



## EL-TRISCAN LS 360° with air purge

Erhardt+Leimer online profile measurement system with air purge

### Contactless profile measurement for measuring external geometry

The profile is one of the most important parameters in the tire manufacturing process. Our online profile measurement system EL-TRISCAN uses state-of-the-art measurement technology to ensure highly precise measurement of the 360° external geometry.

EL-TRISCAN LS 360° works with light section sensors that enable 100% measurement of the entire profile from the apex and bead filler from three or four directions. The recorded data is transmitted directly to the control unit and deviations from the target profile are analyzed in real time. The sensors are mounted on a granite

frame, which ensures particularly accurate profile measurement thanks to its high temperature stability and vibration damping. In the hot range, the system is used for process control, while in the cold range it is used for quality control and documentation.

A new type of air purge is used in particular in the hot and warm areas and in heavily contaminated environments. It enables the hot material to be measured, making material changes after calendaring or extruding immediately visible without any cooling time. This allows the extrusion or cooling process to be controlled directly if

necessary. The optimized flow mechanics also eliminate the need to clean the optical sensors, thereby avoiding production interruptions for maintenance purposes.

# Reliable measurement – even in hot areas

## High 360° measurement accuracy

- High-precision profile measurement
- Triple or quadruple-sided laser triangulation
- Material changes immediately visible

## Robust granite frame

- High stability
- Minimal thermal expansion
- Insensitive to vibration

## Use in hot areas

- Air purge prevents contamination of optical sensors
- No time-consuming cleaning of sensors

## Continuous process control

- Real-time measurement
- Comparison with target profile
- Control of calendaring or extrusion process possible

## Maximum process reliability

- Profile changes immediately visible
- Monitoring of geometric changes in the cooling process

Technical data	
Measurement method	Non-contact and three- or four-sided line laser triangulation
Installation site	Extrusion
Typical products	Apex/Beadfiller
Sensor type	Laser triangulation light section
Thickness measuring range	50 mm
Measuring range width	150 mm to 1500 mm (more on request)
Measuring range width, per sensor pair	150 mm
Accuracy	Thickness: $\pm 30 \mu\text{m}$ Width: $\pm 200 \mu\text{m}$
Measuring equipment capability	Thickness: $C_g \geq 1.67$ ; $C_{gk} \geq 1.67$ [T = 10 x Genauigkeit] Width: $C_g \geq 1.67$ ; $C_{gk} \geq 1.67$ [T = 10 x Genauigkeit]
Displayed resolution	Thickness: 0.001 mm Width: 0.1 mm
Measurement increment width	~0.1 mm
Measurement rate	Max. 8 Hz
Measurement interval in the direction of movement (30m/min line speed, 8 Hz)	0.0625 m
Laser class	2 (670 nm, visible light) – Dedicated laser safety officer not required!
Roller spacing in the measuring range (gap, 60 mm roller diameter)	120 mm
Interface	EtherNet/IP, Profibus, Profinet, CC-Link, DeviceNet
Relative humidity	15 % to 95 % (non-condensing)
Ambient temperature	+10 °C to +40 °C
Operating voltage	115 V to 230 V / 50 Hz/60 Hz / 16 A
Protection rating	IP 54

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