

VOLUMETRIC SCANNER

CONTROL
SYSTEMS TECHNOLOGY

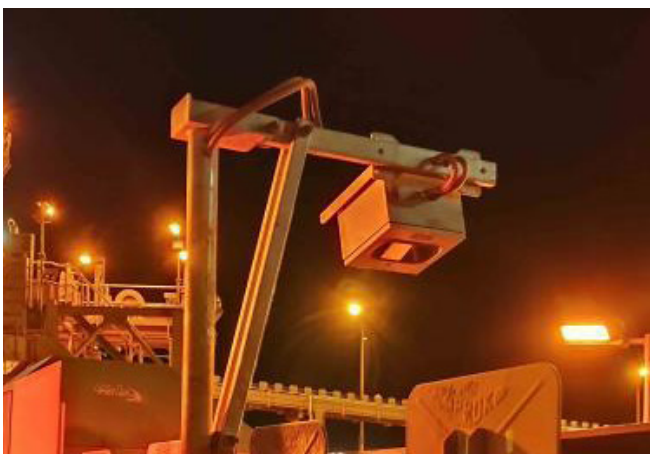
THE BELT WEIGHING SPECIALISTS

The use of Volumetric Scanning as part of the monitoring and measuring process is just one innovation that sets CST apart from its competitors. Through the unique capability to integrate volumetric scanning technology with CST's belt weigher systems via the MaVIS-ARM WIM3 Integrator (WIM3), the system provides operators with complete, real-time, material handling data, enabling greater efficiency, control, and smarter decision making.

With a proven track record across industrial operations, the volumetric scanner provides consistent, high-precision outcomes in the most demanding environments. During its development, CST engineers worked closely with leading process and operations teams to incorporate robust calibration and validation procedures into the system, ensuring it delivers reliable and accurate data across all bulk material handling applications.

DETAILED METRICS:

- Material cross-section on the belt (m^2)
- Material volume (m^3)
- Material freeboard LHS (material edge to left belt edge)
- Material freeboard RHS (material edge to right belt edge)
- Angle of surcharge
- LHS belt edge position (useful for belt tracking problems and belt slit detection)
- RHS belt edge position
- Calculated belt width
- Material height at highest point
- Material instant density (kg/m^3)
- Averaged material density (kg/m^3)



KEY FEATURES

INTEGRATED MATERIAL MONITORING

- Seamless integration with CST's belt weigher system via WIM3 Integrator, delivering a complete overview of your bulk material flow.

PRECISION VOLUME MEASUREMENT

- **Cross-Sectional Area:** Accurately measures the cross-sectional area of material on the conveyor belt, providing essential data for process optimisation.
- **Highest Point Height:** Determines the highest point of material on the belt, crucial for maintaining safe and efficient loading practices.
- **Material Density (kg/m^3):** Provides both instant and averaged material density, ensuring consistent quality control.

ENHANCED SAFETY MECHANISMS

- **Proximity Monitoring:** Continuously monitors the proximity of material to the belt edges, enabling automatic shutdowns to prevent spills and enhance operational safety.
- **Belt Wear and Alignment Tracking:** Keeps track of belt wear and alignment, helping to prevent potential failures and extend the lifespan of the conveyor system.

OPTIMISED MATERIAL LOADING:

- **Maximum Safe Throughput:** Ensures optimal material loading, maximising safe throughput and improving overall conveyor efficiency.
- **Angle of Surcharge:** Measures the angle of surcharge to optimise material distribution of the belt.

ACCURACY GUARANTEED

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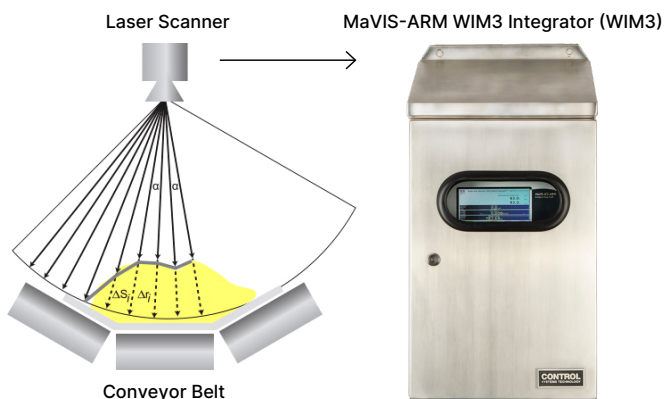
ADVANCED COMMUNICATION CAPABILITIES:

- **Network Integration:** Connects to site networks using Profibus, Modbus TCP, Ethernet, or Profinet, ensuring versatile and reliable communication.
- **Dual Verification:** Utilises dual verification between the weightometer and the scanner to ensure accurate and reliable measurements.

AWARD-WINNING TECHNOLOGY

CST has been honoured with the prestigious **Bulk Handling Innovative Technology Award 2024**, recognising their exceptional contribution to the field of bulk handling through the development of groundbreaking technology underscoring CST's commitment to innovation and excellence in engineering solutions.

Through cutting-edge technology, CST has addressed a critical need for precise measurement in bulk handling operations. The volumetric scanner, when paired with CST's belt weighers via the WIM3 Integrator, forms part of a comprehensive bulk material measurement system that combines volumetric and certified mass data to better inform operational decisions.



CONTACT US TODAY

Ask us how our accuracy guarantee can optimise and enhance your bulk material handling operations, and learn more about how we engineer performance into every application!

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