

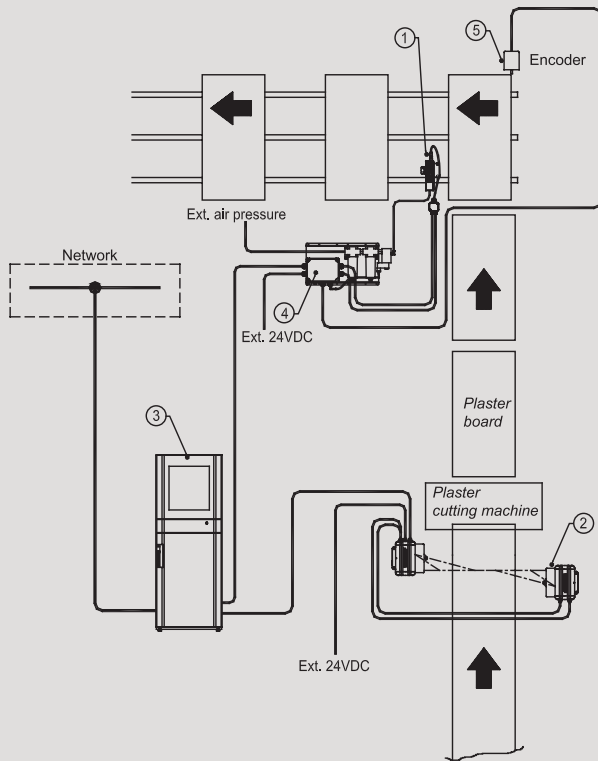
GMS 1100

Gypsum Board Dimensional Measurement System



- Full monitoring of your process.
- Easy to install in the processing line.
- Laser based non-contact measurement.
- High accuracy width, thickness, edge angle and edge profile measurement.
- Production reports and statistics.
- TCP/IP network gypsum board software.
- Turn-Key solution.

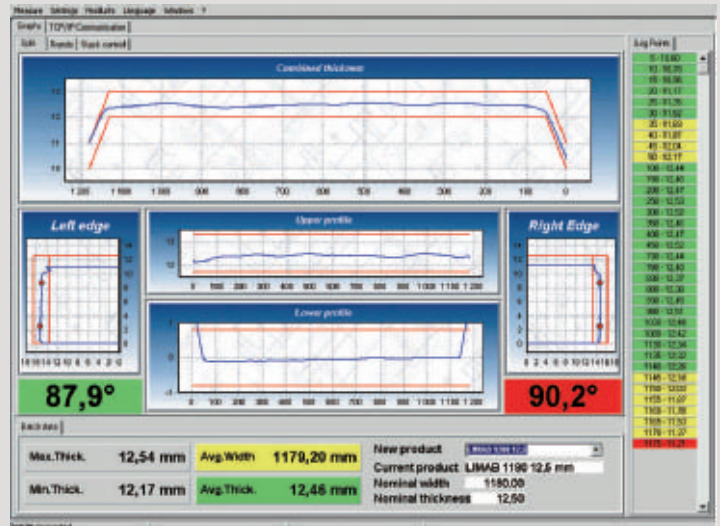
GMS 1100 has been developed by LIMAB for measuring of width, thickness, edge angle and edge profile of gypsum boards during continuous production.



Typical Layout

The GMS 1100 consists of:

1. 2 PreciCura sensors for thickness/profile measurement
2. 2 Accura 35-2D sensors for width, edge angle and edge profile measurement
3. PC unit including cabinet.
Digital card for alarm outputs. CAN-bus card.
4. Air purge system for lower thickness sensor.
5. Encoder.
Windows based TCP/IP gypsum board software license.
All hardware connected in a CAN-Bus loop.



Operator module

TECHNICAL SPECIFICATIONS:

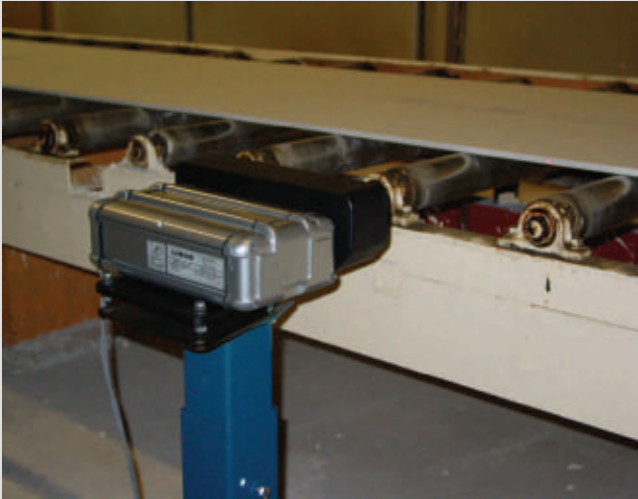
Thickness:

Measuring range:	200 mm (7,8")
Measuring distance:	100 mm (3,94")
Thickness resolution:	0,01 mm (0,0004")
Thickness accuracy:	± 0,1 mm (0,004")
Measurement rate:	800 Hz (independent of exposure time)

Width:

Measuring range:	1000 mm (39,4")
Measuring distance:	300 mm (11,81")
Resolution X	0,04...0,2 mm (0,0016"-0,008")
Resolution Y	< 0.5 mm (0,02")
Accuracy of numeric max width	± 0,3 mm (0,01")
Measurement rate	≤ 2000 Hz
Scanning rate	< 4 Hz

The software has been designed to run on Windows® providing the user with graphic and numeric information about the dimensional size of gypsum boards. The software is provided with easy to use menus that allow the operator to configure the system to suit their production requirements. The on-line measurement system measures every produced board and the saved data is used as a basis for the Production Report. This Production Report is a useful tool to increase knowledge of how to produce a higher percentage of boards within tolerance, increase profitability per board and yield.

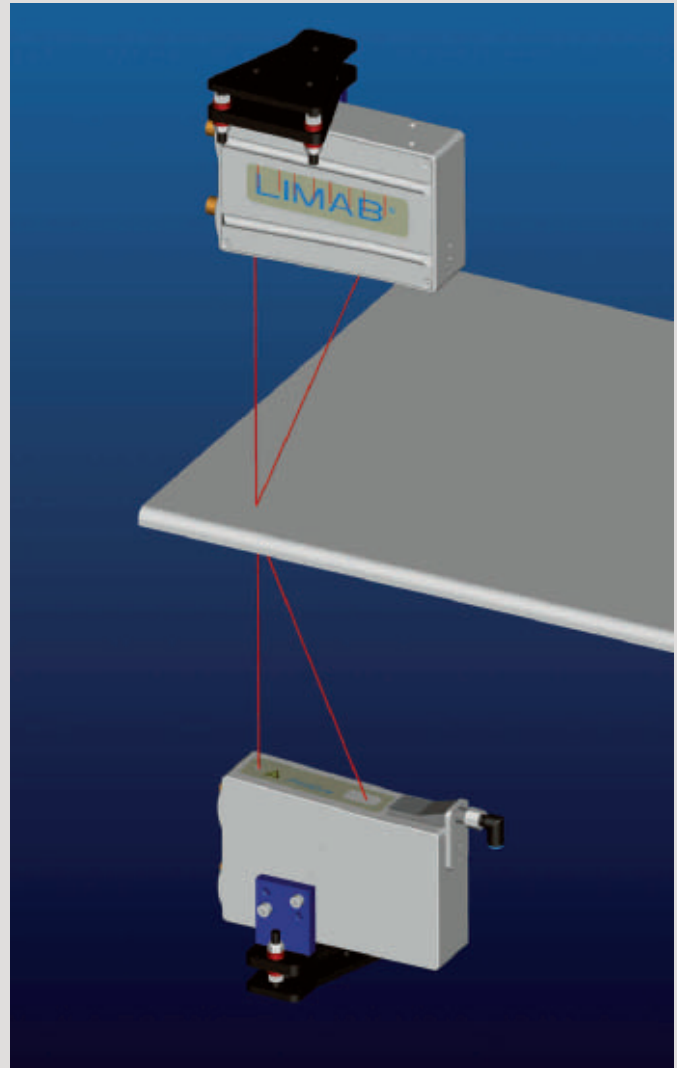


Width, edge profile and edge angle

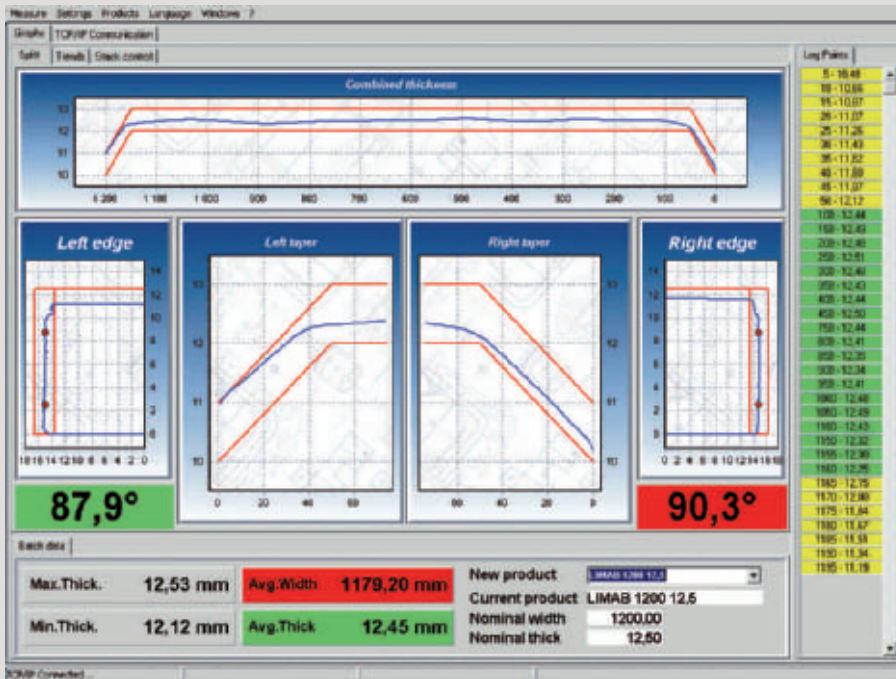
LIMAB has a unique scanning sensor for measurement of width, edge profile and edge angle. A laser beam is sweeping up and down, continuously measuring the edge profile. The measurement speed is up to 2000Hz with a scanning speed of up to 4Hz. In practise this means that around 400 measurement points are taken on each scan. The width and edge profile sensors are normally placed 10-15 meters before the knife, between 2 rollers. It is also possible to place the width sensors at the wet belt to provide earlier feedback of the edge profile. The sensors have a long measurement range of 500 mm on each side, which gives a total range of 1000 mm. It is possible to produce boards between 400-1400 mm (16" - 55") without having to reposition or recalibrate the sensors, saving valuable time. Longer measurement ranges are possible on request.

Thickness measurement

Two fixed sensors, one above and one below the gypsum board, are mounted in the transfer table area. The system needs little maintenance due to the fact that there are no moving parts. The constant measurement speed produces data for an accurate profile of the board, used for thickness and profile presentation.



Two PreciCura sensors measuring thickness



LIMAB operator module showing thickness profile, width, edge profile and edge angle.

- TCP/IP based software allows the measurement results to be presented on computers connected to the plant network.
- Combined screen of thickness, width, edge angle and edge profile.
- All sensors are connected to a CAN-Bus network for internal communication.
- All measured data available on the network.
- Possible to connect to the production system.
- Trend graphs for thickness, width and edge angle.
- No calibration required between product changes.



LIMAB has more than 60 references in the gypsum board industry. For an updated reference list please contact LIMAB.

We reserve the right to introduce modifications without prior notice.

LIMAB®

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