All about TeraSpin

Issue - 2

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Message from the Director

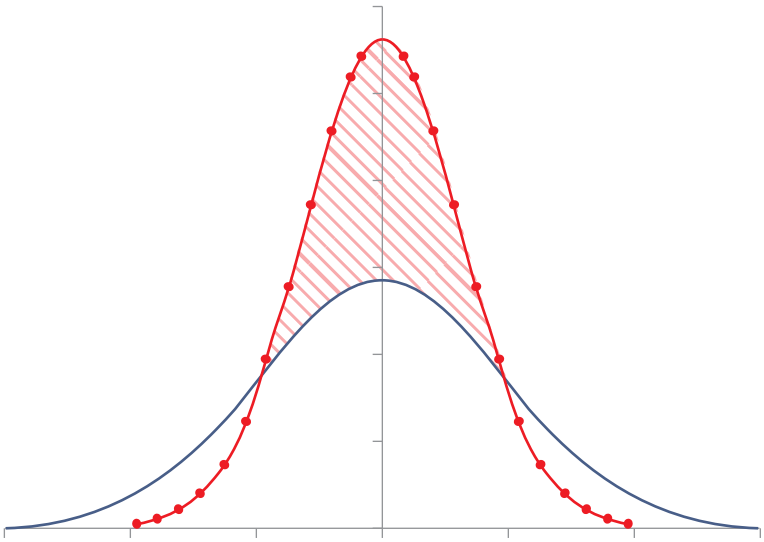
K P Singh, Director-Operations

Dear Readers

What makes TeraSpin products so special, one may ask? The simple answer is our commitment to total quality – a quality level with 'zero' defects.

Statistically, when thousands of parts get manufactured, it is not possible to produce all of them with exactly the same dimensions. This can explain why all component designs include specification tolerances, which are designed to ensure a minimum level of the acceptable product performance. Obviously, the product performance is best at the nominal/perfect specification and likely to deteriorate as we move away from the nominal specification. As per the Taguchi loss function, the loss to the customer and/or society increases exponentially with deviation from the nominal specification.

While most manufacturers would be satisfied to produce quality that lies between the specification limits, at TeraSpin we are striving for much more. We are constantly seeking ways to produce all products as close to their nominal specification limits as possible as shown in the peaked bell curve of the normal distribution. This is reflected in our goals for 'zero defects' and 'zero customer complaints'. In a nutshell, we are driving towards the achievement the of Six Sigma quality level for our TeraSpin product range, as opposed to a usual Three-Sigma level targeted by most. Our commitment to total quality and zero defects is part of the shop floor culture at TeraSpin



Normal distribution curve for products manufactured within the tolerance limit

A peaked bell curve for TeraSpin products show a much higher proportion manufactured close to the exact dimensions

The benefit to end users is that yarns produced with TeraSpin components have noticeably fewer imperfections. It is not difficult to imagine how a slightly off-centre revolving component will over time develop eccentricity that will induce periodic imperfections into the yarns being produced. Since the taste of the pudding is in the eating, we encourage trials with TeraSpin components on ring spinning machines to see the improvement that results.

With best regards

K P Singh

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Smart Cradle, OH S 168

It's been some months since the OH S 168 has been tried and adopted by mills who are constantly looking to improve yarn quality. The deeper understanding of how the Smart cradle scores over similar products can be simplified in one sentence – it takes care of any adjustments required for apron tension variations for individual spindles without affecting the front roller nip to apron nip distance.

Smart Cradle helps maintain exact and equal distance between apron nip and front roller nip

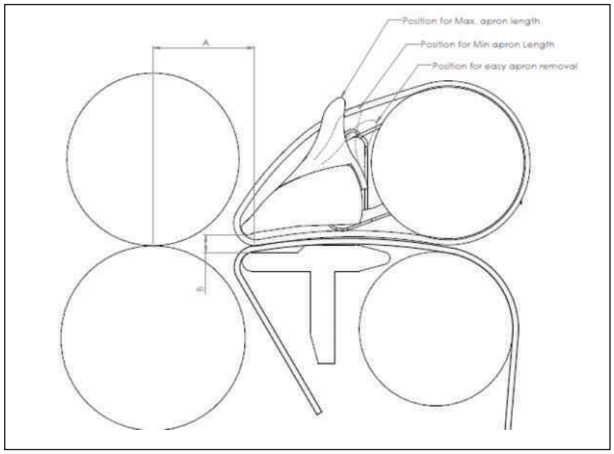


Figure 1

- Self-adjusting apron tension and yet constant radial distance of apron nip to top roll centre *(patent pending)
- Robust fibreglass reinforced polymer suitable for tough mill conditions
- Easy removal and mounting of apron
- Smooth rotation of apron
- Longer apron life

Other spring activated cradles can lead to nip distance variation with fluctuation in apron length or elasticity

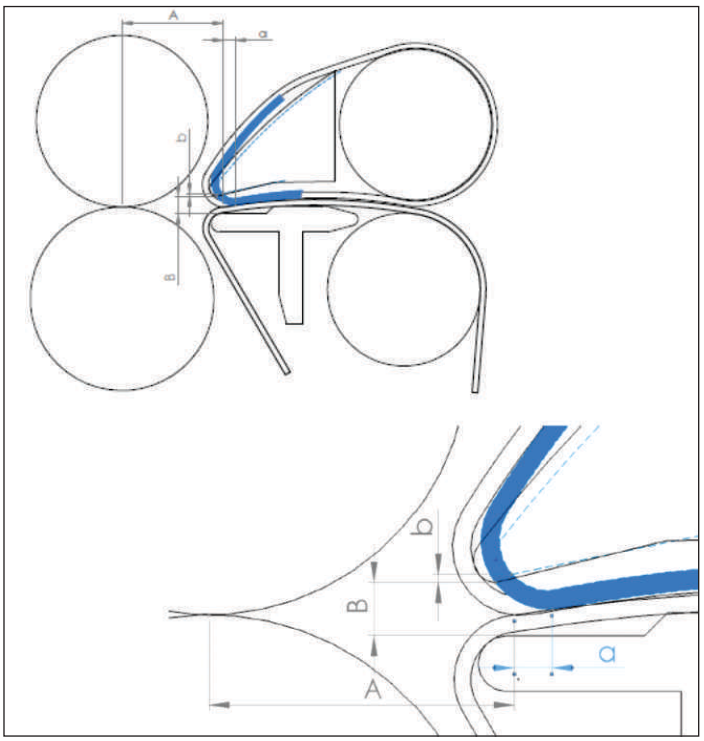


Figure 2

As can be seen in the diagrams along side, any fluctuation in apron tension results in the nose of the cradle shifting forward or back. This not only disturbs the nip distance from A to A +/- a, but also causes a vertical shift in the apron nip from B to B +/- b. These changes are a fraction of a millimetre but to a quality yarn spinner fractions count. It is fractions such as these that make a mill be counted in the top 5% of world's spinning mills.

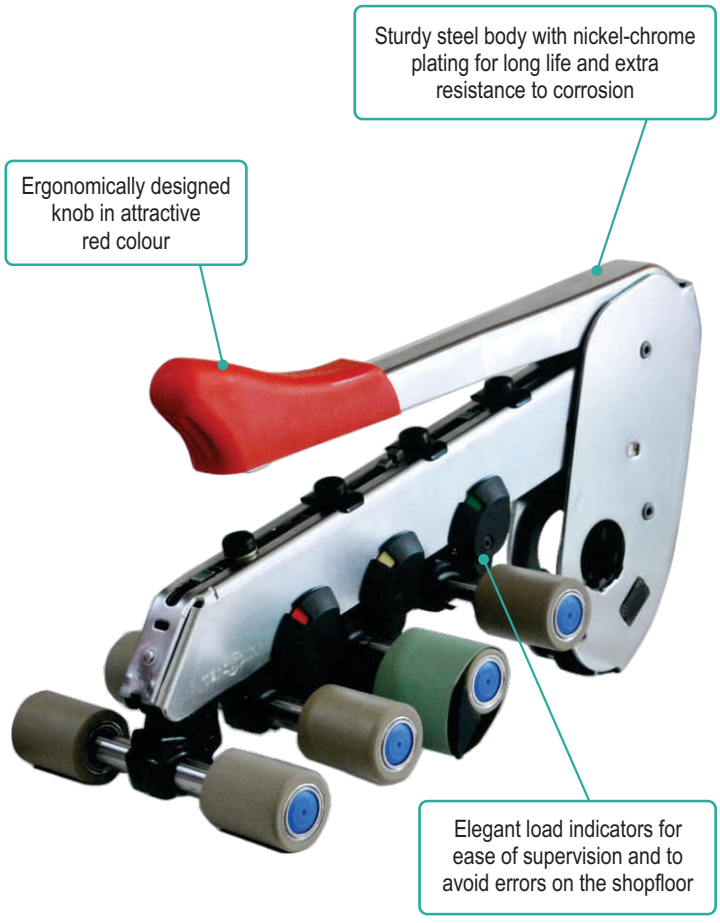
Trials have shown that there is up to 17% reduction in IPI (thin places of more than -50% scale and thick places of + 50% range and more) when the spring activated cradle with nose movement is replaced with Smart cradle.

The Smart cradle has none of the uncertainty associated with the pin type spacers. It is a sure shot path to improve yarn quality.

New Smart weighting arm, PK P 2000 series

Responding to the market demands, TeraSpin has developed a new "Smart" weighting arm with load indicators for speed frames. It has the usual steel body with nickel-chrome plating, which ensures longer life and extra resistance to corrosion. The differentiating feature is the load indicators on the top arm that are visible from three sides – front, side & top. Further, load indication is through use of the same colours (red, green & black) that spinning mills have been familiar with while using our existing speed frame top arms.

For mills wanting to change, the existing top rollers and cradles of the PK 1500 can also be used. That should make it easier to upgrade to the new Smart arm.



News and Events

TeraSpin's total commitment to quality, environment & safety is well reflected in certification of its manufacturing facility in Ahmedabad for ISO9001:2008 (Quality Management System), ISO14001:2004 (Environment Management System) and OHSAS 18001: 2007 (Occupational Health & Safety system).

As a part of the TeraSpin safety drive, a safety awareness campaign was run in April 2015 with enthusiastic participation from our colleagues on the shopfloor. Notable suggestions were recognised in a simple awards ceremony.

TeraSpin staff being awarded

TeraSpin staff being awarded

TeraSpin shopfloor

TeraSpin makes an impact at ShanghaiTex 2014

TeraSpin was present at the Dechang stand in the recently concluded ShanghaiTex, held in 15-18 June, 2015. The stall, which had spindles and top arms from TeraSpin on display, saw good footfall of enthused customers. Important contacts could be made and old ties renewed with machine makers from China and abroad. Visitors to the show were from all major textile producing companies in Asia and some from Europe, Africa and America too. Besides the display at the Dechang stand, TeraSpin PK1500 drafting system was also demonstrated on the Electrojet roving frame exhibited at the show.

TeraSpin at ShanghaiTex 2014

TeraSpin at ITMA, Milan

TeraSpin would be present at ITMA, Milan to be held from Nov 12 to 19. Visitors can learn more about TeraSpin and the latest in product development.

A.T.E. ENTERPRISES PRIVATE LIMITED
(Business Unit: **TeraSpin**)
Survey no. 251, Sarkhej Bavla Highway (N.H. no. 8A), Village: Sari, Taluka: Sanand, Ahmedabad - 382 220 India
Email: sales@teraspin.com Website: www.teraspin.com