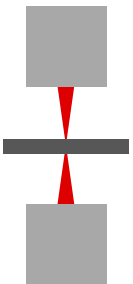


LASER THICKNESS GAUGES - *KLT*



CHARACTERISTICS

- Complete range of gauges: **single point, multipoint and scanning.**
- Heavy-duty mechanical frames for harsh industrial environments.
- High-level protection for optoelectronic components.
- Accurate micrometric optical alignment of the laser beam.
- Easy and fast calibration, manual or automatic, on certified samples.
- Optical windows air purging system.
- Double wall insulation system and temperature regulation (optional).



Measurements in
production line



Intuitive operator panel
for real time display of
measurements

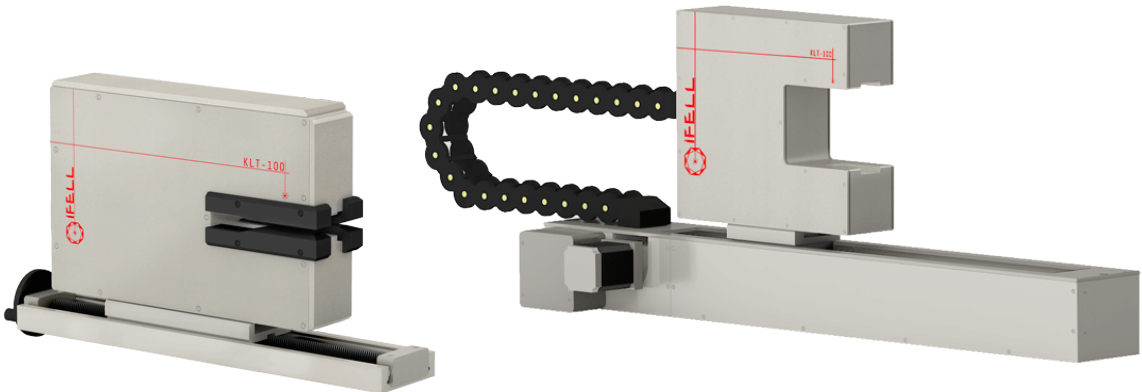


Automatic data reporting

SINGLE POINT GAUGES

KLT-100

- Measurements near the edge of wide strips or up to centreline of narrow strips.
- Throat depth 120 mm (higher on request).
- Models with linear stages for **manual** or **automatic** movement.
- Models with **out of line parking position** and automatic detection of material edge position.



KLT-1000

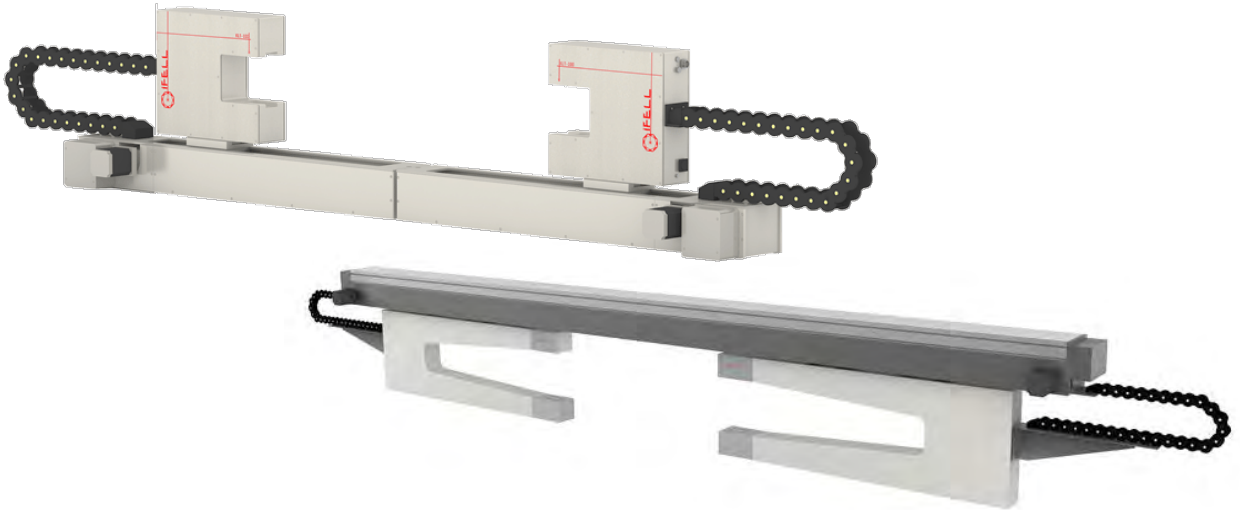
- Measurements at centreline of wide strips or at any points of medium size strips.
- Throat depth up to 1100mm.
- Models with linear stages for **manual** or **automatic** movement.
- **Out of line parking position** and movement at the desired measuring position.



MULTIPOINT GAUGES

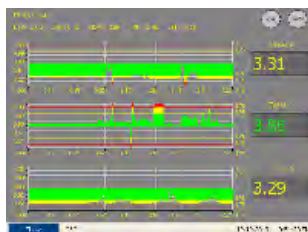
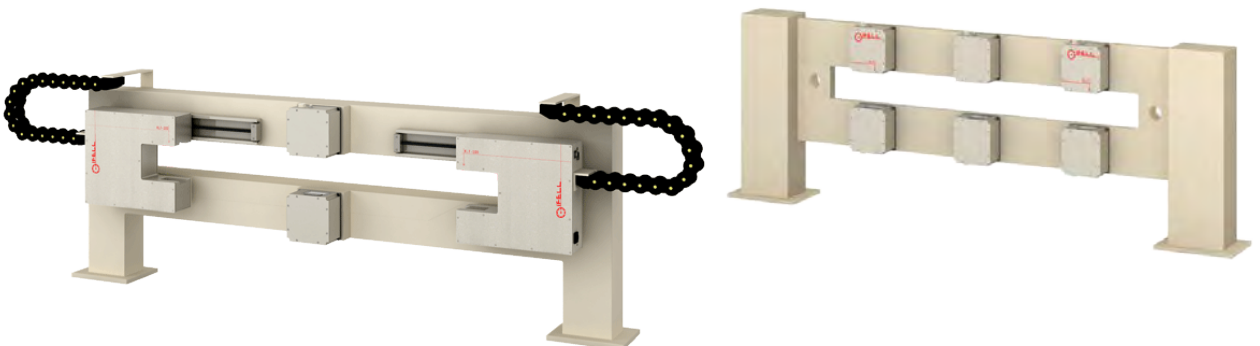
KLT 2

- To measure **two points at the same time**, nearby material edges or up to the centreline.
- Automatic movement from parking position to the desired measuring position.
- Automatic detection of material edge position.



KLT 3

- To measure **three points at the same time**, fix centreline + two movable edges according to material width change.
- Models with three (or more) fix points.
- Automatic models: from parking position to desired measurement position and automatic edge detection (lateral heads only).



SCANNING GAUGES

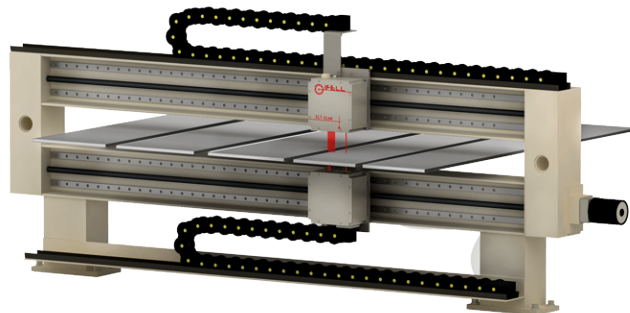
KLT-scan

- For continuous measurements of **thickness profile** along full material width
- Automatic detection of material edge position.
- **O-frame** structure: for wide materials (width up to 2000 mm)
- **C-frame** structure: for medium width materials (up to 800 mm)
- **Multistrip mode** for slitting lines. It allows to scan the full material width and to display the **individual measurements** of each slitted strip both as operator interface and as separated control reports.

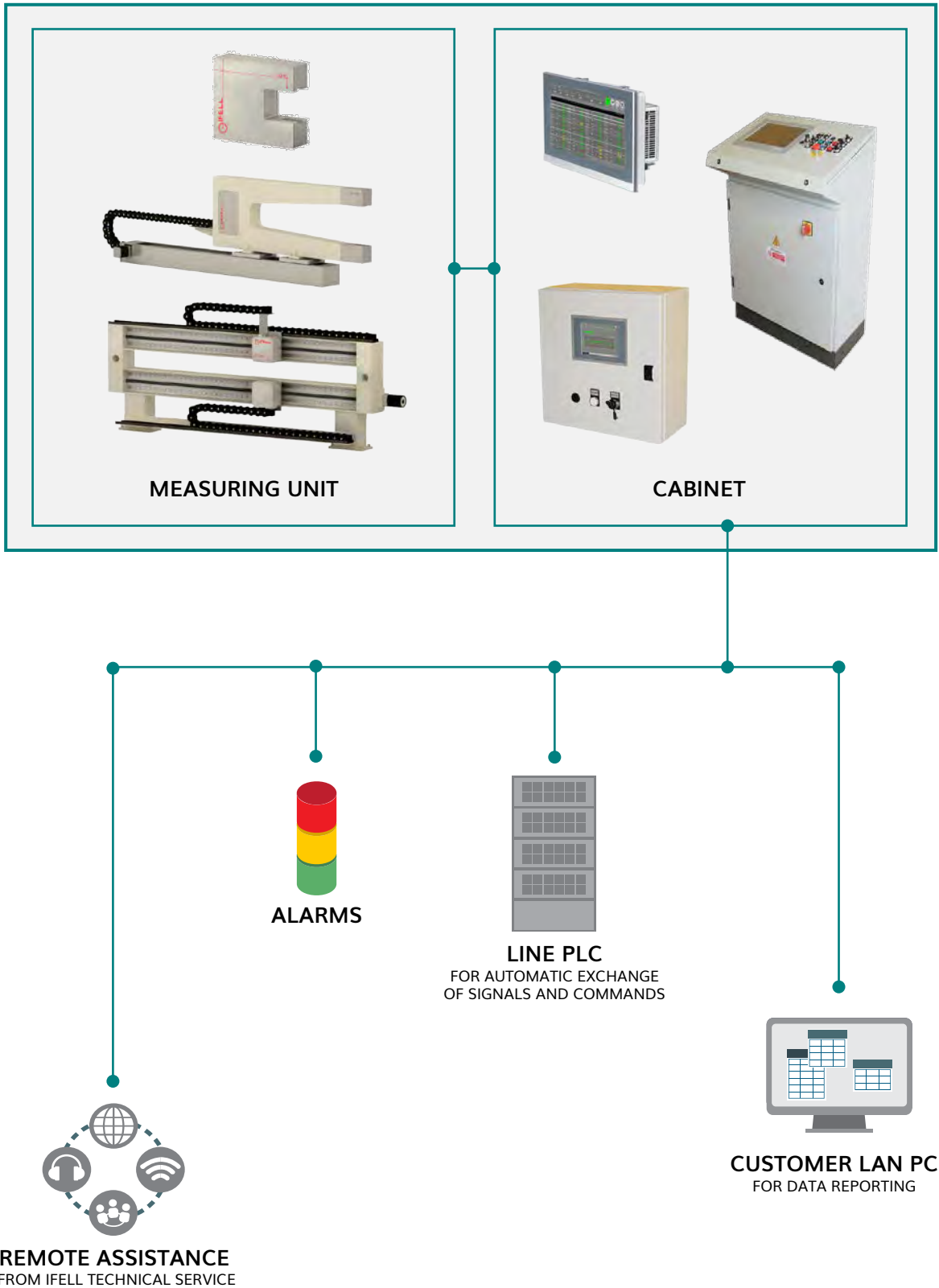


KLT-scan-MW

- **Combined gauge** for **thickness and width** measurements for slitting lines.
- It allows to measure strips width at the beginning and at the end of each coil (material standing) and strips thickness along full length (material running).



TYPICAL SYSTEM CONFIGURATION



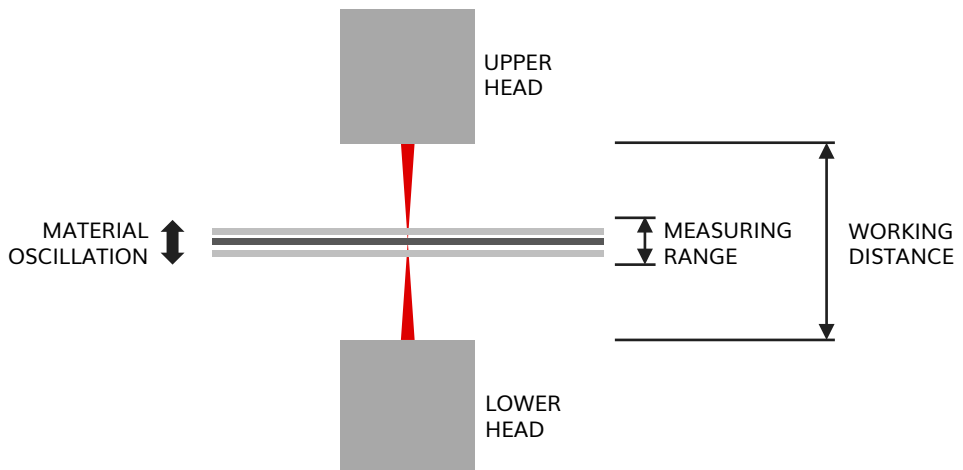
TECHNICAL DATA OF SOME MODELS

	KLT-xxx				
MEASURING RANGE (mm)	4	10	30	50	80
WORKING DISTANCE (mm)	4	40	140	280	280
RESOLUTION (μm)	0,5	1	1	1	1
PRECISION (μm)*	$\pm 0,8$	± 1	± 2	± 3	± 5
LINEARITY	$\pm 0,05\%$ of pass-line variation				
LASER CLASS	2	2	2 / 3R	2 / 3R	2 / 3R

* typical value on master sample at pass-line according to test specification MTP/17.xx.

WORKING PRINCIPLE

KLT thickness gauges are based on the well known **laser triangulation** principle with two laser sensors mounted at the opposite sides of the target material. Each sensor measures the position of the relevant surface along its optical axis by means of a small laser beam observed through an optical system at a certain angle. The material thickness is calculated from the combination of the positions of the two material surfaces, given the distance between the two sensors (**working distance**). The measuring task is performed when both material surfaces are running inside the specified **measuring range**.



All data can change without notice.