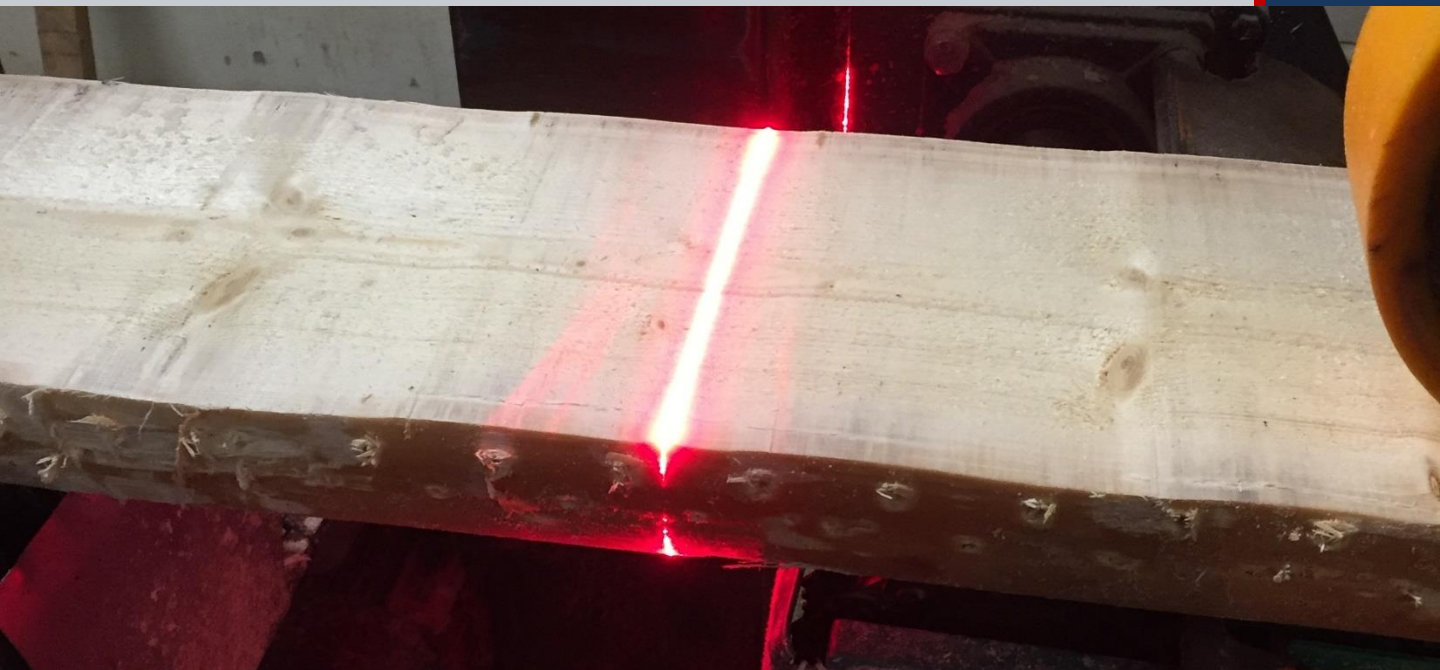


BoardProfiler 3D-LH/LD

Lineal scanning system for Hit & Miss and dimension control



BoardProfiler 3D-LH/LD

Hit & Miss control system

The BoardProfiler 3D-LH is an inline laser based measurement system for control of the planer function in order to remove defects from a board. The system scans the boards in a lineal conveyor. The LIMAB state-of-the-art ProfiCura sensors can be mounted single or double-sided. The software divides the board into specific tolerances along the board according to operators specification. If the board is not according to the tolerances, the board will be marked or rejected.

Dimension control system

The BoardProfiler 3D-LD scans the board similar to the LH system, but it is also continuously checking every mm of the board for out-of-tolerance dimensions.

The BoardProfiler 3D-LH/LD systems are integrating the LIMAB 2D ProfiCura sensor series, which means that the complete board will be scanned when passing by the measurement system. The ProfiCura range of sensors are offered in several versions. Depending on the width of the board, the appropriate sensor will be chosen.

When the board passes the measurement system it will be scanned and the system software will analyze the dimensions and defects. These measurements are used to do a product mapping and defined tolerance settings are then deciding further actions.

The results of the measured board will be shown on the operator interface in a 3D view. Information as board dimension, defects and reason for different actions will be displayed. Sort or reject proposals will be sent to the plant automation system.

Product tolerances and dimensional rules are easily configured in the system software. It is possible to view the actual measurements in the operator view and there is also a historical view where the actual measurements can be replayed for further analysis.



LIMAB

LIMAB has a history of more than 30 years designing high precision laser based measuring systems and sensors for the harsh environments in saw mills.

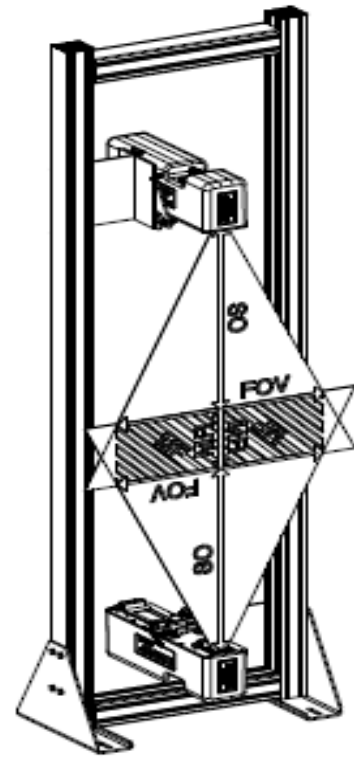
Today, we are considered as a world leader in non-contact, in-line measurements for saw mills with and have installations in all parts of the world.

High accuracy 3D measurements

The BoardProfiler 3D is based on our 2D sensor platform, the ProfiCura. These sensors are specially designed for high accuracy measurements and integrates the latest development in laser and CCD technology.

Benefits with the BoardProfiler 3D-LH/LD

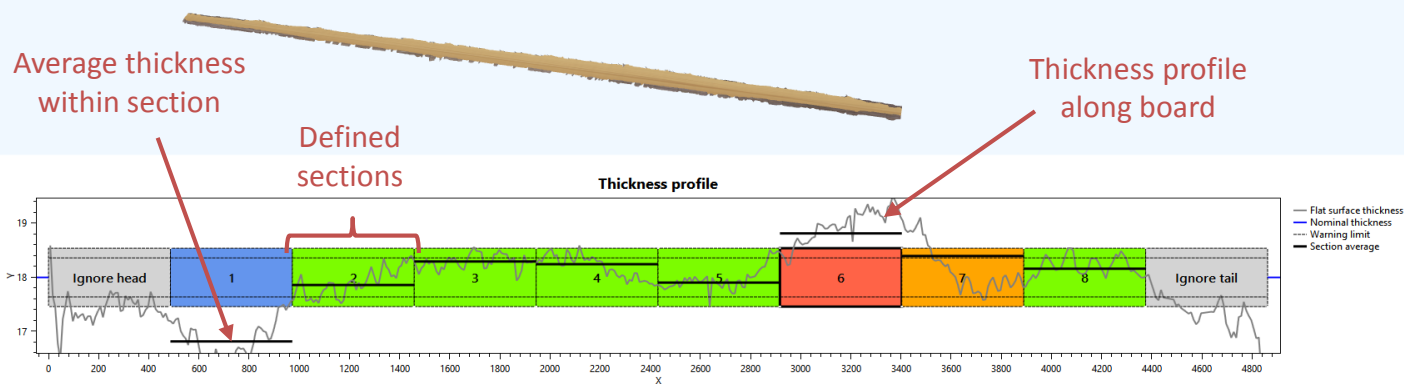
- Easy installation only requiring 500 mm space in the board direction
- Complete board scanning, single or doubled sided
- Several sensor versions available for optimum performance
- Easy integration with saw mill automation system
- Better dimensional accuracy compared to traditional camera systems
 - High accuracy thickness measurement, from +/- 0,03 mm
 - Measures with a resolution from 0,2 mm (depends on sensor version and applied averaging) across the board
- Adapted to high speed lines
- Factory calibrated sensors
- Comprehensive and easy-to-use software



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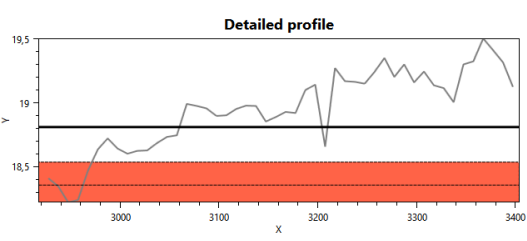
Operator View Products Dimension results

Latest board



Selected section details

Section: 6
 Average thickness: 18.81
 Upper tolerance: 18.54 (3%)
 Upper warning: 18.36 (2%)
 Lower warning: 17.64 (2%)
 Lower tolerance: 17.46 (3%)



Color codes for sections

Green	Within tolerance
Red	Out-of-tolerance – too thick
Orange	Warning level – too thick
Blue	Out-of tolerance – too thin
Light blue	Warning level – too thin
Grey	Ignore measurement

Applications for LH and LD

- Hit & Miss detection after a planer
- Sorting and rejecting of boards out of tolerance
- High accuracy control of dimension on hard wood applications such as lamellas for flooring

Software

- Operator view with detailed information of:
- Visual results of out-of-tolerance dimension
 - Visual information of what kind of defect the system has found

BoardProfiler 3D-LH/LD

Technical Specification

Measurement objects	Boards and lamellas
Amount of sensors	2 pcs LIMAB ProfiCura
Resolution	From 0,1 mm over the width of the board
Scan rate	240-2.000 Hz
Laser class	3B



We reserve the right to introduce modifications without prior notice

LIMAB – the complete solution provider for non contact dimensional measurements

Our core capability resides in our ability to deliver effective laser scanning sensors and systems for our customers. Through our experience and understanding of your needs, we engineer and produce sensor and system solutions that will fulfil your requirements of best-in-class technology and quality.

LIMAB was founded 30 years ago and has a long tradition of developing and manufacturing laser based technology. We supply laser guide lines, laser sensors and complete systems for dimensional and profile measurement in sawmills, panel production and steel mills. Headquarters and manufacturing plant is located in Gothenburg, Sweden. LIMAB has regional offices in the USA, UK and Germany as well as approved distributors and partners in other regions.



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