

Basis Weight Measurement: Single Sided Measurement System

Single sided system with an X-ray backscatter sensor for inline measurements.

This X-ray backscatter system is perfectly suited to measure the basis weight of a running web or a sheet material during its production process. Reliable density information allows thickness determination as well and vice versa.

The measurement runs continuously and is completely contact less and non destructive.

Measurement of basis weight in a production line allows to monitor the production process and is an inevitable tool for efficient savings of raw material and for tracking and documenting important quality features.

Special features

- Measurement takes place at one side of the web only; no O-frame is required, no misalignment of sensor heads will affect data generation.
- Close positioning to the process of interest thanks to single sided measurement principle and a tight dimension in machine direction (210 mm). Ideal location of measurement for controlling purposes.
- No strait measuring gap has to be passed; contact safe and low affinity to dirt; this makes it easy to feed in the web and is advantageous e.g. after a coating process.
- Measurements towards an impenetrable support like a conveyor belt, a calender or a cooling roller are feasible, e.g. in foil or sheet extrusion.
- Thick fabrics can be measured.
- No radioactivity.



Figure: maX- scanning system with beam dump (displayed without chiller unit).

Components included

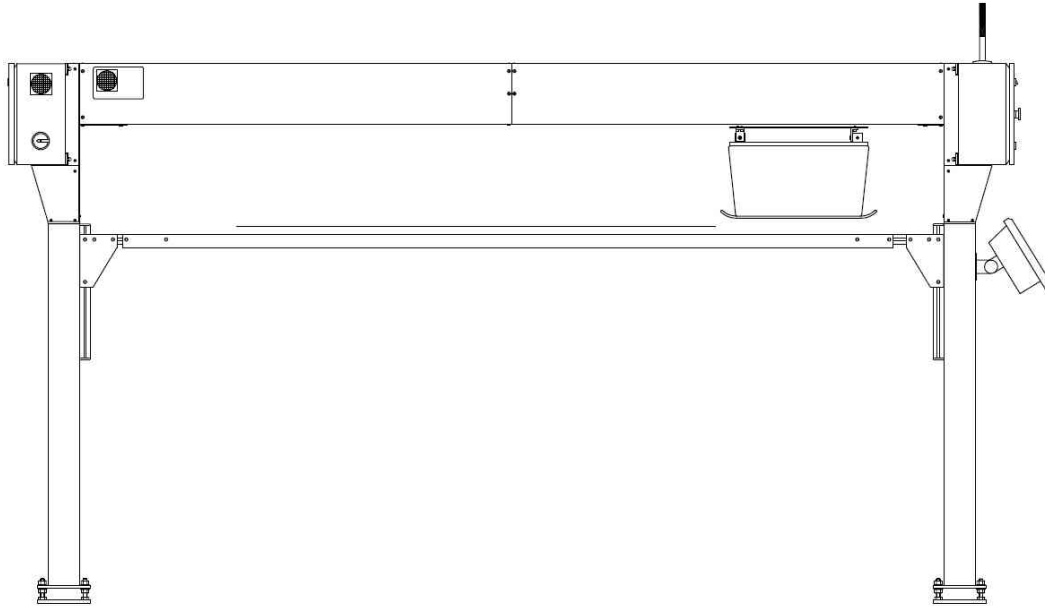
- Single sided travelling frame for sensor; optional with a beam dump bar located underneath the sensor.
- X-ray backscatter sensor.
- Chiller unit for sensor.
- Display and control station: touch screen computer connected to the measurement frame via TCP/IP.
- Optional: analog and digital ports for measurement readings or alarm signals to be fed into an SPS unit.



leading technology

Materials

- ✓ foils and sheet material made of plastics and rubbers
- ✓ fiber compounds, carbon glass aramid ceramics, prepregs, sheet moulding compounds
- ✓ nonwovens, textiles and carpets, spacer fabrics, geo textiles, technical textiles
- ✓ liquids on a metallic surface
- ✓ coatings and laminates
- ✓ scattered materials
- ✓ materials for thermal insulation



Specifications

travelling width	maximum range	up to 5600 mm
travelling speed	basic version ¹⁾	up to 10 cm/s
positioning	accuracy	<0,5 cm
weight	at 2 m travelling width	ca. 270 kg

1) for beam spot dimensions 1,5 cm (CD) x 3 cm (MD)

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