



# COMPACTeasy

The new mechanical compacting solution

COMPACTeasy –  
The new mechanical compacting solution for basic compacting needs, available for most common applications in cotton, man-made fibres and blends





## COMPACTeasy – features and unique selling points



Fig. 3: COMPACTeasy on Rieter P3-1 top weighting arm

COMPACTeasy is a mechanical compacting system permitting real compacting without additional energy consumption owing to the y-channel in the Compactor. COMPACTeasy is particularly suitable

- for any type of ring spinning machine as investment on new machinery or retrofit to used machinery,
- for the most common applications, including the spinning of blends and 100% man-made fibres,
- for yarn count ranges from Ne 20 to Ne 80,
- for customers with a restricted investment budget,
- for customers using the fast plug on/off ability to switch easily between compact spinning and conventional ring spinning.

COMPACTeasy is different from other mechanical compacting systems in many respects. These are not only the wear of spinning components, but also yarn parameters and the consistent yarn quality due to

- the y-channel and its double compacting function reaching similar levels in the yarn values and parameters as in pneumatic compact spinning,
- the real compacting without energy requirement (zero energy),
- the traverse motion of the Compactor leading to longer lifetime of cots and consistent yarn quality from spindle to spindle.

## COMPACTeasy – components



Fig. 4: COMPACTeasy retainer with COMPACTeasy Roller, easy-Spring and Compactor with y-channel



Fig. 5: Compactor with y-channel and Pin

The COMPACTeasy device consists of the **retainer** holding the front top roller and the smaller **COMPACTeasy Roller**. The **easy-Spring** is pressing the COMPACTeasy Roller onto the bottom roller. Between the two top rollers there is the **Compactor** with the **y-channel** and the preceding **Pin**. The Compactor is pressed against the bottom roller by the Compactor spring with a low spring force, thus causing considerably less wear on the Compactor than magnetically loaded compacting elements.

The retainer (Fig. 4) consists of the red body, the easy-Spring to apply the pressure to the COMPACTeasy Roller and the Compactor spring to hold the Compactor and apply soft pressure to position it on the bottom roller.

The retainer with the front top roller is clipped into the top arm. This top roller is part of the basic ring spinning machine and is reused. COMPACTeasy requires top roller cot dimensions of 29 x 25 mm.

Ne 20	Ne 30	Ne 40	Ne 50	Ne 60	Ne 80
P5 (black)					
P4 (white)					
	P3 (green)				
P2 (yellow)					
				P1 (red)	

Chart 1: Pin for certain yarn count range

Due to the traverse motion of the Compactor no grinding of the COMPACTeasy Roller is necessary. The cots are exchanged at the end of their service life. Depending on the fibre material spun, a lifetime of 1.5 years can be expected.

The y-channel in the Compactor (Fig. 5) provides more intense double compacting which has a positive effect on the yarn parameters as it is real compacting.

The Pin function is similar to the PINSpacer in conventional ring spinning. This Pin preceding the y-channel takes effect in exactly that zone of the main drafting system where the fibres have the least guidance, thus improving the yarn irregularity and increasing yarn tenacity. Four different Pin heights (1 - 4) and one without Pin (5) are assigned to different yarn count ranges (Chart 1).

## COMPACTeasy – traverse motion support



Fig. 6: Transmission of the traverse motion to the Compactor



Fig 7: Transmission of the traverse motion to the Compactor  
(view from rear side)

Part of COMPACTeasy is the traverse motion support (Figs. 6 and 7). The traverse motion of the standard rod in the ring spinning machine is transferred along the drafting plane directly to the Compactor, enabling a traverse motion of 6 mm at the COMPACTeasy Roller. This is a considerable advantage over the flipping of the front top roller usual in mechanical systems. It extends the lifetime of cots and ensures in particular a permanently constant yarn quality (Fig. 8).

To support the traverse motion system in the ring spinning machine, pneumatic or electronic drives are installed at each machine end. Each device moves the right and left traverse motion rod simultaneously. To prevent the traverse motion rods from buckling they are pulled!

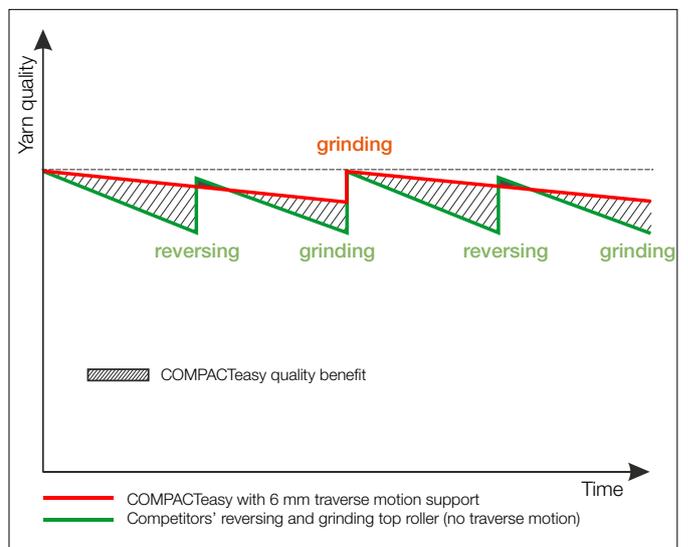


Fig. 8: Quality advantage of COMPACTeasy traverse motion support vs. flipping top rollers in competitors' systems

# COMPACTeasy – intense mechanical double compacting

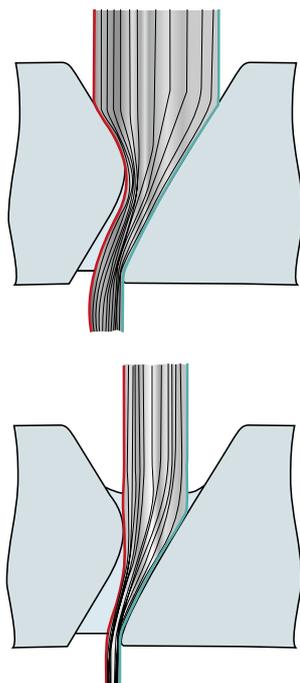


Fig 9: y-channel in Compactor – intense double compacting for all yarn counts

The y-channel in the Compactor (Fig. 5) is independent of the yarn count (Fig. 9). The geometry of the channel is such to ensure an invariable fiber path, the closest passage of the Compactor being wider than the different channels of other mechanical compacting systems. Obstruction of the channel by trash or thick places is therefore excluded. Furthermore, the y-channel permits double compacting, because mechanical compacting is effected twice by the special shape of the channel and the S-shaped flow of the fibre strand in the channel. This more intensive compacting compared to other mechanical compacting systems has a positive effect on the yarn parameters.

The yarn quality produced by COMPACTeasy is determined not only by the Compactor, meaning the y-channel, but also by the integrated Pin. This Pin preceding the compacting channel takes effect in exactly that zone of the drafting system where the fibers have the least guidance, thus improving the yarn irregularity and increasing yarn tenacity. Consequently, the yarn parameters reach a level similar to pneumatically spun compact yarns and a much better level to conventional ring yarn and other mechanical compacting systems (Chart 2).

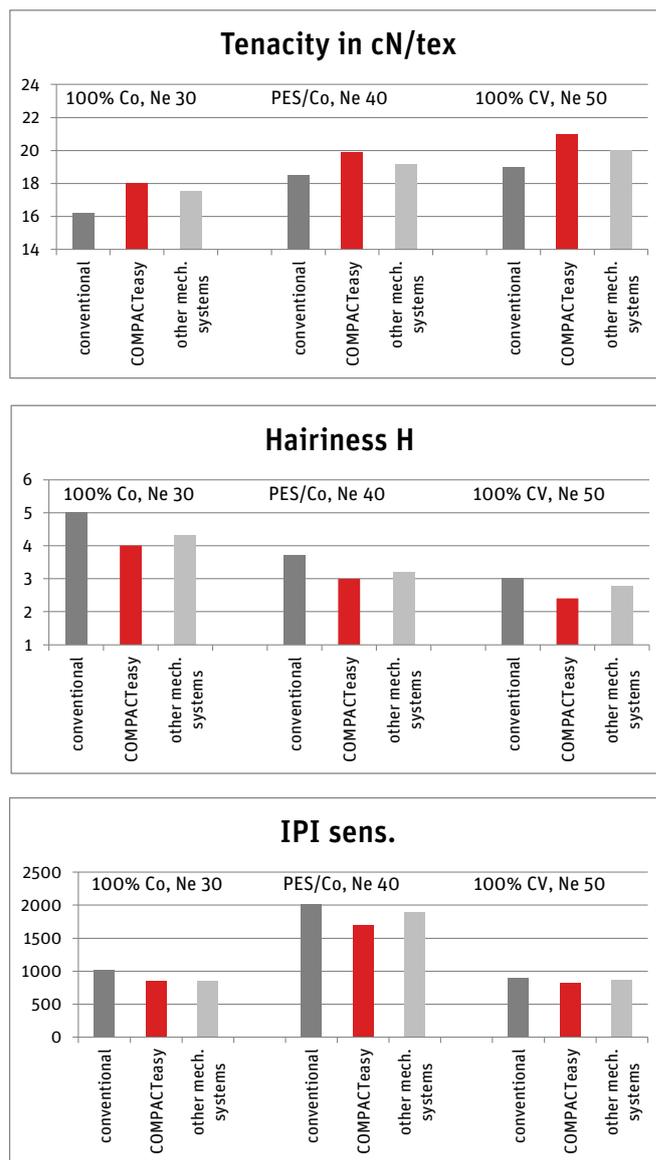
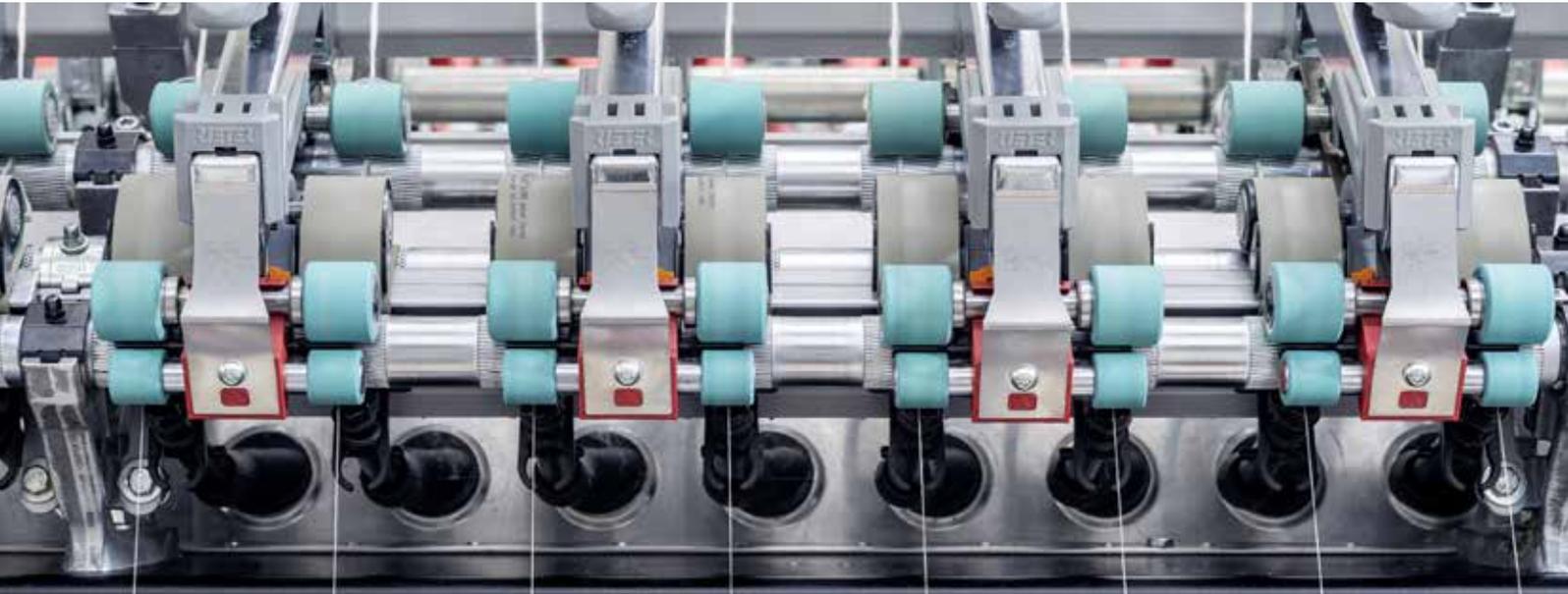


Chart 2: yarn values achieved with COMPACTeasy vs. conventional ring spinning resp. other mechanical compacting system for different yarn counts and materials



Rieter G 32 with COMPACTeasy

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