

Case Study

TeraSpin Premium ES spindle impresses customer with 10% energy saving!

Background

A reputed textile mills in Bangladesh had been using European spindles on their ring spinning frames. This mill produces yarn from cotton as well as man-made fibres in a wide count range (Ne 20s to Ne 60s) for leading garment export houses. In view of the increasing energy costs in Bangladesh with surging gas prices, the customer had been looking for high quality, energy-efficient, and high speed spindles at competitive prices.

When the customer came to know that TeraSpin had introduced Premium ES spindles that offer many advantages, they invited TeraSpin to make a detailed technical presentation. They found that TeraSpin Premium ES spindles offer multiple benefits such as lower vibration, lower noise, and low energy consumption.

TeraSpin Premium ES spindles

TeraSpin Premium series spindles consist of Premium spindles and Premium ES spindles. TeraSpin Premium spindles come with HF 1 and HF 100 spindle bearing units with min. 18.5 mm wharve diameter and also with HF 21 spindle bearing unit with min. 20.2 mm wharve diameter TeraSpin Premium ES spindles come with HF 1 and HF 100 spindle bearing units with 18 mm wharve diameter and are designed to reduce energy consumption significantly. In view of the customer's requirement for highest possible energy savings, TeraSpin offered HF100 Premium ES 18 mm wharve diameter, which are designed to provide extra energy savings over and above the benefits of lower vibration, lower noise, and lower energy consumption provided by all Premium spindles.

Result

The customer carried out extensive trials to compare the power consumption of TeraSpin Premium ES spindles with the European standard spindles. They measured the power consumption of the spindle drive system (including main drive motor, main drive shaft, drive pulleys, drive belts, tension pulleys, etc.) with the European make standard spindles and TeraSpin Premium ES spindles on the same ring frame at different running speeds ranging from 15,000 RPM to 22,000 RPM.

The trials showed that TeraSpin Premium ES spindles with 18 mm wharve diameter consumed approximately 10% less power at a spindle speed of over 19,000 RPM, as compared to the European make standard spindles. The saving works out to about 1.25 watt per spindle, which translates into a significant saving of about Taka 71 per spindle per annum (USD 0.86 per spindle per annum).

The customer is quite impressed with the performance of the TeraSpin Premium ES spindles and their energy saving potential!



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