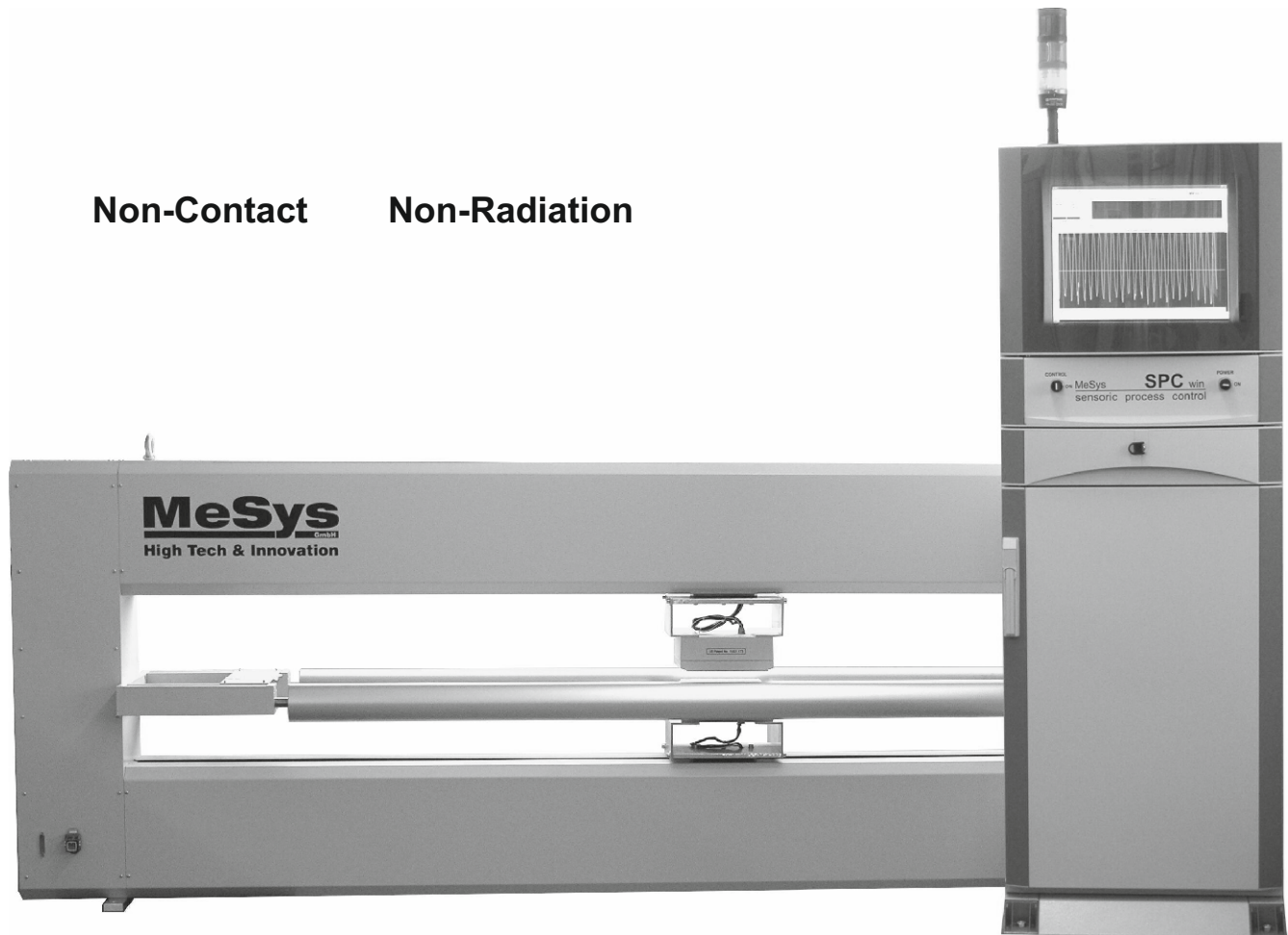


# USMX 200/500

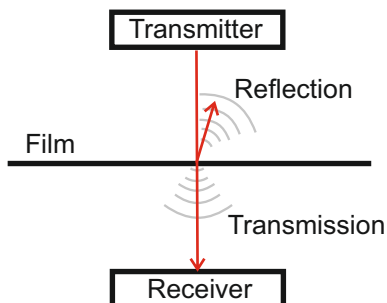
## Weight/Thickness Gauge

**Non-Contact**

**Non-Radiation**



**Advanced Weight/Thickness Measurement Method uses Low Frequency Instead of Beta source**



### **Measurement Principle:**

The material to be measured is locally oscillated. The transmission and reflection of this oscillation varies, depending on the grammage and the thickness of the material. The oscillations are measured by an appropriate sensing system and evaluated by a high-speed microcontroller. For ease of explanation, it can be assumed that the oscillation amplitude is inversely proportional to the surface density at the measuring point. Any noise and environmental impacts are eliminated through intelligent logic control.

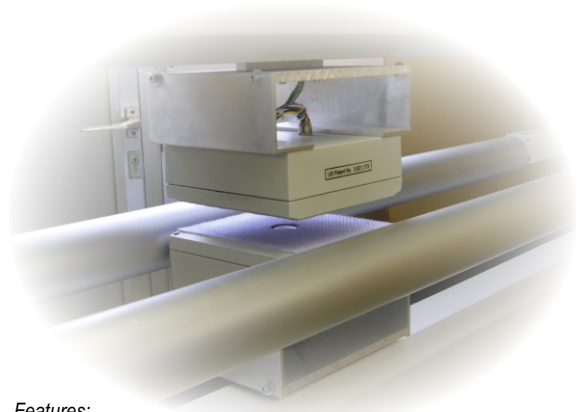
As an additional performance characteristic, the relative measurement accuracy remains constant with decreasing grammage, resulting in a higher absolute accuracy.

# USMX 200/500

## Weight/Thickness gauge

### for Plastics, Paper, Metal, Fleece, Coatings, etc.

- ◆ Non-contact, non-destructive, non-radiation
- ◆ Thickness range USMX200: 0 - 1.000µm (0 - 1.000gsm)
- ◆ Thickness range USMX500: 0 - 4.000µm (0 - 4.000gsm)
- ◆ Resolution - down to 0,001µm
- ◆ Accuracy: always +/- 0.5% of sample weight
- ◆ Clearance in measuring >20mm
- ◆ High pass line range
- ◆ Fast measurement speed 120Hz
- ◆ Up to 18 mts./min. scanning speed
- ◆ Highly accurate
- ◆ Simple interface via RS232/422
- ◆ Low cost



*Features:*  
Feedback control for thickness and profile  
Same spot operation for coating and stretch film applications.  
Measurement in Ex-environment

Resulting from an intensive R & D program, MeSys is proud to introduce a new method for weight and thickness measurements of thin films (**patented**). The measurement range of this method is 0 to 4000 grams per square meter ( 0 to 4000 microns) with an accuracy of 0,5 percent of the measured value.

The USMX-200/500 System is designed for **non-contact traversing measurement** of thin material layers in industrial process control and quality assurance applications. It can be used for all kinds of material such as paper, plastics, aluminum, fleece, layers and so on. The sensor module is extremely robust against industrial environments.

With the USMX-200/500, MeSys provides a thickness measurement device for web widths up to 12 meters. Very high web transport and traversing speeds are enabled by a scanning frequency of 120 measurements per second.

The measurement spot has a diameter of 5 mm. Via a special evaluation method, even the smallest production defects can be identified. In measuring mode, the measurement clearance is >20 mm (standard is 40 mm) and is much larger than with comparable methods.

This new measurement system from MeSys closes a gap in the measurement range of the previously known sensors DAC and TOM which also are of contactless and non-radioactive type but cover the range from 200 microns to 200 mm.

#### Application of USM-200/500 sensor

- ◆ Complete on-line weight/thickness gauging system
- ◆ C-frame construction for small applications (on-line MD profile analyses etc.)
- ◆ Labprofiler for off-line testing and analyses (blown film, layer etc.)
- ◆ Several OEM applications
- ◆ Replacement of beta sensor