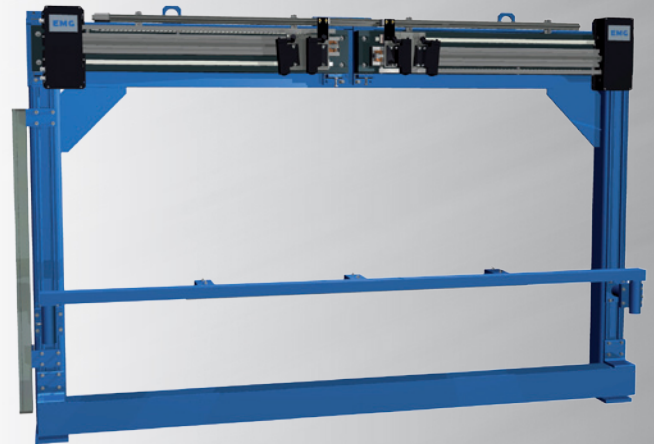


# BREIMO Strip Width Measurement

BREIMO is the contact-free, optical strip width measurement for steel strips in continuously running processes. Consisting of a measuring frame (BMS) and two sensor positioning devices strip edge (EVK) as well as the belonging light sources (LLS) and a common position encoder, BREIMO means a highly reliable strip width measurement. All advantages of the EVK can be found with BREIMO as for example the robustness against external contamination. Strip edge position changes are sensed continuously and taken into account when calculating the strip width which is displayed immediately.



## Performance features:

- ▶ waiting time reduction
- ▶ minimization of measuring errors
- ▶ insensitive to strip thickness
- ▶ certified sample sheets for calibration with detail about thermal expansion (option)
- ▶ visualization of strip width measurement (option)
- ▶ archiving via data base (option)
- ▶ automatic blow-off (LAC) for HF-light sources and control (option)

## Customer's benefit:

- ▶ precise and reliable measuring accuracy
- ▶ high availability
- ▶ minimum space requirements
- ▶ high efficiency
- ▶ ease of operation
- ▶ most up to date field bus technology
- ▶ stable and ready-to-install measuring frame according to customer's demand
- ▶ short start-up time
- ▶ fast and comfortable calibration

## Optical strip width measurement:

- ▶ measuring system insensitive to ambient light
- ▶ contamination compensation to a large degree due to reference measuring principle
- ▶ Bus-communication via CANopen
- ▶ common linear position transducer with contact-free magnets for precise measurement of the strip edge positions

Strip height variation: (Idler rolls are recommended)	< +/- 20 mm
Distance strip height – sensor above the strip:	< 1.5 m
Measuring accuracy:	+/- 0.5 mm

## High precision strip width measurement:

Corresponds to the optical strip width measurement and additionally provides:

- ▶ low thermal expansion and low torsion of the sensing equipment due to granite mounting plate
- ▶ certified sample sheets

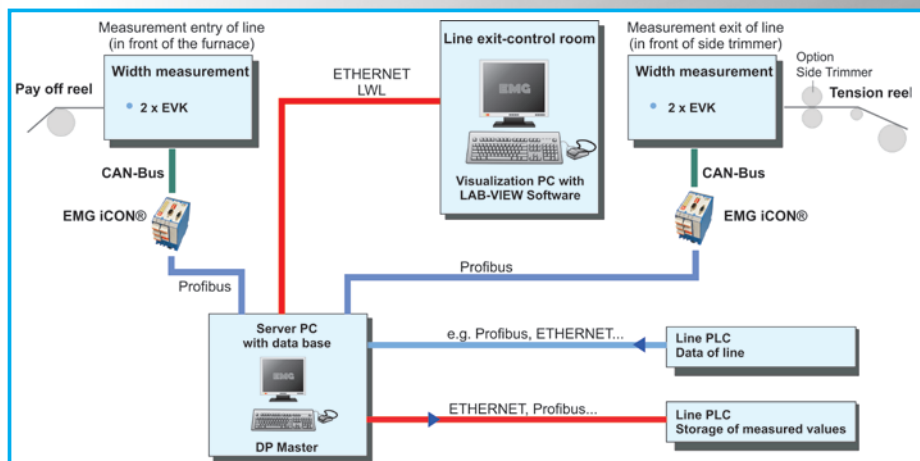
Strip height variation: (Idler rolls are to be supplied by customer)	< +/- 10 mm
Distance strip height – sensor above the strip:	< 1 m
Measuring accuracy:	+/- 0.2 mm

# SWOp Strip Width Optimization

In many steel treatment processes the steel strip is subject to a contraction in dimensions. This shows itself by a reduction of the strip width in a process line, often caused by thermal treatment or by high strip tension. Precise knowledge of the input and output width allows predetermination of the change in the strip width as a function of the line parameters. This results in strip width optimization for all upstream processes and to a reduction in the amount of edge scrap from trimming.

The most important factors which influence changes in strip width are the grade of steel, the strip width itself and the thickness as well as strip tension or the annealing cycle in the process line.

The system solution SWOp (Strip Width Optimization) offers, in a combination of several width measurements and a PC server, the working platform for visualizing the strip width and the various factors leading to optimization of the strip width in the overall process.



## Customer's benefit of SWOp:

- ▶ optimizing of the purchase order and minimizing the width of the coil (semi-finished material)
- ▶ minimizing the amount of scrap
- ▶ checking and recording of the exact strip width as specified in the order
- ▶ calculation of edge scrap upstream of the trimming shear
- ▶ integral advance warning system "insufficient strip width for the trimming shear" in order to protect the knives of the shear

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Example: Visualization and recording of the strip width over the entire strip length