

DATA SHEET

JORO-3D-SCANplus

Bark detection



Maximum accuracy



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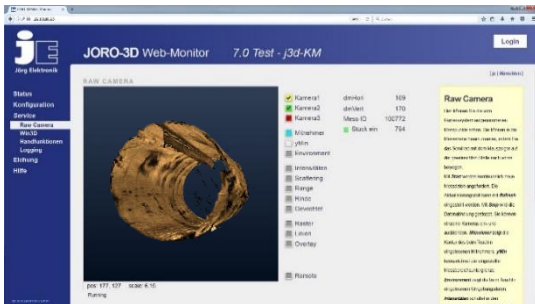


JORO-3D-SCANplus

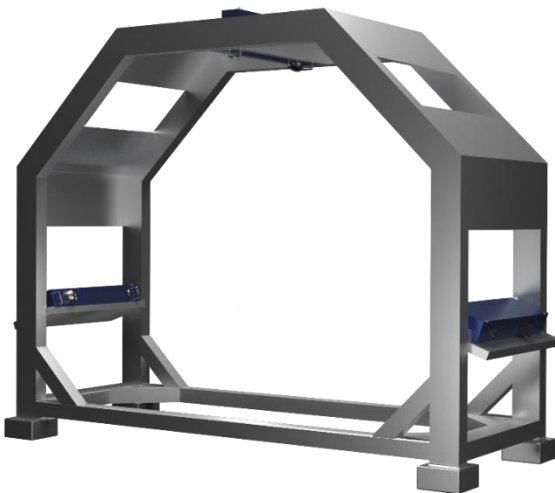
Bark detection

Can be integrated into an existing JORO-3D installation

3D scanner (range)
Tracheid effect (scatter)
Laser intensity



Full overview with the JORO web-monitor



Toughness and stability due to many years of experience

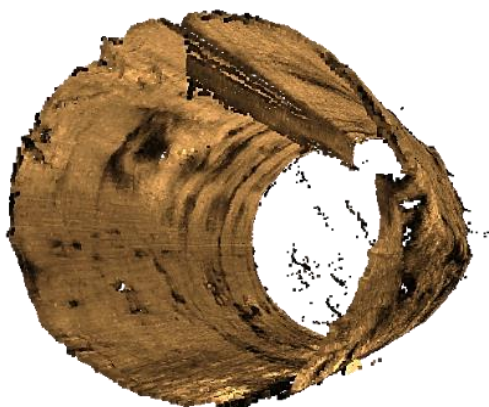
JORO-3D-SCANplus is the newest variation of the true-shape scanner. The system developed is based on the tracheid effect (scattering) - like board-sorting systems. It can measure the bark thickness and its amount of bark on partly debarked logs. The detection of the exact thickness of bark and identification of barkless logs between the partly debarked logs leads to an increased sorting accuracy at the log yard.

An optical measuring system with an advanced 3D camera technology is used to measure the log with its precise contours and to determine the thickness of the bark in the same operation. The real-time capability of the system guarantees a direct integration of data into the existing flow. Through years of experience in extreme conditions the system promises robustness and stability in harsh environments.

JORO-3D-SCANplus enables optimization of timber yield. The maximum precision and optimization in wood processing is becoming more important. With a tenth of a millimetre accurate recognition and calculation, an optimal timber yield is guaranteed.

JORO-3D-SCANplus uses optical effects to distinguish bark from the wood. The system is based on the different absorption and reflection properties of wood and bark upon irradiation with laser light. Wood reflects a laser stronger than bark, which on the other hand has a higher dispersion and absorption. These differences are recorded and evaluated by multi-scan technology from 3D cameras.

Advantages



Bark removal on completely debarked logs



Bark detection on partly debarked log

Measurement

- ✓ true-shape scanner
- ✓ simple calibration
- ✓ scalability (measurement range, camera systems)
- ✓ detection of knots bigger than 15mm on the log surface
- ✓ web-based handling (independent of operating system)

Mechanical installation

- ✓ no interruption of the measuring conveyor
- ✓ largely independent of the mechanism
- ✓ trouble-free installation into existing mechanism
- ✓ easy adjustment

Environmental influences

- ✓ hardly any additional protection against mechanical damage needed
- ✓ temperature range from -40 °C to +40 °C by climatization
- ✓ protection class IP65 (dustproof, waterproof)
- ✓ robust against vibrations

JORO-3D-SCANplus

Example calculation

Measuring of softwood in bark

WITHOUT JORO-3D-SCANplus



Bark on log: MDM 260, after bark subtraction
✓ diameter class 2b

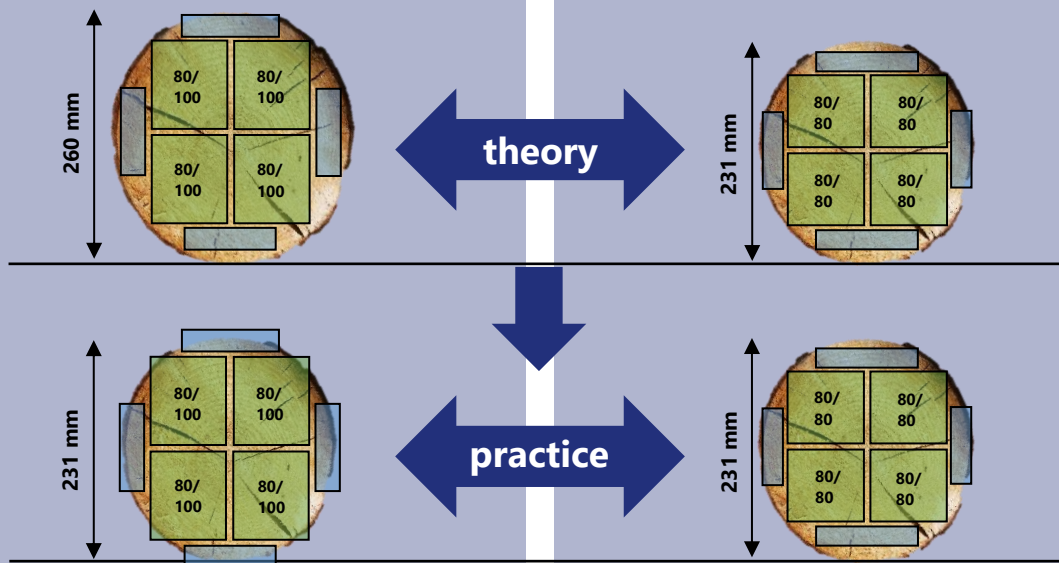
WITH JORO-3D-SCANplus



Detection of bark: MDM 240
✓ diameter class 2a

→ sorting into different boxes

cutting in the sawmill according to cutting patterns



Advantages

- ✓ No loss caused by assumption of a wrong diameter
- ✓ No cutting of additional logs to fulfill orders
- ✓ No additional loss of side products
- ✓ No downgrading of main products into lower product ranges