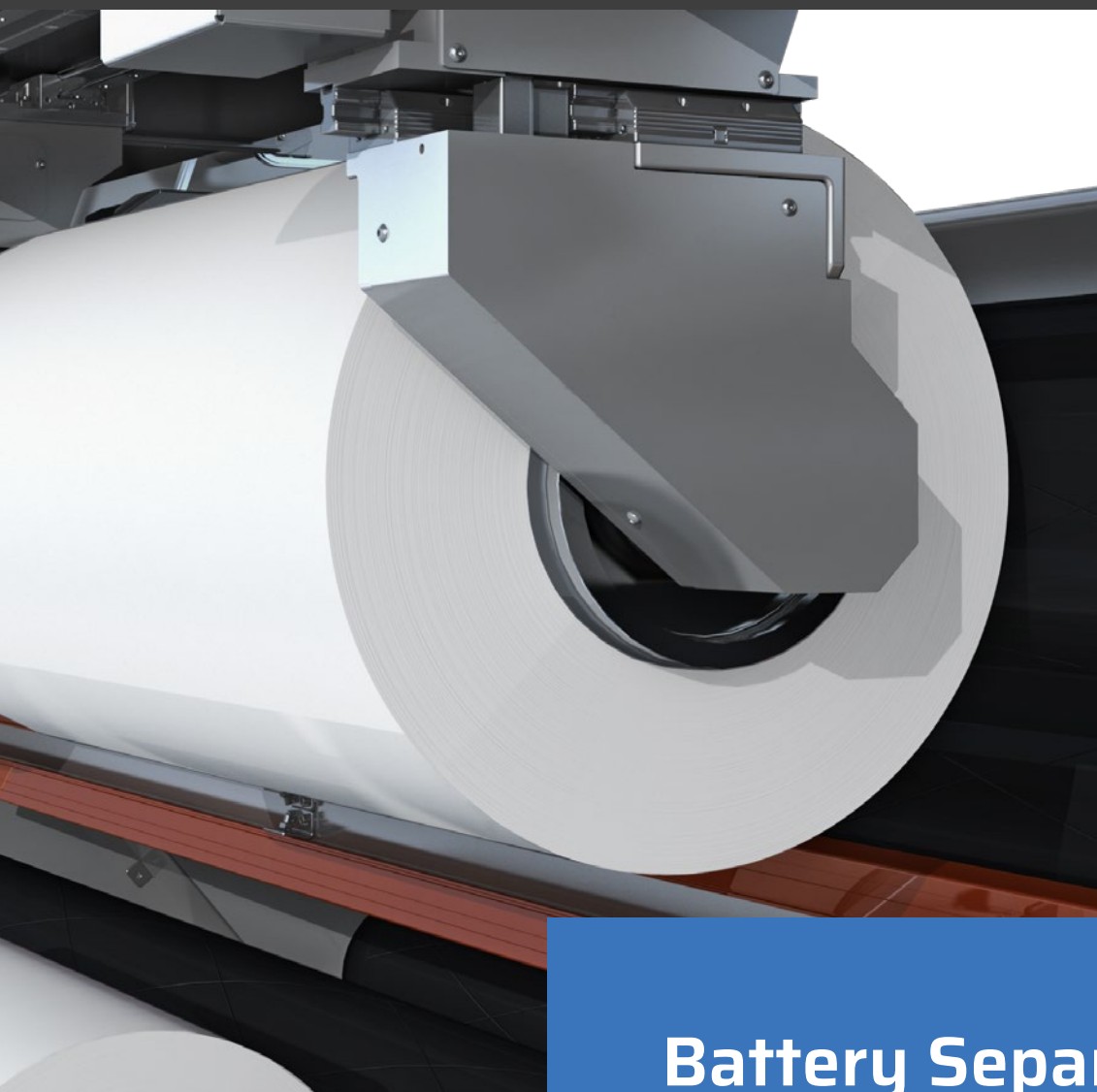




Battery Separator Films

Slitting and Winding technology

BSF Slitter

Customized, solution-oriented, focused on quality and future viability

Kampf offers a selected range of Battery Separator Film production equipment to satisfy the increasing demands of the highly innovative Lithium Ion Battery manufacturing industries.

Highly reliable Non-Stop Winders, high efficient Primary and Secondary Slitters are producing on top quality standards all around the world and are the benchmark for success.

Maximum performance and modularity

We combine strong core features to guarantee the required maximum performance with new, smart and exciting solutions.

Following the optimum characteristics of the production line, the BSF Slitter will be configured tailored to your film specifications to achieve the highest output

- **Remarkable compactness and ultra-short overall web path**
- **Optimum web handling and latest digital tension control**
- **Latest slitting technologies considering highest quality aspects**
- **Advanced web control for every individual finished roll (Geometry · Tension · Nip · Torque)**
- **Smart design details for cleanest and most hygienic production**

The benchmark in primary slitting

Performance.
A definite strength of
your **BSF Slitter**.



Production flexibility

- The unwinder offers many opportunities for individual parent roll handling
- Open for the integration of various web inspection units
- Fully driven shear cut option
- Blade cut option
- Edge trim winding or suction possibilities
- Multiple electrostatic discharging possibilities

Optimum web control

- Proven edge guiding and film oscillation
- Uncompromising ultrasensitive tension compensation roller
- 4 tension sections
- Controlled and consequent individual driven rollers
- Wide range of adaptable web spreading technologies
- Specialized rewind section for precise and sensitive web control

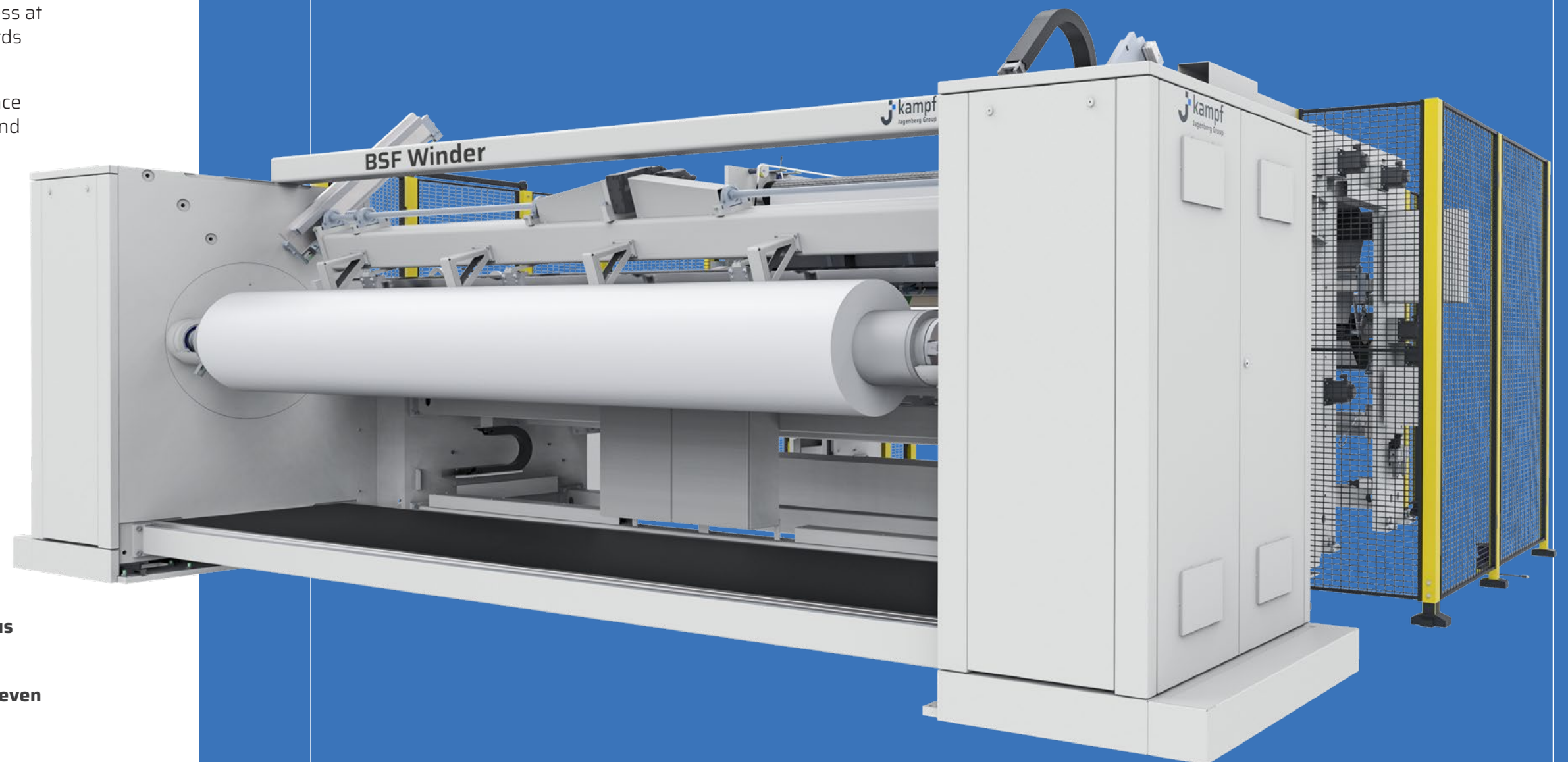
BSF Winder

Kampf's new generation of BSF Winders are especially designed to significantly improve the comprehensive processing and safety aspects of the complex key components inside Lithium Ion Batteries.

The BSF Winder stands for optimum quality rolls for the following slitting process at minimum waste and sets new standards in reliability and winding quality.

Rely on accurate long-term performance due to highly developed technology and proven reliability.

Capability.
A definite strength of
your **BSF Winder**.



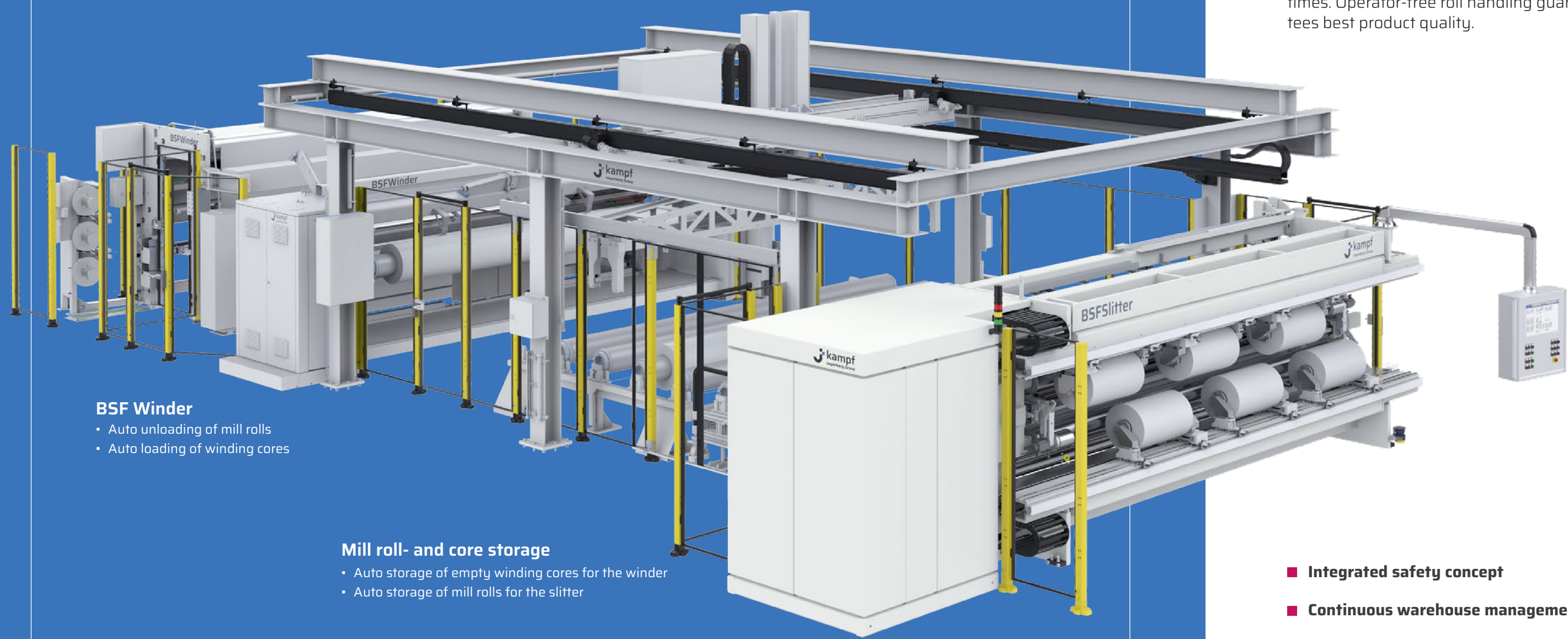
- **Optimal web transfer from previous stretching line**
- **Special web spreading system for even transverse tensioning**
- **Most sensitive tension control**
- **High efficiency of winding quality and quantity**
- **Newest cross cut technology - tension and wrinkle-free**

Holistic approach with combined process steps

BSF Converting Line

Increased output
through
Full Automation.

Integrated converting line with winder, roll and core handling and slitter. Highest productivity through optimized cycle times. Operator-free roll handling guarantees best product quality.



BSF Winder

- Auto unloading of mill rolls
- Auto loading of winding cores

Mill roll- and core storage

- Auto storage of empty winding cores for the winder
- Auto storage of mill rolls for the slitter

BSF Slitter

- Auto unloading of empty cores
- Auto loading of mill rolls into the slitter

- Integrated safety concept
- Continuous warehouse management
- Mill roll handling without risk of damages

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