reproducible and is set by simple swivelling of the guide elements. Additional fiber guides in the main drafting field prevent lateral slipping of the edge fibers. Fewer disturbing faults in the yarn are the result. Furthermore, the top roller bearings are permanently lubricated and run at a lower temperature.



Fig.4: CLEANcoil-PES: the coiler for 100% Polyester fibers.

When processing fibers with high fiber-fiber friction, as is the case with man-made fibers, active sliver separation is necessary for a trouble-free can change. To achieve this, the motors of the autoleveler drafting system create a thin place, which is transported below the coiler and deliberately breaks at can change.

CLEANcoil and CLEANcoil-PES coilers for precise sliver coiling

CLEANcoil is the standard coiler for all fiber materials and therefore offers maximal flexibility. The spiral coiling tube ensures coiling which is free of drafting faults, even at high delivery speeds. A honeycomb structure on the coiler underside reliably prevents deposits.



Fig.5: Precise coiling of Polyester slivers thanks to CLEANcoil-PES coiler.

For the processing of 100% polyester, the latest development CLEANcoil-PES (Fig. 4) with a new type of coating offers unique advantages in coiling.

Even with critical polyester fibers, the cleaning cycle can be extended by at least 100%. This also leads to more consistent sliver and yarn quality (Fig.5).

Up to 33% higher productivity at equal or better yarn quality

The SB-D 50 draw frame without leveling and the RSB-D 50 autoleveler draw frame produce, in practice, at a delivery speed of up to 1200 m/min.

Depending on the fiber material, up to 33% higher speeds in comparison to the previous model are possible.

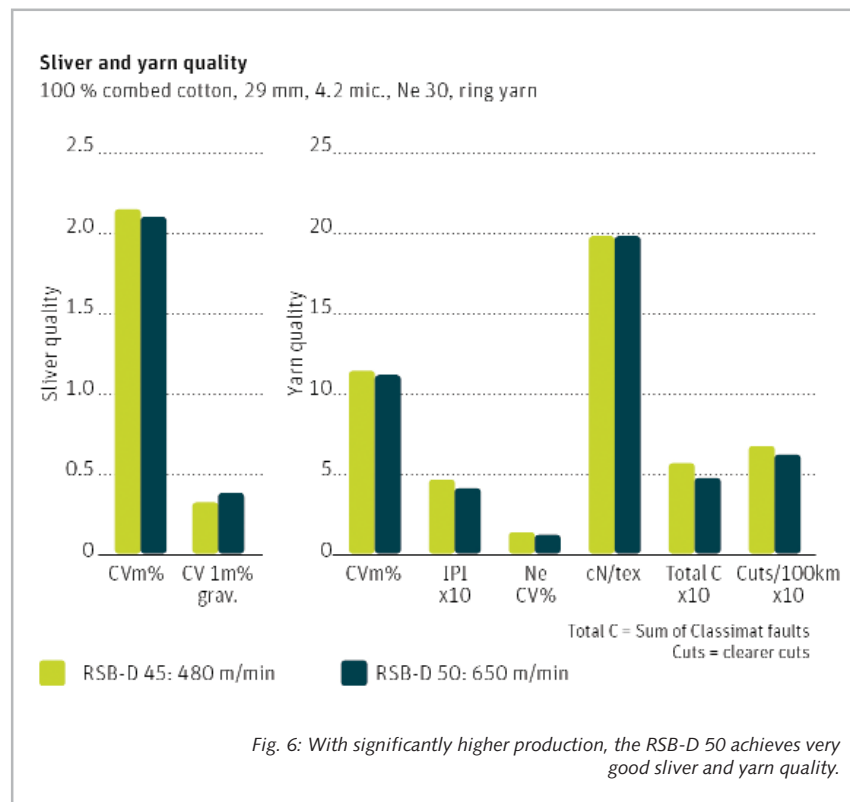


Fig. 6: With significantly higher production, the RSB-D 50 achieves very good sliver and yarn quality.

The following is an example of a customer who processes combed cotton. The RSB-D 50 is operating at 650 m/min, the previous model RSB-D 45 at 480 m/min. Despite far higher delivery speed, the sliver quality values of the RSB-D 50 achieve an equally good level (Fig. 6). The yarn count Ne 30 shows equal or even slightly better quality. In the nine-week long-term test, the mean values of the disturbing faults on the RSB-D 50 are also remarkable. Compared to the RSB-D 45, that already achieves very good quality values, the Classimat values could be improved by 13% and the winder cuts by 8%.

Touch display and LED displays for intuitive operation

The SB-D 50 and RSB-D 50 use the latest control generation as well as a colored touch display with a high resolution. This allows intuitive and easy operator guidance (Fig. 7).

Clear indications are of decisive importance for the operator when it concerns efficient working. Here, LEDs, that are visible from afar and provide information on the condition of the draw frame, help (Fig. 8). They simplify the operator's work immensely. By means of the USB interface, the data is quickly and easily transferred to other machines. Connection to the Rieter mill control system SPIDERweb is possible as a standard feature.

Technological know-how in the machine display

Frequent personnel changes or shortage of specialists are increasing problems for spinning mills. Rieter offers the remedy with setting recommendations that appear directly on the machine display.

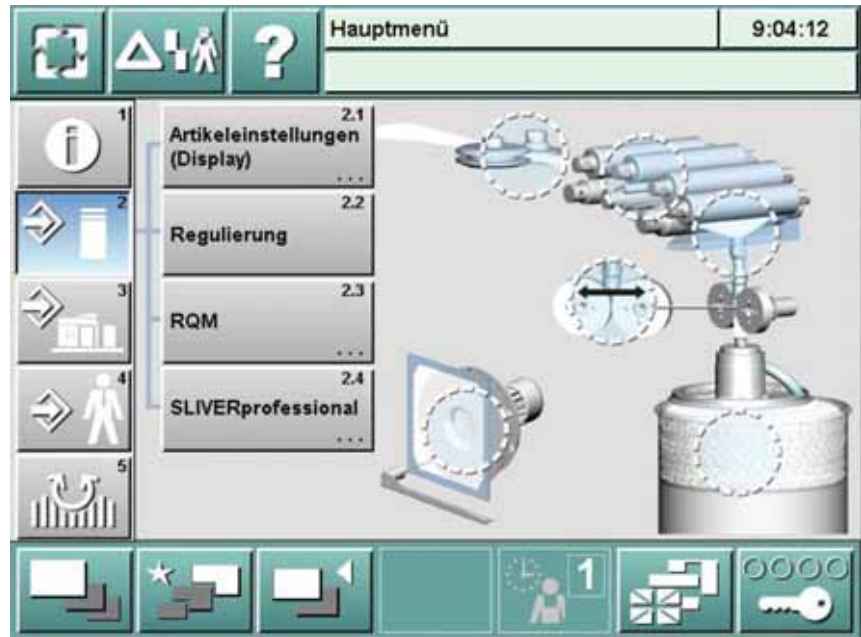


Fig. 7: Easy operation: touching the selected fields leads directly to the required menu item.



Fig. 8: LEDs visible from afar allow the operators to work efficiently.

play. The basis is the well-known SLIVERprofessional expert system which is now integrated in the machine display. It provides valuable technological support. This unique tool offers setting recommendations for the entire machine, after the raw material data has been entered. These can be transmitted as a data record onto other machines. In addition, SLIVERprofessional assists with the analysis of spectrogram faults such as

periods and draft waves. In this way, faults are rapidly corrected and the availability of the machine is increased.

Assembly on or recessed into the floor

The SB- and RSB-D 50 allow, as previously, assembly on the floor. This makes very flexible positioning possible. A new option is to install the machine recessed into the floor. This means, the transfer height of the can on the empty can magazine is lower and thus more convenient. The full cans are pushed out directly onto the spinning mill floor.

Proven advantages of the RSB-D 45 are retained

The RSB-D 50 keeps unique features of the previous model which are all patented. Here is a selection:

- ❖ Effective suction by automatically lifting clearer lips on the top rollers.
- ❖ CLEANtube for sliver coiling without trash accumulations – for cotton applications.
- ❖ Sensor for exact first sliver coils, even with can plates that are too low.

With the RSB-D 50 and SB-D 50, Rieter sets another milestone in draw frame engineering for the benefit of our customers. Once more, the saying prevalent amongst mill managers "Buy an RSB and you can sleep peacefully," applies in this context. ♦