

Contact-free thickness profile measuring sensor *VenPad* for measurement on the bubble

Solutions ...

The capacitance gauge profile measuring sensor *VenPad* has been especially developed to measure the thickness profile on blown film with sticky surface or sensitive to scratch. Fitted freely moveable on a rotation device, the *VenPad* measuring head oscillates 360° around the film bubble.

... for blown-film lines: ...

The so-called Venturi effect assures a constant distance between film and sensor at any time of the measurement. With a resolution of 0.1 µm even the smallest thickness variations are detected.

... modular and economic.

Equipped with its own process electronics, *VenPad* connects to a central process computer via field bus interface, e. g. profibus, for the display of measurement data and gauge profile.



Quality and cost reduction

- no clinging of film to sensor with sticky films
- no scratches on sensitive film surfaces
- continued measurement with sticky and sensitive films
- decrease of waste production

Sophisticated technology

- constant distance between film and sensor kept automatically
- high measuring speed results in quick reaction time for corrections
- constant rotating speed for accurate profile positioning

Automation of process

- continuous recording and display of thickness profile
- safer production process
- high-tech sensor for modular concept of extrusion control

Octagon measuring-modules: Technology especially developed for extrusion control

Capacitance sensor

The capacitance sensor is kept at a constant distance to the film. An ultrasonic sensor is integrated to ensure that contact between film and sensor is kept to a minimum thereby virtually eliminating the possibility of scratching.



VenPad on oscillating device

VenPad

VenPad is equipped with air supply shields with integrated nozzles. An air-pad is created between film bubble and sensor surface by air streaming at high velocity. Due to force of attraction and the movable bedding, the sensor will always follow the film.



Capacitance sensor with VenPad

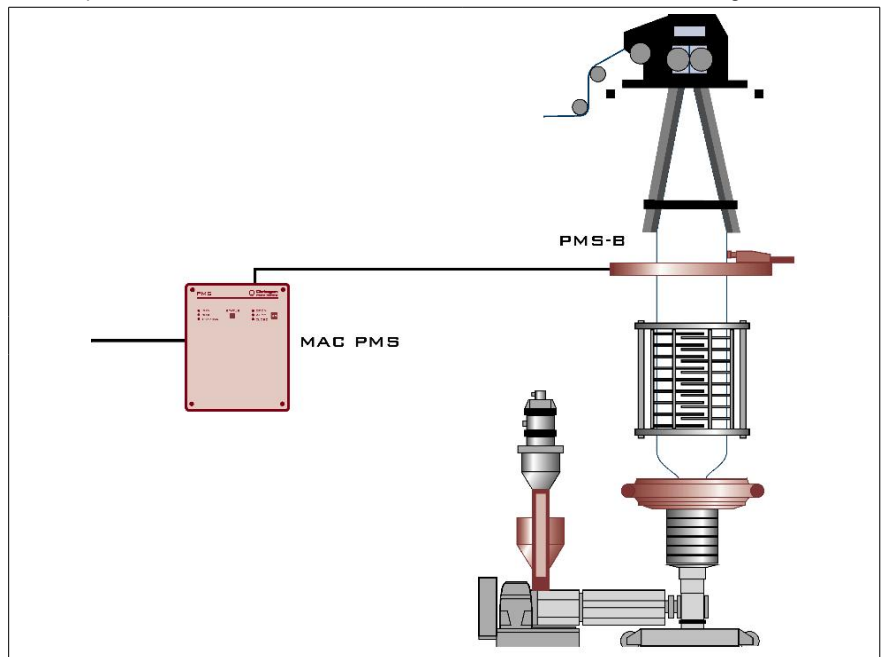
Oscillating rail

The oscillating device allows a rotation of the sensor around the film bubble by 360°. Drive is direct via the toothed wheel of the ball bearing whereby the speed of the rotation is kept constant. A drag chain protects the transmission cables from any damage.



Drive of the oscillating device

Installation in an extrusion line:



Standard extent of delivery

- Measuring sensor VenPad
- Oscillating device
- Process controller MAC-PMS

Technical data

- Measuring range 6 - 500 μm
- Resolution 0,1 μm

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