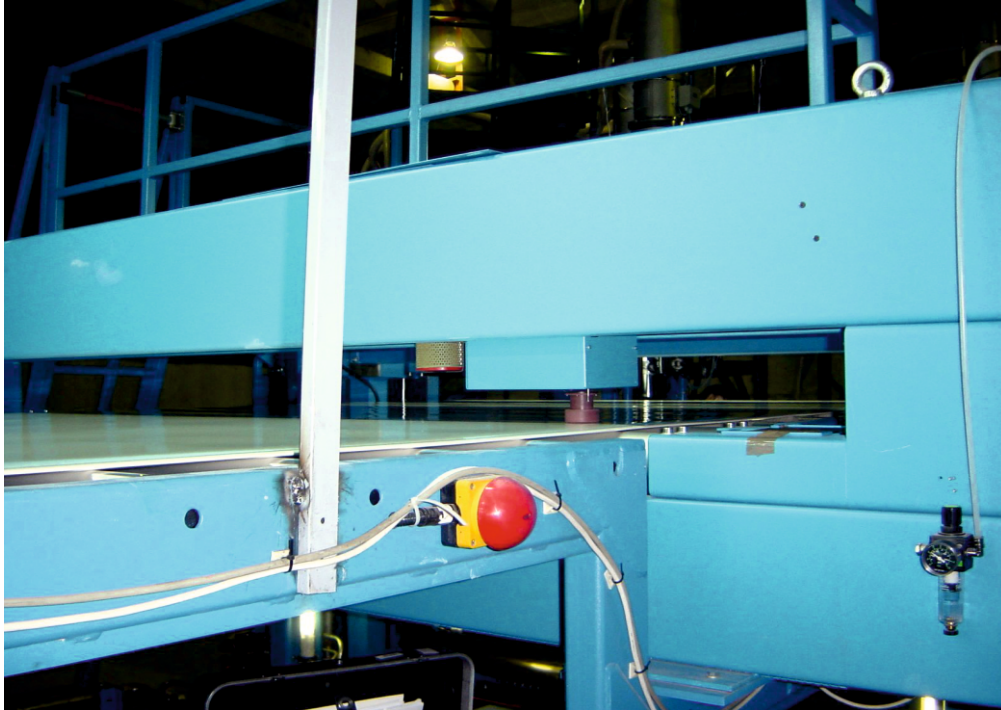


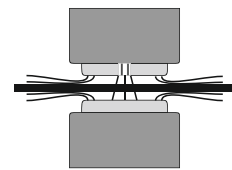
Hovercraft Sensor DAC



DAC Hovercraft in foam sheet production

DAC-Measuring Principle (Double Air Cushion)

For non-contact, double-sided measurement. The measuring range extends from $200\mu\text{m}$ - 30mm. The hovercraft sensor operates on a direct measurement principle. The measuring head and reference plate float on an air cushion with constant distance to the measured material. The system is designed so that two equally light aerodynamic forces are exerted onto the web without touching the material.



The distance is measured via an eddy current coil in the measuring head.

The layer thickness is equal to the measured signal minus the thickness of the air cushion. The gap of the air cushion is about $200\mu\text{m}$ and is held constant by a regulated blower and is calibrated in regular intervals. No expensive plant air is used. The absolute thickness of electric non-conductive materials such as plastics (also laminations), coating foam, paper, rubber, etc. is measured with the SAC and DAC sensors.

Coatings on metallic substrate can also be measured. The measuring head can either be on top of or on the underside of the web material. The thickness measurement results from the average measuring field value and is independent of surface consistency, color or thickness of the material. The measuring field corresponds to the measuring head diameter of 40- 60mm and is optimally tuned for automatic die bolt control.

O-Frame with Hovercraft Sensor Measuring Range 0,2mm - 30mm

**Sensor Specs:**

Inductive displacement sensor (Eddy Current Sensor)

Measuring Range:

DAC 2S: 0,2mm - 3mm / DAC 4S: 0,2mm - 5mm / DAC 6U: 0,2mm - 8mm / DAC 15U: 0,5mm - 30mm

Resolution:

+/- 0,001 mm

Accuracy:

+/- 0,001 mm or +/- 0,1% of nominal thickness, whichever is greater

Repeatability:

+/- 0,002 mm for meas. range < 4mm, +/-0,05% for meas. range > 4mm

Linearity:

+/-0,1% Fs

Temperature Range:

0 to 50° C without air conditioner

Max. Sheet Temperature:

93° C, optional sensor heating available if required

Measurement Speed:

Measurement every 0,5mm (1kHz)

Scan speed:

Traversing speed 0 to 300 mm/sec. fast retract 18 m/min