



MEC Short Stretch KIT

Since : 1984

The ring spinning technology will continue to be the most widely used spinning process in short staple spinning. The spinning geometry is a critical aspect in the spinning process of staple yarn. Especially for Compact spinning, when and with the additional parts are included, the optimization of spinning geometry plays a vital role in getting very good performance in spinning.

- i) Distribution of fibre tension in the spinning angle
- ii) Twist insertion rate in the yarn
- iii) Binding-in of fibres
- iv) The properties of spun yarns
- v) Tension in yarn and the performance of the machine.
- vi) Spinning end breaks and Yarn parameters

Diagram illustrating the geometry of a roller beam mechanism. The diagram shows a roller beam of length 270, with a roller of diameter 180. The beam is supported by a vertical lift of 160. The geometry is defined by the following dimensions and angles:

- Roller beam length: 270
- Roller diameter: 180
- Lift: 160
- Tube length: 180
- Distance from roller center to the first joint: 90
- Distance from the first joint to the second joint: 55
- Distance from the second joint to the end of the tube: 42.5
- Distance from the end of the tube to the vertical lift: 82.5
- Angle between the beam and the vertical: 22.5°
- Angle between the tube and the vertical: 15.2°
- Label: Compact Geometry

Diagram illustrating the geometry of a roller beam system for a lift. The beam is 270 units long, with a 90-unit section at the top. The lift tube is 180 units high. The beam is supported by a roller at the bottom, which is 42.5 units from the base. The lift is 160 units high. The beam is tilted at 3.7 degrees. The lift is labeled "Regular Geometry".

IRREGULAR SPINNING GEOMETRY

Short Stretched Spinning Geometry :

The reduction in stretch length and higher spinning angle in ring spinning results into higher-spindle speed due to better twist propagation and stable ballooning with reduced yarn breakage.

The diagram A) and B) clearly illustrates the clear difference in ballooning between optimized spinning geometry and Irregular spinning geometry.

A).Short Stretched Spinning Geometry

Spindle to Spindle centre – 680 mm
Angle – 14.40 deg (pig tail rest) (Compact)
IG+IB+ spindle WH – 494 mm



B).Irregular Spinning Geometry

S-S – 620 mm
Angle – 6.37 deg (Pig tail rest) (Compact)
IG+IB+Spindle WH- 539 mm



The Inclination of Drafting Arrangement:

The angle of inclination of drafting arrangement is one factor which determines the height of the spinning triangle. The inclination of drafting arrangement is with respect to the horizontal line of the machine. If the drafting arrangement is mounted with a relatively low inclination, the angle of the wrap of the fibre strand over curvature of the front bottom drafting roller is large; this will give a long spinning angle, with its associated advantages and disadvantages. With a steeper inclination and large angle (α_2), the deflection angle $\angle 2$ is small and the spinning triangle is short. The inclination of the drafting arrangement in modern ring spinning machines now lies between 45° and 37° .

Features & Benefits of MEC Short Stretch Kit



The short stretch modifications with increased spinning triangle is gaining momentum right now in the spinning industry especially for compact spinning machines,



The significant Reduction in spinning breaks **30% to 50%**



The Superfine counts have been manifested reduced thin places.



Tension conditions, Binding-in of the fibres, Number of End Breakages, Yarn Hairiness, Yarn Irregularity, and Generation of Fly have been also improved significantly.



Up to 10% more production can be achieved due to reduced spinning breaks and thereby increased spindle speed.



Our MEC short stretch kit suitable for all counts and all spindle and tube length.



Payback - Less than 6 months



Reduced spinning breaks and thin places influences the improvement in down stream processes like warping and weaving.



Considerable improvement in restarting breaks noticed during the studies as reported by the customers



Easy mending of spinning breaks



Our MEC Short stretch kit available for all Models of LMW machines.

- LR G5/1
- LR 6/S
- LR 60/A
- LR 9 Ax

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