

Lay-flat width measuring unit GMS

for film with and without gussets

Solutions ...

The distinguishing features of the width measuring unit GMS 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 GMS unit is connected to a central computer via a fieldbus.

Appropriate control elements may be connected to this central computer for maintaining the required widths.

... accurate and easy to maintain.

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



Function description

Two sensor discs, each equipped with 2 infrared sensors and driven by stepper motors, submerge into the two film gussets. The sensors continuously follow the four 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 and gusset depth
- Shorter start-up and change over periods
- High-Tech sensor for modular concept of extrusion control
- High accuracy of control

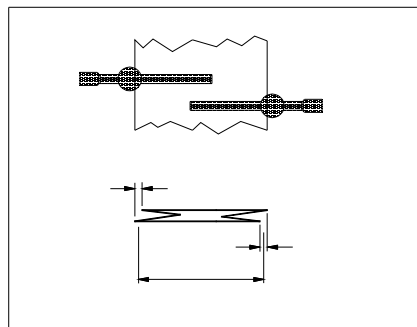
Octagon Measuring Modules: Technology especially developed for extrusion control

Special features of a well-proven measuring system

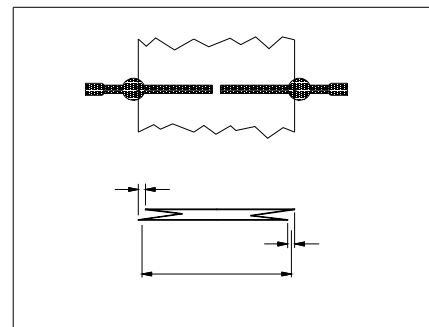
- Interior of measuring beams totally protected in every sensor position thereby preventing any contamination of mechanical elements
- Drive by stepper motors reduces maintenance to a minimum
- High measurement accuracy by use of 4 precise infrared sensors
- Two measuring devices operating totally independently of each other
- Installation fast and simple

Measuring range and accuracy

The measuring range of both beams from minimum to maximum width is 1500 mm. Varying their positions allows 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.



GMS beams in offset pos. for narrow film



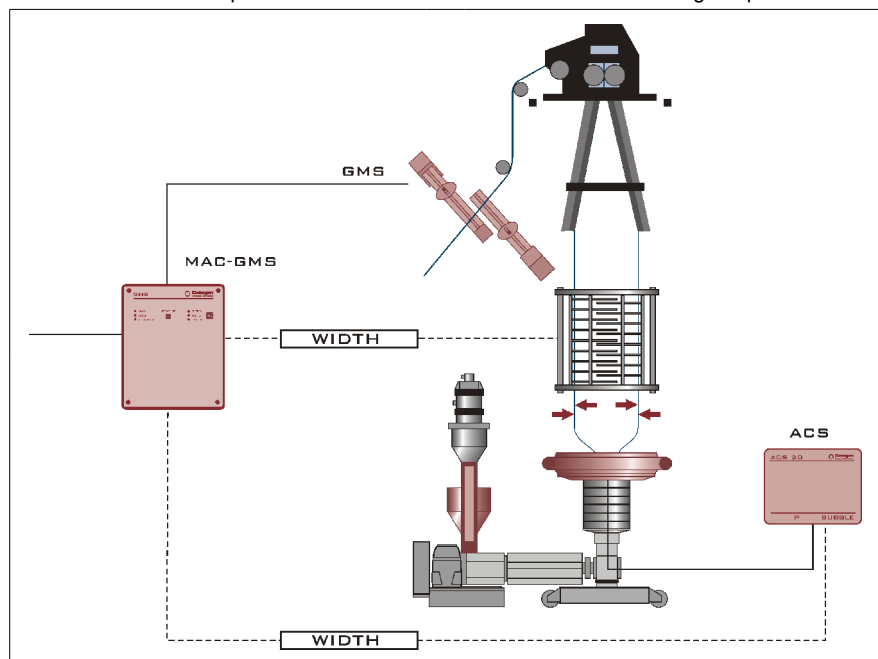
GMS beams in aligned position

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
- Measurement of gusset offset

Lay-flat width control

The width measuring units GMS are connected to a central computer via processor MAC-GMS. For maintaining the required widths 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

Octagon
Process Technology GmbH
Nuernberger Straße 119
D-97076 Wuerzburg

Phone +49 931 27 96 70
Fax +49 931 27 47 19

contact@octagon-gmbh.de
www.octagon-gmbh.de

Process controller MAC-GMS

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-GMS

Technical data subject to alteration