Intelligent Solutions for Optimum Product Quality and Production Stability
BST eltromat – Solutions for Tire Machines

QUALITY, SAFETY AND EFFICIENCY

High demands are placed on control and inspection systems in tire production as a result of progressing automation of the manufacturing processes and ever increasing expectations on the quality of the products.

Through many years’ experience working together with the tire industry, BST eltromat is able to support its customers with solutions for the tasks at hand: With streamlined automation solutions, intelligent quality assurance systems and state-of-the-art control components.

Prepare to be impressed by our products and solutions:
- Web guide control systems for all manufacturing processes
- Web tension measuring systems in all load sizes
- Intelligent, high-precision sensors
- Profile scan systems for extrusion profiles
- Thickness measurement
- High performance camera systems – as easy to use as sensors
- Intelligent controllers

In addition to standard products, BST eltromat develops customer-specific and problem-related customized solutions.
Web guiding and web tension control on unwinders, roller accumulators and heating and cooling towers, homogeneous textile cord distribution in front of the calender, thickness measurement on and after the calender, position-guided edge cutting systems, width measurement systems and the web guide control and web tension control on the system outfeed are performed in a safe and reliable manner by intelligent and low-maintenance BST eltromat sensor and actuator systems.

Swiveling Roller Guide
In combination with different sensors, the SmartGuide:SF is guiding web or textile cord. For calender lines, BST eltromat recommends the BST eltromat full width sensor.

Edge Guiding System
The Triokanter realizes the accurate positioning of the textile cord edges before the calender. The special BST eltromat proportional – integral guiding characteristic assures high precision independent of the web speed.

Double Expander
Corrects the width and ensures a homogeneous distribution of textile cord for subsequent production processes. For tire calender lines, BST eltromat recommends the combination with the BST eltromat full width sensor.

Winder Guiding System
The SmartGuide:WF ensures the controlled unwinding and rewinding of the material and the liner. Customized solutions can be realized due to a large range of proven components, such as sensors and actuators.

Width Measurement
The CCD CAM 100 system precisely measures the widths of material in reflecting or back light mode.

Thickness Measuring System
The Indicon system delivers exact measurement results for: thickness of the individual layers of the top and bottom plate; and total thickness and location of the steel cord inside the overall composite.

Web Tension Measuring Systems
The BTL Load 100-500 cells control the tensions of the rubber material and the textile cord during their run through the calender line.
EXTRUSION LINES

BST eltromat 3D profilometers and web width measuring systems ensure consistent quality of the extruded material. Customer-specific mechanical solutions for liner web guide control systems and integrated web tension control on the winder reduce premature wear of the liner on cassette winders.

Smart Profile Measuring System
The 3-D Laser triangulation Profile Scanning System precisely controls the dimensions of the extruded treads or sidewalls.

Winder Guiding System
The SmartGuide.WF ensures the controlled unwinding and rewinding of the material and the liner. Customized solutions can be realized due to a large range of proven components, such as sensors and actuators.

Width Measurement
The CCD CAM 100 system precisely measures the widths of material in reflecting or back light mode.

Web Tension Measuring Systems
The BTL Load 100-500 cells control the tensions of the rubber material and the textile cord during their run through the calender line.
INNERLINER CALENDER LINES

With winder guiding components, width measurement and web tension control systems, laser markers or edge cutting positioning systems BST eltromat helps to ensure a constant material quality.

Customer-specific and product-related solutions for material doubling or pre-assembling processes increase the production efficiency.

Winder Guiding System
The SmartGuide.WF ensures the controlled unwinding and rewinding of the material and the liner. Customized solutions can be realized due to a large range of proven components, such as sensors and actuators.

Doubling
Depending on the tire design BST eltromat provides individual doubling solutions on the base of proven components and guiding technologies and in combination with the high performance camera CCD CAM 100.

Width Measurement
The CCD CAM 100 system precisely measures the widths of material in reflecting or back light mode.

Web Tension Measuring Systems
The BTL Load 100-500 cells control the tensions of the rubber material and the textile cord during their run through the calender line.

Laser Marker
Based on the recipe data the Lasermaker LPS100 indicates the correct edge position of the material.

Edge Cutting Positioning System
Measures the width of the material and edge positions to control the edge knife position.

Thickness Measuring System for Innerliner
With a large portfolio of thickness measurement systems BST eltromat is able to ensure a high measurement accuracy in various applications.
Web guiding for unwinders and winder, guiding from the loop, web width measurement systems with the high performance CCD CAM 100 camera from BST eltromat product range form the basis for top product quality on textile and steel cord cutters.

Swiveling Roller Guide
In combination with different sensors, the SmartGuide.SF is guiding web or textile cord. For calender lines, BST eltromat recommends the BST eltromat full width sensor.

Pivoting Frame Guide
The SmartGuide.DF corrects the lateral offset of running materials. In combination with various sensors that are selected according to the material to be controlled, the unit guides the web to its correct position.

Winder Guiding System
The SmartGuide.WF ensures the controlled unwinding and rewinding of the material and the liner. Customized solutions can be realized due to a large range of proven components, such as sensors and actuators.

Smart Profile Measuring System
The 3-D Laser triangulation Profile Scanning System precisely controls the dimensions of the extruded treads or sidewalls.

Doubling
Depending of the tire design BST eltromat provides individual doubling solutions on the base of proven components and guiding technologies and in combination with the high performance camera CCD CAM 100.

Width Measurement
The CCD CAM 100 system precisely measures the widths of material in reflecting or back light mode.
DOUBLING LINES

The CCD CAM 100 high-resolution cameras provide the ideal basis for perfect doubling. In conjunction with BST eltromat web tension measuring systems and intelligent actuators, high-precision results can be achieved in the doubling of primary materials. On the winder, web guide controllers and web tension control systems ensure winding with straight edges and gentle liner handling.

Smart Profile Measuring System
The 3-D Laser triangulation Profile Scanning System precisely controls the dimensions of the extruded treads or sidewalls.

Web Tension Measuring Systems
The BTL Load 100-500 cells control the tensions of the rubber material and the textile cord during their run through the calender line.

Laser Marker
Based on the recipe data the Lasermarker LPS100 indicates the correct edge position of the material.

Conveyor Guiding
In combination with various sensors that are selected according to the material to be controlled, the actuators control the conveyor belts to bring the material to its correct position.

Doubling
Depending of the tire design BST eltromat provides individual doubling solutions on the base of proven components and guiding technologies and in combination with the high performance camera CCD CAM 100.

Winder Guiding System
The SmartGuide.WF ensures the controlled unwinding and rewinding of the material and the liner. Customized solutions can be realized due to a large range of proven components, such as sensors and actuators.
A precisely-positioned material infeed from the unwinder, accurate web guiding from the loop, high-precision web guiding in the immediate vicinity of the drum on the ply server, and intelligent geometry-related control algorithms on the belt server represent the key components of the BST eltromat control systems developed especially for tire building machines. The base element of these control systems is the high-resolution CCD CAM 100 camera.

Winder Guiding System
The SmartGuide.WF ensures the controlled unwinding and rewinding of the material and the liner. Customized solutions can be realized due to a large range of proven components, such as sensors and actuators.

Alternative:
Guiding from the Loop
Realizes edge or center-line guiding of material webs. A lateral movement of the roller corrects the material position. The principle is specially made for start – stop applications.

Laser Marker
Based on the recipe data the Lasermarker LPS100 indicates the correct edge position of the material.

Plyserver Guiding
The plyserver guiding system provides accurate material positioning due to light sources that are specially designed to be near as possible to the drum.

Beltserver Guiding
Intelligent software solutions with high performing mathematical procedures allow in combination with the high performance camera CCD CAM 100 the maximum belt guiding precision.
SMART SERVICE TO HELP YOU ACHIEVE THE NEXT LEVEL.

No matter where you use our technologies, we are here for you, providing dependable BST eltromat service. Our experts are available internationally and will be quick to help you sort out any issues. You can rely on a broad global production and sales network, ensuring first-class service anywhere in the world.

Being partners for top quality: To ensure you achieve maximum value, all our systems are precisely aligned to your specific conditions. You define what you need: project-based cooperation or a full BST eltromat service package. No matter what you choose, we are fully committed to making your products define new benchmarks.

To learn more, please visit www.bst-international.com