

# Lay-flat width measuring unit LMS

## Solutions ...

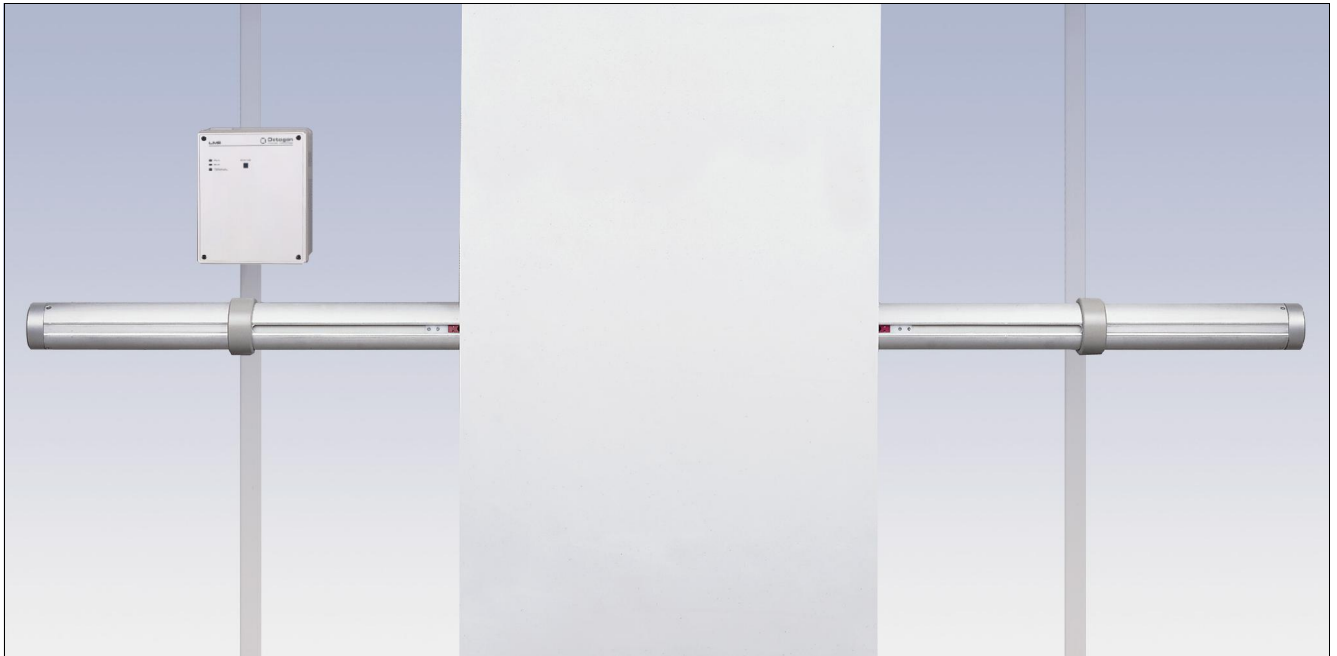
The distinguishing features of the width measuring unit LMS include a high measuring accuracy and reliability. Highly sophisticated and well-proven in design it assures safe functioning thereby playing an important part in enhancing quality control of produced film.

## ... for blown film lines ...

For the input and display of measurement data the LMS unit is connected to a central computer via a fieldbus, such as a profibus. Appropriate control elements may be connected to this central computer for maintaining the required widths.

## ... accurate and easy to maintain.

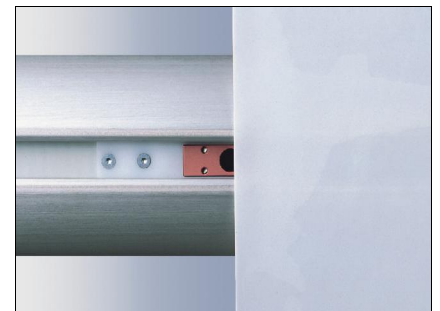
Two highly accurate infrared sensors give the LMS a measuring precision of better than 1 mm. Its special design leaves the LMS practically free from maintenance: With the measuring slots covered in every sensor position the mechanical parts are totally protected from contamination.



## Function description

The lay-flat film passes across the LMS measuring beam. Driven by stepper motors, two infrared sensors continuously follow the film edges registering their position.

By counting the steps of the motors, the process computer calculates the distance between the edges, which represents the total lay-flat width of the film.



Infrared sensor at the film edge

### Quality

- Maintains set film width
- Ensures consistent product quality
- Maintains chosen tolerance range at minimum level
- Reduces customer complaints
- Safeguards against inaccurate manual measurement

### Advantages

- Reduces waste during start-up and job changes
- Saving in raw materials
- Prevents oversize film width
- Stops width variations caused by temperature changes
- Low in maintenance and user-friendly

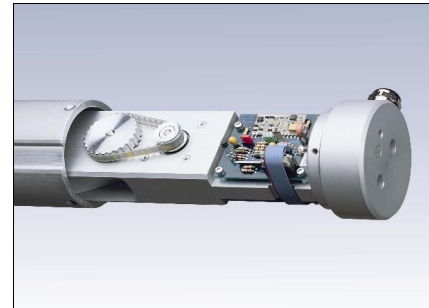
### Automation

- Safe production process
- Continuous display of film width
- Shorter start-up and change over periods
- High-Tech sensor for modular concept of extrusion control
- High accuracy of control

# Octagon Measuring Modules: Technology especially developed for extrusion control

## Special features

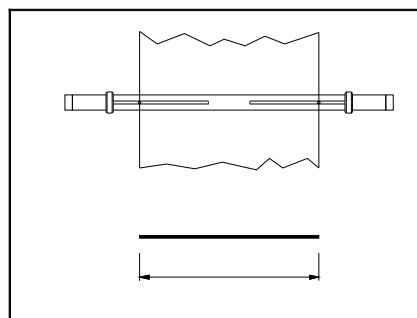
- Mechanical parts totally protected in every sensor position thereby preventing any contamination of mechanical elements.
- Measuring sensor operates without making contact with the film, therefore no risk of film being scratched.
- High measurement accuracy by use of precise infrared sensors
- Drive by stepper motors reduces maintenance to a minimum
- Measuring devices at both ends of the tube operating totally independent of each other
- Installation fast and simple



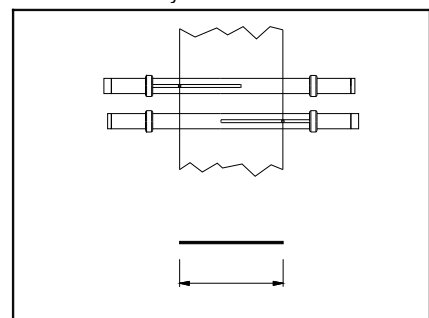
Drive assembly of measurement device

## Measuring range and accuracy

The measuring range between minimum and maximum width is 1400 mm. Different tube lengths allow adaptation to job-specific requirements. Each measuring step has a resolution of 0.1 mm allowing the system to operate with an accuracy better than 1 mm.



Standard model



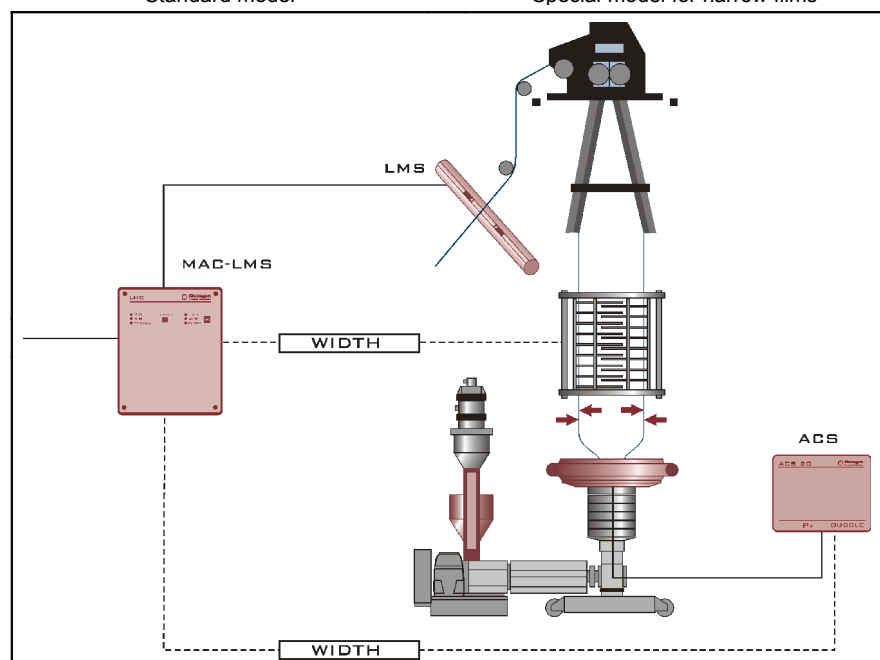
Special model for narrow films

## Measuring and control tasks on an extrusion line

- Lay-flat width measurement
- Lay-flat width control
- Bubble volume control ACS on lines without IBC
- Calibration basket control on lines with IBC

## Lay-flat width control

The width measuring unit LMS is connected to a central computer via process controller MAC-LMS. For maintaining the required width appropriate control elements may be connected to this central computer for adjustment of the calibration basket or the bubble air volume.



Extrusion line with width control via inflate / deflate device or calibration basket

## Process controller MAC-LMS

Its main task is to convert the measurement signals and transmit them to the central computer via fieldbus. Status, BUS and alarms signals are displayed on the front panel. All operations are carried out on the central computer.



Process controller MAC-LMS

Technical data subject to alteration

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