



SPRESCAN[®] 3D-L

Electronic Laser Measuring Systems for
Log Contour & Curvature Detection

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SPRESCAN 3D-L

RANGE OF SERVICES

SPRESCAN 3D-L is a measuring system that records the complete log contour in detail. From this data, characteristics such as centre, top and cane diameter, taper, trunk length, curvature and ovality are calculated.

The system consists of four high-performance matrix cameras and seven continuous wave lasers. Using the light-sectioning method, the contour of the trunk is scanned. Points in a Cartesian coordinate system are calculated from the raw camera data – based on a patented calibration procedure.

APPLICATION AREAS

- Roundwood sorting taking into account curvature, ovality and woodiness
- Cutting pattern calculation and optimisation including contour and curvature
- Automatic log rotation and positioning before the tensioner according to contour and curvature criteria (turn-in optimisation)
- Model Contour Optimiser (MCO): Acquisition of the model contour with course of the forest edge (optionally with optimisation of the side fabric)

CUTTING PATTERN OPTIMISATION & MODEL CONTOUR OPTIMISER (MCO)

Due to its high resolution (up to 2048 measuring points per measuring insert), SPRESCAN 3D-L provides a very accurate log image. The measuring system is ideally suited for high-performance systems at speeds of up to 240 m/min (measuring in-

serts at 1 cm intervals). The SPRESCAN 3D-L measuring system achieves a scanning accuracy of < 1 mm (single-turn optimisation) or < 0.5 mm (MCO).

To eliminate interferences, the measuring points are subjected to multiple plausibility checks. The 3D image is the basis for calculating the diameter, the woodiness and the curvature. These criteria are decisive for the quality, grading and cutting optimisation of the logs.

COMBINATION WITH LOG PHOTOGRAPHY

SPRESCAN 3D-L is also offered as a combination with SPRESCAN PHOTOLOG-L. The PHOTOLOG component is used to automatically photograph and archive logs at log yards, thus creating the prerequisite for logging the quality assessment of incoming raw material. The system enables database-driven management of the log images at longitudinal conveyor speeds of up to 240 m/min.

INTEGRATION

The SPRESCAN 3D-L system is used both as a retrofit package (to improve the productivity of existing machines) and as an integrative component in new installations. All products of the SPRESCAN family can be remotely serviced online by Sprecher Automation in Linz.

WHY SPRESCAN 3D-L?



HIGH SCANNING SPEED

Even at feed speeds of up to 240 m/min, the log is scanned in 1 cm increments.

HIGH ACCURACY & STABILITY

The measuring system is calibratable.

EASY INSTALLATION & MAINTENANCE

The system components are mounted on a sturdy steel frame and connected in a plug-in manner with prefabricated cables. Assembly, commissioning and adjustment are easy to carry out.

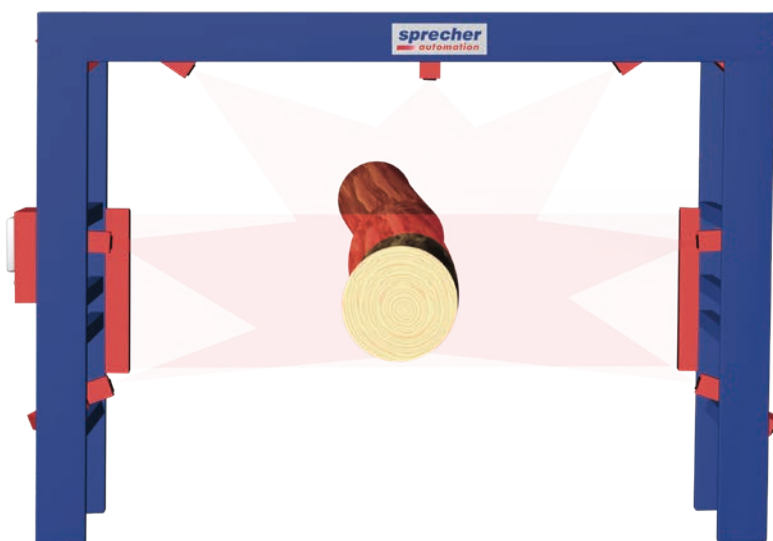
LOW POLLUTION

The favourable arrangement of the system elements reduces contamination by the conveyor system.

STANDARDISED INTERFACES

SOFTWARE

The user-friendly graphical interface runs under LINUX® as well as under Windows®. The software can be run on any PC that is networked with the evaluation PC. In addition, the user interface can be run on several PCs in the network.



SPRESCAN 3D-L – TECHNICAL DATA (EXCERPT)



	SPRESCAN 3D-L/200	SPRESCAN 3D-L/300	SPRESCAN 3D-L/400
Number of camera points sorting and rotation MCO lignificatio	4x 128	4x 512	4x 512
Measurement rate	1 cm increments at up to 120 m/ min feed rate, 200 measurements/s	1 cm increments at up to 120 m/ min feed rate, 200 measurements/s	1 cm increments at up to 240 m/ min feed rate, 400 measurements/s
Diameter measuring range	Bloches: 70 - 800 mm, model up to 400x400 mm or customised		
Length measuring range	customised, resolution: 1 cm		
Measured value resolution	< 1 mm		
Installation depth in conveying direction	Minimum 1m		
Interfaces	RS232, Ethernet (UDP/ISO on TCP), special interfaces		
Temperature range	-20 °C to +50 °C		
Power supply	110/230 V, 50-60 Hz, 100 VA		
Approval tests	Austrian calibration approval		
Design standards	ÖNORM L1021		



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