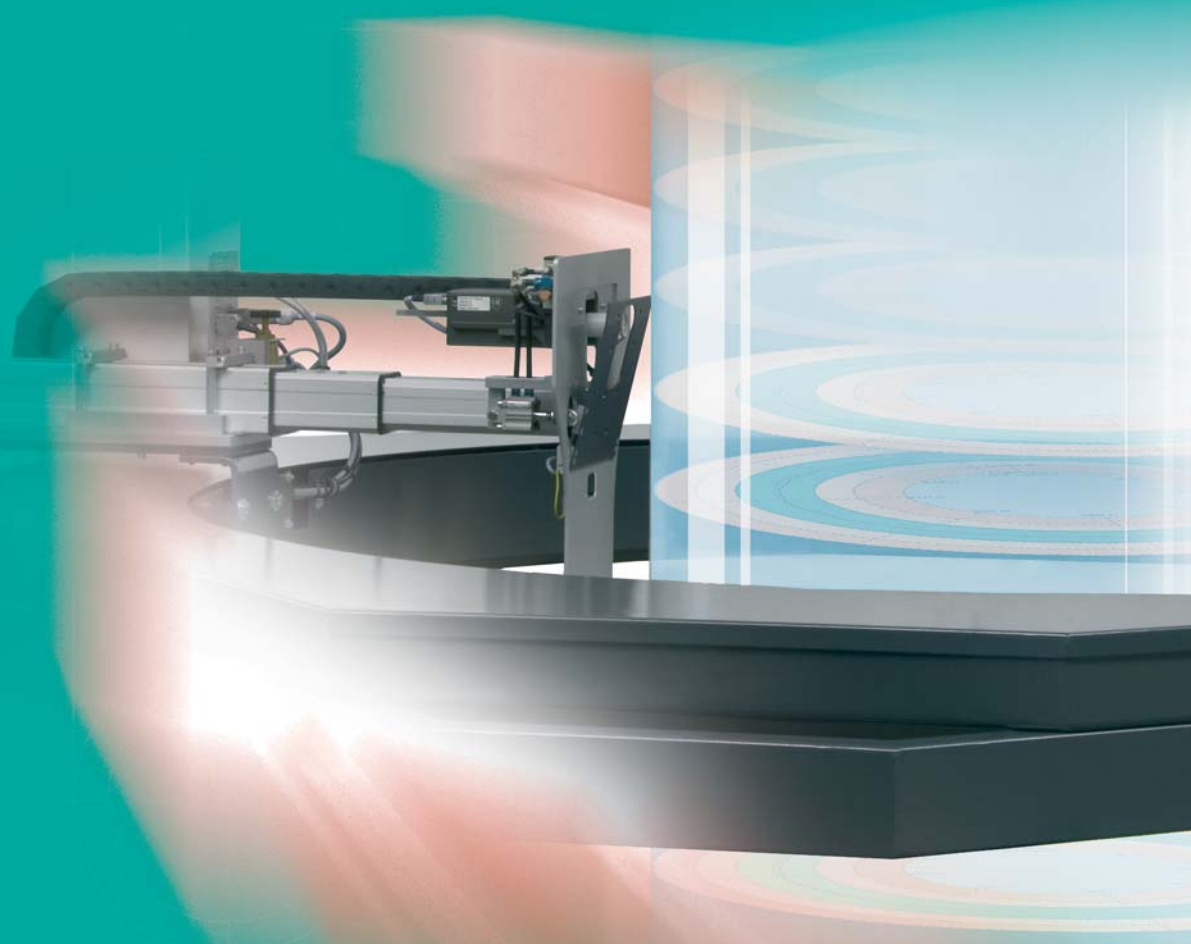




MODULAR PROFILE MEASURING SYSTEM OF BLOWN FILMS

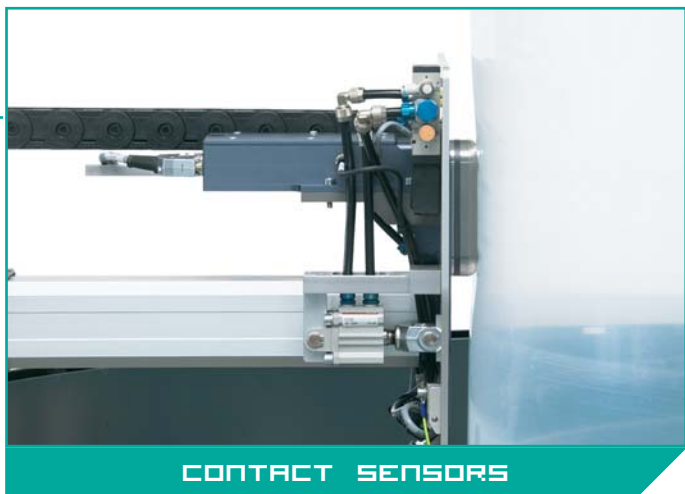
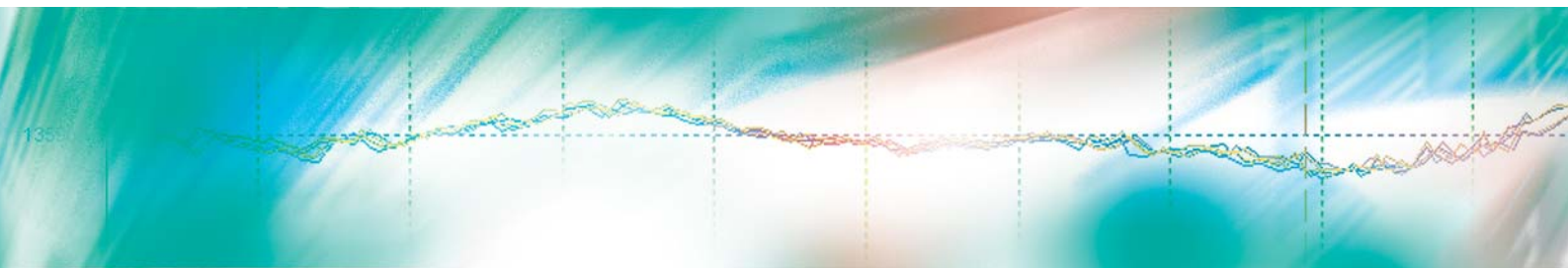


## MODULAR PROFILE MEASURING SYSTEM OF BLOWN FILMS

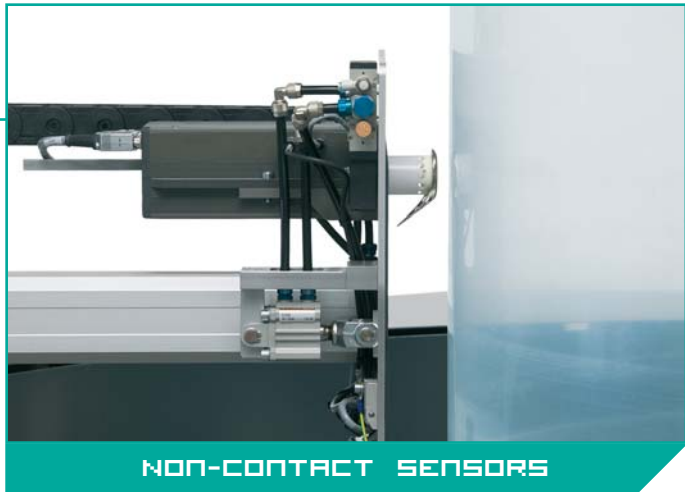


### **Modular measuring system for profile measuring of blown films**

The measuring of the film profile already on the film bubble provides crucial data for the extrusion control. In order to make the process as efficient as possible, the modular blown film measuring system has been designed by Micro-Epsilon which is installed immediately after the calibration cage. The system comprises an annular die and an exchangeable measuring unit which oscillates around the film bubble. The sensor system used for the profile measurement is based on the capacitive measuring principle and determines the film profile precisely and reliably.



**CONTACT SENSORS**



**NON-CONTACT SENSORS**

**Special features of the measuring system**

The profile measuring system for blown films measures longitudinal and lateral tolerances of the blown film with precision. The measuring system starts as early as the approach of the film bubble. As the oscillation velocity at the respective process state can be adjusted, an optimum deviation control corresponding to the respective process step is made possible.

The system oscillates in a circle around the bubble for the measurement and makes continuous measurements in doing so. Capacitive sensors are used which are distinguished by extreme precision and signal quality. The measuring unit is always maintained at a constant distance from the film using compressed air. Thus, high signal stability is ensured. Thanks to the use of a flexible annular die, the profile measuring system is suitable for film diameters between 160 mm and 2,300 mm.

Sensor replacement and the exchange of sensor from contact to non-contact can be performed easily due to identical connectors and mounting points. A non-contact version is also available in addition to the standard contact version where the sensor head directly rests against the film bubble. The contact measuring unit is designed for common film types while the non-contact version is specially designed for sensitive films and "sticky" films.

The system can be fitted with different interfaces such as Profibus DP, CAN-Bus, Ethercat, RS232 or RS485. The system can be regularly checked by remote maintenance due to online connection.

**System advantages:**

- Short control response time
- High system measuring rate
- High versatility
- Simple operation
- Direct connection to the host system
- Safety mechanism for process monitoring
- Adjustable oscillation velocity

**Technical data:**

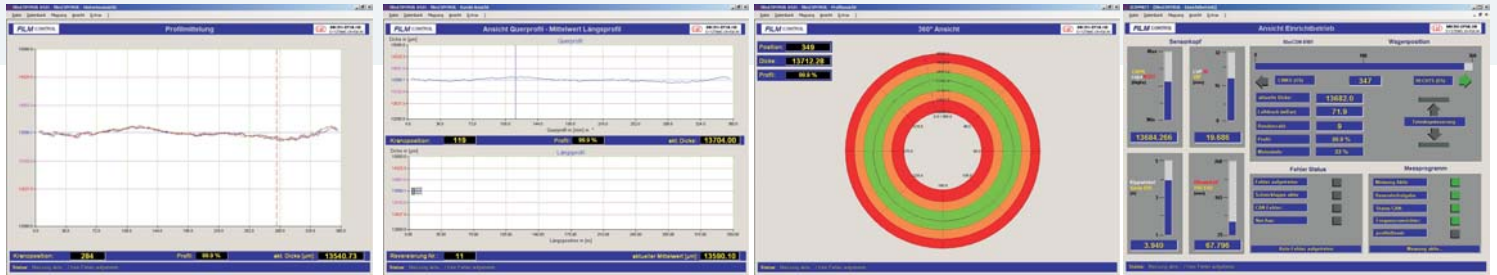
- Weight: ca. 75 kg
- Current consumption: < 2 A
- Supply voltage  
230 VAC, -10%, + 5%, 50 Hz
- Air pressure supply  
2 bar ±0.5 bar, dry and without oil
- Consistency of the blown film  
5 µm to 350 µm  
1-9 layers, insulating
- Blown film diameter: 160 - 2,300 mm



Non-contact capacitive sensors



Contact capacitive sensors



Screenshots: Profile of blown film and system set up

Modifications reserved / Y9761210-A010097MLO



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