

Proven Performance: Energy Savings with the New High Speed HF S 562 Spindle

A leading spinning mill in western India, with an installed capacity of **125,000 spindles**, differentiates itself through its capability to manufacture **12,000+ types of yarns**. They are a reputed global supplier of cotton, polyester, and specialty yarns to diverse industries and applications including apparel, home furnishings, luggage, ropes, geogrid fabrics, seatbelts, upholstery, sportswear, innerwear, umbrellas, personal protective equipment, and pipes.

Background

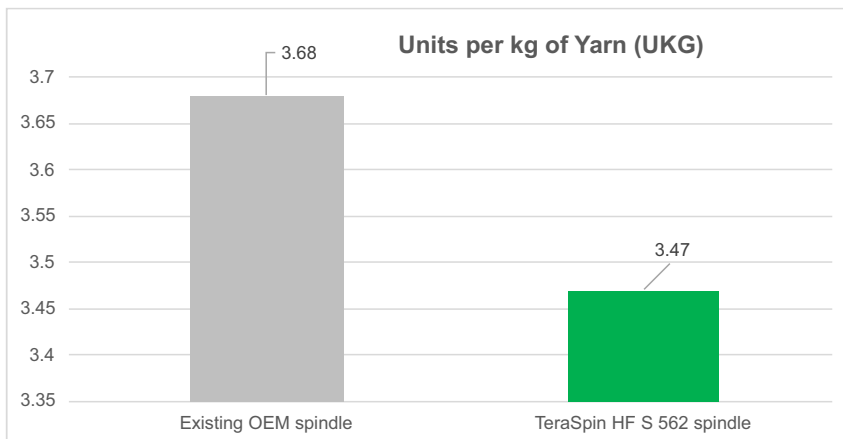
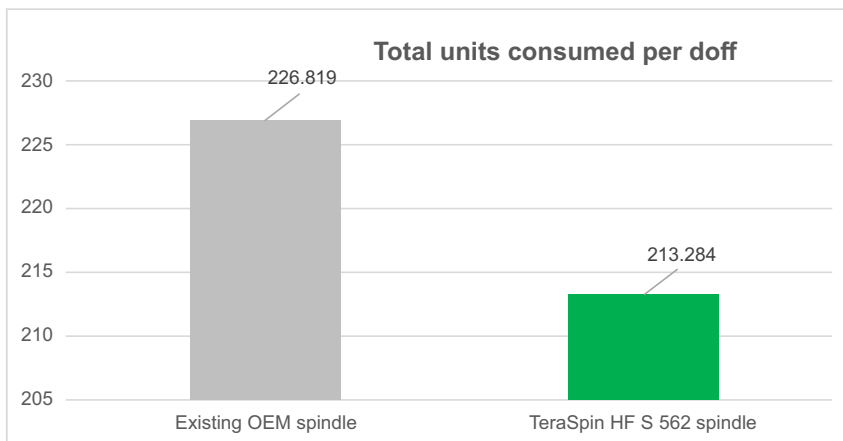
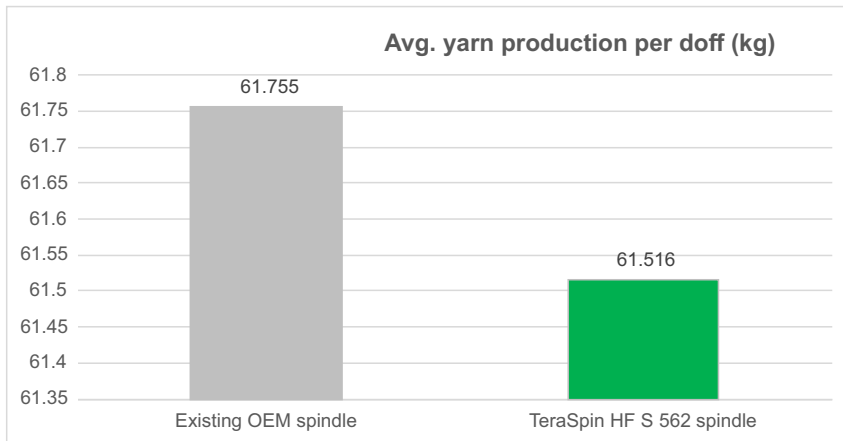
With a focus on innovation and operational excellence, the customer actively explores advanced technologies to upgrade product quality, optimise production, and reduce costs. This pursuit of continuous improvement provided an opportunity for **TeraSpin** to demonstrate the potential of their launched HF S 562 spindles on a LMW LR 9/AXL ring frame of 1,632 spindles working in the mill.

Performance of HF S 562 spindle

The production output and energy consumption were meticulously tracked both before and after over a one-month period, with data collected on a **shift-by-shift and day-by-day basis** for accuracy and reliability.

Make & model of the ring frame	LMW LR 9/AXL
Number of spindles per ring frame	1,632
Bobbin length	190 mm
Weight of empty bobbin	26 g
Ring diameter	36 mm
DUI	17.85 mm
Roving hank	Ne 1.15
Yarn count	Ne 61 CCW
Twist Multiplier (TM) / Twist per Inch (TPI)	3.3/26
Maximum spindle speed	23,500 rpm
Average spindle speed	23,029 rpm
Yarn length in full bobbin	4,000 m/38 g

Parameters	Existing OEM spindle	TeraSpin HF S 562 spindle
Wharve diameter	18.5 mm	17 mm
Average yarn production per doff	61.755 kg	61.516 kg
Total units consumed per doff	226.819	213.284
Units per kg of Yarn (UKG)	3.68	3.47
% reduction in UKG	–	5.7% reduction



Conclusion

- **UKG reduced with TeraSpin HF S 562 spindle: 0.21**
- **% UKG reduced with TeraSpin HF S 562 spindle: 5.7%**

The analysis revealed consistent power savings of 5.7%, validating the energy efficiency of the HF S 562 spindle. The customer is delighted with the direct boost to their bottom line achieved using the new HF S 562 spindle. At the same time other performance parameters and quality parameters remained the same.