PROSINO
A Subsidiary of the Rieter Group

STEELHAWK

Precision-engineered spinning ring

An exceptional choice in ring design

STEELHAWK

OUTSTANDING ADVANTAGES

Quality Consistency

Through special plasma like coating and high consistency of all mechanical parameters (out of roundness, hardness, roughness)

No Running in

STEELHAWK spinning rings feature a special non-metallic dry lubrication coating allowing the start of new rings at full speed.

Improved Yarn Stability

More stable yarn tension helps reduce yarn breaks, resulting in increased frame productivity.

Universal Traveler Compatibility

STEELHAWK rings operate efficiently with any internationally recognized traveler brands. Customized flange profiles are available upon request to meet specific requirements.

High-Speed Performance

STEELHAWK enables high working speeds due to several key factors: an exceptionally low surface roughness (below 0.2 µRa), an ultra-precise flange profile crafted using PROSINO form turning technology, and a durable dry lubrication coating with plasma-like anti-wear properties.

Exceptional Wear Resistance

Thanks to its advanced plasma-like coating, the STEELHAWK offers outstanding wear resistance, enabling a service life of up to 10 years.

Optimized Traveler Contact

The specially engineered flange profile, produced using precision form tool technology, ensures improved contact between the ring and the traveler for enhanced performance and durability.

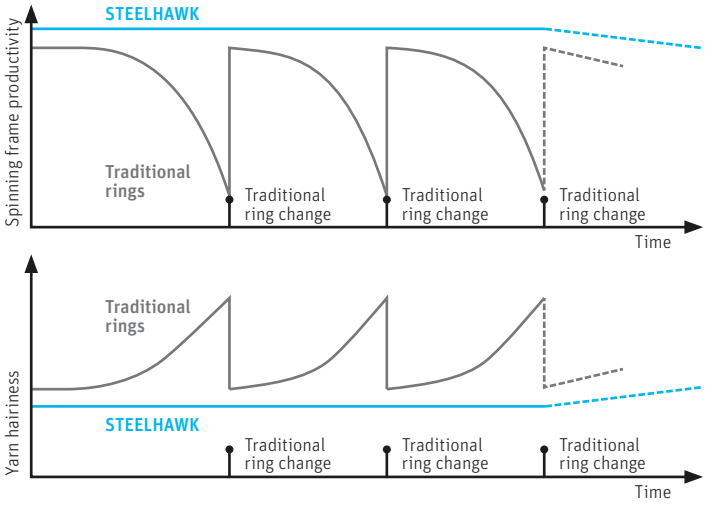
STEELHAWK:
A Benchmark in Spinning Ring Technology

STEELHAWK stands at the forefront of modern spinning ring design, the result of over 80 years of collaboration between PROSINO and leading OEMs and high-performance spinning mills worldwide.

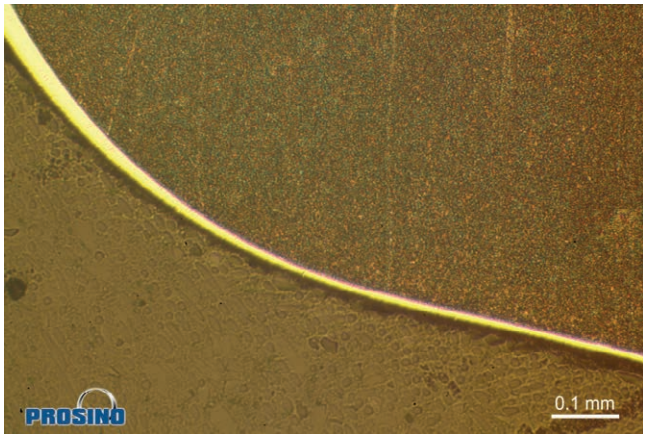
Excellent paypack

The STEELHAWK spinning ring offers key benefits that enhance productivity and reduce operational costs:

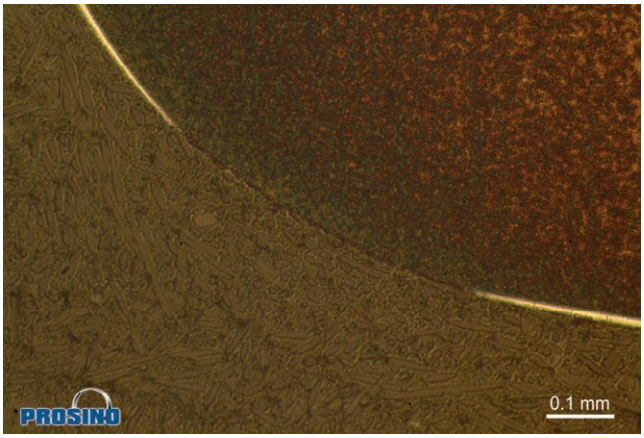
- immediate full-speed operation without running-in with any standard traveler number
- no ring surface deterioration thanks to a plasma-like coating that prevents micro-welding between the ring and traveler, thus minimizing wear and extending ring life
- improved yarn tension stability, resulting in fewer yarn breaks and enhanced frame productivity



Count Ne 20, Ring ID 38 mm, r. p. m. 19 800, 100% Polyester, Indian market – Analysis done on the inner flange area



STEELHAWK plasma coating after 58 months*



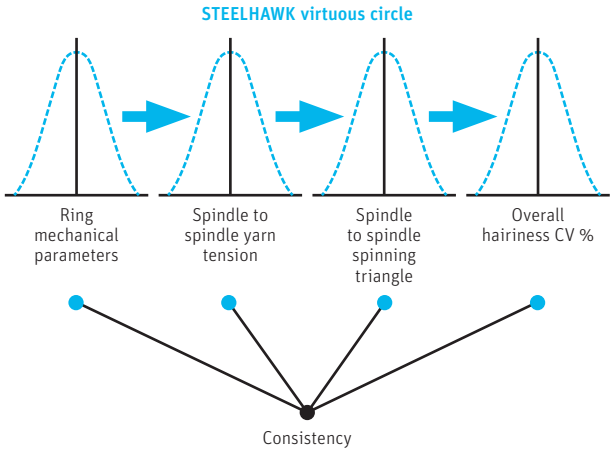
Competitor flange coating after 40 months*

* According traveller lifetime in days

High-speed performance

The STEELHAWK spinning ring is engineered to support high spindle speeds through a combination of precision manufacturing and advanced surface technology:

- low surface roughness below 0.2 µRa, minimizing friction and heat generation
- ultra-precise flange profile, achieved with PROSINO's proprietary form-turning technology, ensuring optimal traveler guidance
- plasma-like coating and dry lubrication, reducing wear and eliminating the need for additional lubrication
- high consistency, including out-of-roundness, hardness, and roughness, ensuring stable performance



Outstanding yarn quality

The STEELHAWK spinning ring plays a key role in reducing yarn hairiness by maintaining a smooth and stable surface across all spindle positions over time. One of the primary contributors to hairiness is variation in the spinning triangle, which is directly influenced by yarn tension. Yarn tension, in turn, depends on the friction coefficient between the ring and traveler.

As conventional ring surfaces wear (see Fig. 1), friction increases and becomes unstable, altering the spinning triangle and promoting hairiness. The STEELHAWK ring's advanced non-metallic, plasma-like coating resists wear and maintains low, stable friction. This contributes to long-term control of yarn tension and triangle geometry, helping to ensure low and consistent yarn hairiness.

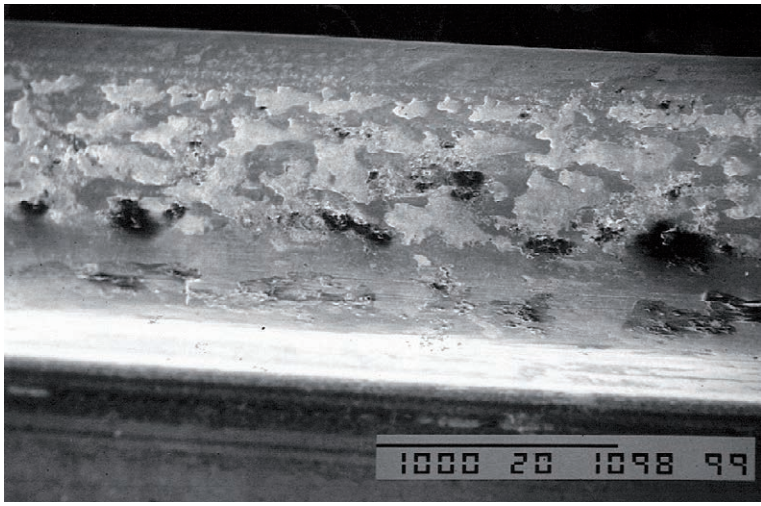


Fig.1: Traditional ring worn out pattern

Core material for wear resistance and stability

The STEELHAWK ring is manufactured from high-carbon, high-chrome, core-hardened 100Cr6 bearing steel—an alloy renowned for its durability and wear resistance. Only premium, low-sulfur, high-purity European steel is used, with each batch undergoing rigorous inspections before being released for production. The advanced heat treatment process (Fig. 2), including a sub-freezing step (Fig. 3), ensures long-term dimensional stability. This robust foundation allows STEELHAWK rings to perform reliably even under the most demanding operating conditions, such as compact cotton spinning, dyed synthetics, and 100% rayon.

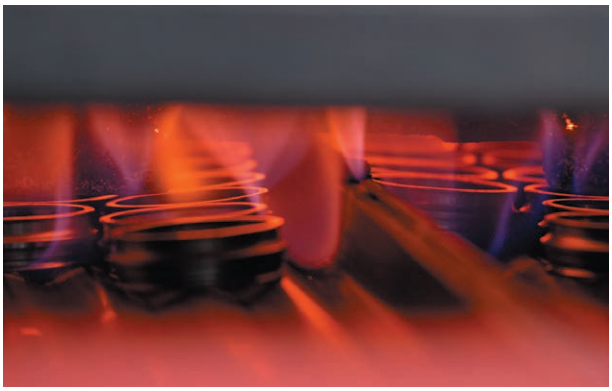


Fig. 2: Core hardness heat treating

Fig. 3: Special cryogenic sub-freezing treatment

Spinning Performances Examples

Ring ID	Fiber	Twist	Count [Ne]	RPM	M/S	Traveller ISO weight	L = specific pressure on ring in Nm
36	100% Cotton	Knitting	40	21 000	39.58	31.5	2 742
36	100% Cotton	Weaving	60	22 700	42.79	22.4	2 278
36	100% Cotton	Weaving	80	22 700	42.79	18	1 831
38	100% Viscose	Weaving	30	17 000	33.82	56	3 372
38	100% Cotton	Weaving	80	22 700	45.17	18	1 933
38	100% Cotton	Knitting	40	20 300	40.39	23.6	2 026
38	100% Cotton	Weaving	50	21 000	41.78	16	1 470
40	100% Cotton	Weaving	24	17 500	36.65	50	3 358
40	100% Cotton	Knitting	40	19 800	41.47	22.4	1 926
40	Poly/Cotton	Knitting	30	18 500	38.75	56	4 204
40	Poly/Cotton	Weaving	32	18 500	38.75	56	4 204
41	100% Cotton	Weaving	20	16 500	35.42	71	4 345
41	100% Polyester	Weaving	20	16 500	35.42	63	3 856
45	100% Polyester	Weaving	8	9 000	21.21	200	3 997
51	100% Polyester	Weaving	14	7 800	20.83	250	4 253

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