Octagon Process Technology

Lay-flat width control with sensor GMS

for film with and without gussets

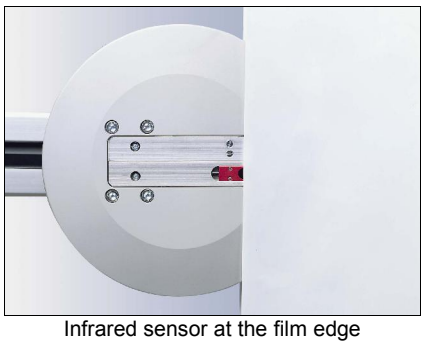
Optimum for blown film lines

ScenEx LG is a well-proven stand-alone system specially designed for the measurement and control of lay-flat width of gussetted film on blown film lines. Sophisticated, accurate, reliable and yet economic, with these features all the demands on a modern measurement and control system are fully met.

The lay-flat width is accurately measured by the GMS measurement units.
For maintaining the required width, either the calibration basket or the air volume of the bubble are automatically adjusted. An additional alarm is available in case of the selected width tolerance range being exceeded.

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 search the 4 outside 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 widths
- Ensures consistent product quality
- Maintains chosen tolerance range at minimum level
- Reduces customer complaints

Advantages

- Reduces waste during start-up and job changes
- Prevents oversize film width
- Safeguards against inaccurate manual measurement
- Prevents width fluctuations caused by temperature changes

Automation

- Simple to operate
- High accuracy of measurement and control
- Shorter start-up and change over periods
- Continuous recording and display of film width and gusset depth

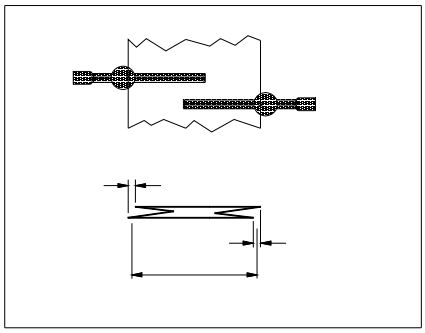
Octagon Control Systems:
Quality control, optimised products, raw material savings

Special features of a well-proven measuring system

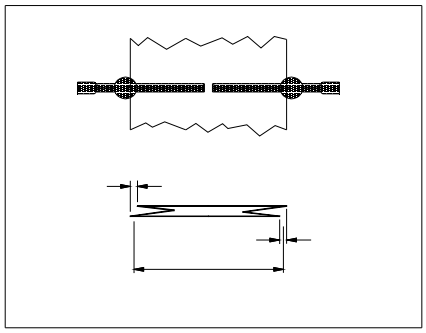
- Interior of measuring beams totally protected totally protected in every sensor position thereby preventing any contamination of mechanical elements
- Drive by stepper motors reduces maintenance to a minimum
- High measurement accuracy by use of 4 precise infrared sensors
- Two measuring devices operating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



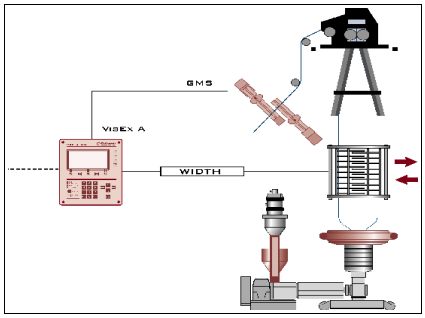
GMS beams in offset pos. for narrow film



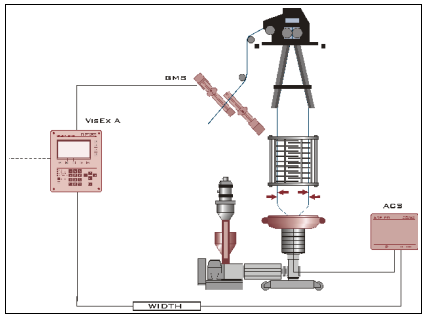
GMS beams in aligned position

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



Width control via calibration basket



Width control with ACS inflate / deflate device

Process controller VisEx A

All elements of the system are connected to VisEx A controller which is installed at a maximum distance of 5 m from the LMS.
Its front panel include numerical key board, operating keys and modern LCD display panel making it easy for the operator to enter and read all production data.

Simple data input:

- Target lay-flat width mm
- Target gusset depth mm

Clear LCD display:

- Target/act. width mm
- Target/act. gusset depth mm
- Alarms
- Order number

Process controller VisEx A

Inflate/deflate device ACS

This device allows the width to be maintained by automatic adjustments of the bubble air volume.
Additional air is automatically blown into the bubble if the width has decreased. Similarly the air volume is reduced if the width has increased.

Inflate / deflate device ACS

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