

Wane Scanner



**Infrared Scanning System
for Measuring
Wane and Dimension of
Boards and Cants in
Lateral Transport**

LBP-1000

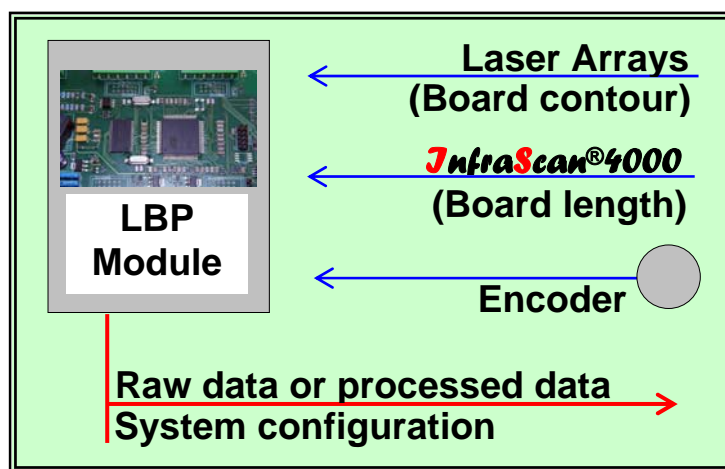


Features and Advantages

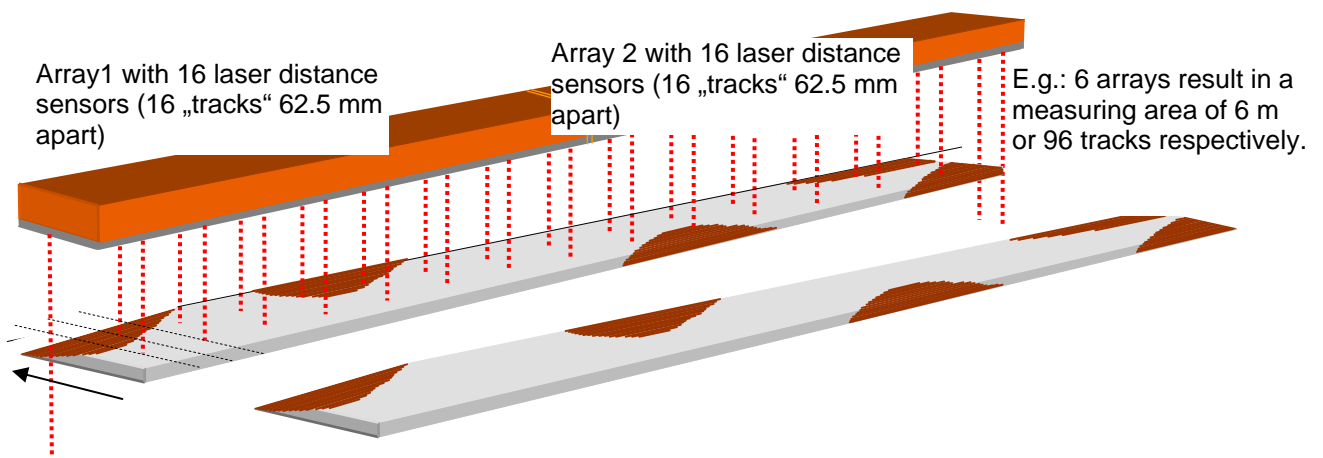
- High speed data processing
- Easy to integrate into different types of optimizing systems
- Easy installation in new plants and renovations
- No additional illumination necessary
- Highly unaffected by ambient light

Structure and Measuring Principle

A measuring System LBP-1000 consists of a Module, serving for power supply, the data input from the sensors and an encoder, as well as the data output.

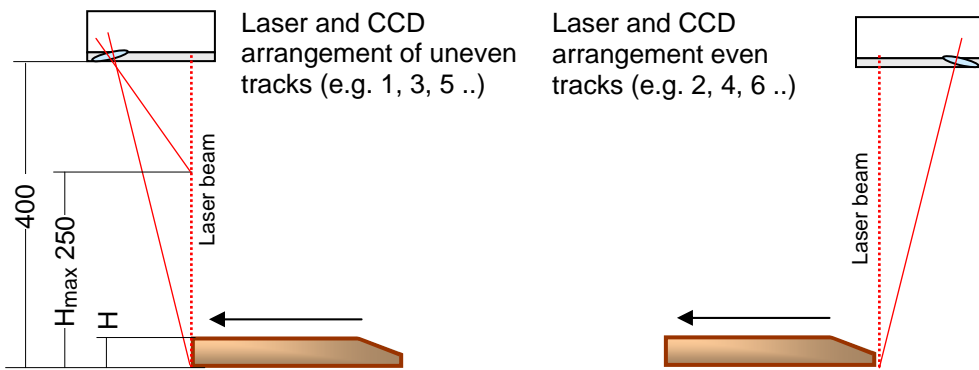


The sensor heads (laser arrays) have a nominal length of 1 m and can be „stacked” to form a system of up to 7 m length.



The Laser Arrays were specially developed by H-Sensortechnik. Each array combines 16 laser beams and 16 CCDs with high resolution with a powerful signal processor. By triangulation the distance to the board is being measured and thus a „profile“ of the boards along the „tracks“ produced.

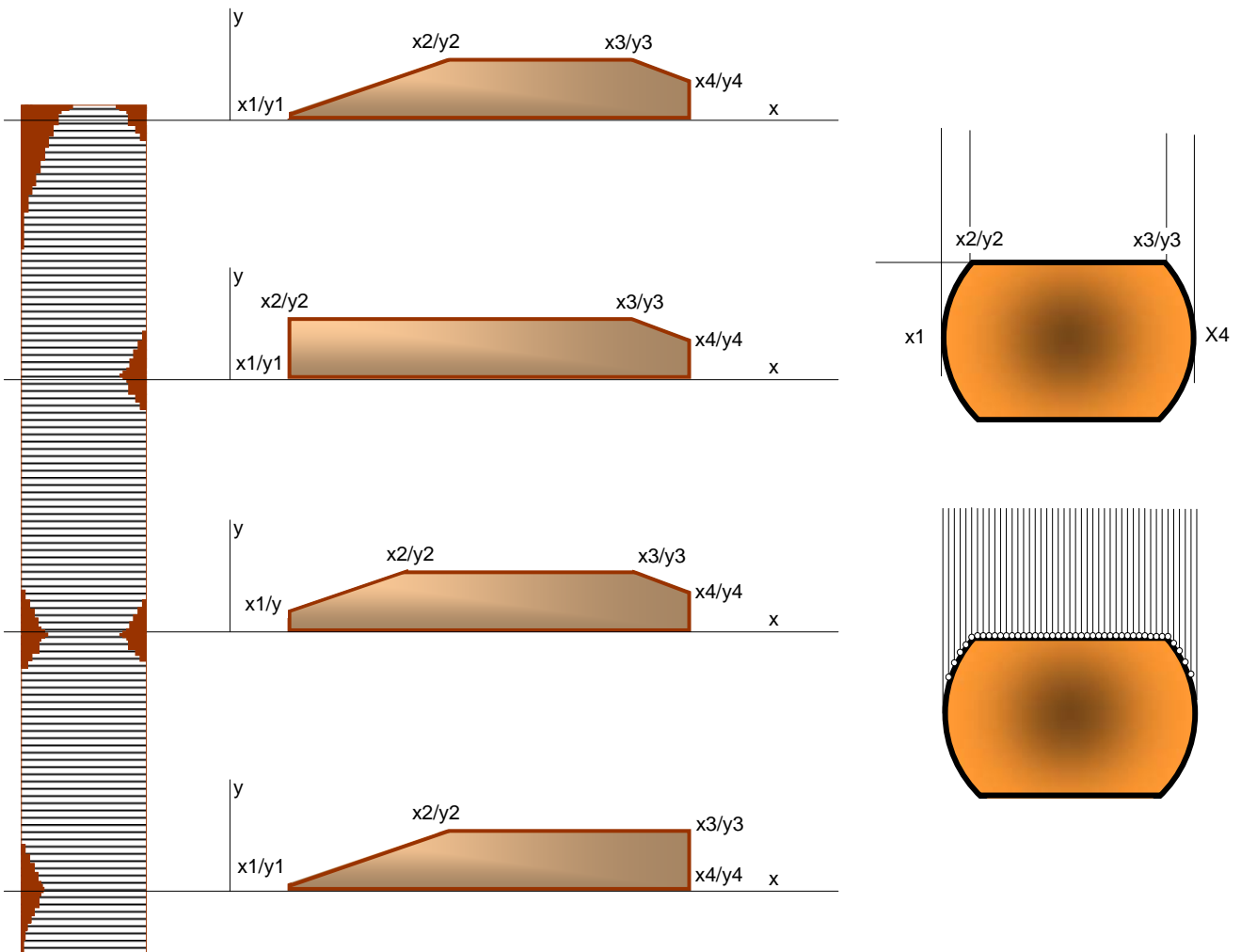
The distance of the laser arrays to the bottom surface of the boards can be 400 mm. This allows the maximum measuring area of 250 mm.



The special, alternating arrangement of the laser/CCD elements enables the system to measure very steep wane or even vertical sides very accurately.

As the boards move under the laser beams, every one mm the distance measurements are recorded. Of these data the contour of the board or the wane respectively, can be calculated. The distance between the "tracks" is 62.5 mm. Accordingly 16 contours are available. The „minimized“ data can then be output and is available for further processing and optimization. However, it is also possible to output the actual measuring data to reproduce the contour of, e.g. a cant, as shown below.

Examples of data sets for each track: $x_1, y_1, x_2, y_2, x_3, y_3, x_4, y_4$



The sensor heads are interconnected via a Bus cable which at the same time serves for power supply and data transfer. For mains supply and easy connection of all elements – as mentioned before – a so-called module is available and this should be mounted near the sensors. Even with a 6 m system the Data is available within only 100 ms after board scanning (inclusive Data transfer).

Technical Data

Basic Data:

Track distance:		62.5 mm
Tracks per array:	:	16
Max board length:		8 m (8 Arrays)
Max scan rate:		1000 / s
Power supply:		24V DC \pm 20%
Power consumption	:	280mA at 24V DC per array
Encoder:		RS422, increments >/1mm
Length resolution:		-0/+62.5 mm, \pm 5 mm with InfraScan
Thickness resolution:		0.5 mm
Width resolution:		1 mm (programmable)
Dimension L/W/H	:	995x160x75 mm
Colour:		grey/orange RAL 2008
Weight:		15 kg per array

Measuring Data

Data sets/array:		4 wane co-ordinates per track Board thickness Board width Length Twist, cant contour: Calculated externally
Interface:		RS422 or RS232, 115.2 kBaud
Data format:		Binary Data blocks with check sum

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