

Extrusion line optimisation SmartLip mc⁸ for dual-lip and triple-lip air rings

Increase in output and optimisation of film quality

SmartLip mc⁸ is an on-line system for continuous control of the gauge profile on blown film lines.

SmartLip mc⁸ focuses on two fundamental production targets, the increase of film being produced, and its improved quality at the same time.

The SmartLip mc⁸ control system may be fitted not only to any new line but is also an optimal solution when it comes to retrofitting older lines.

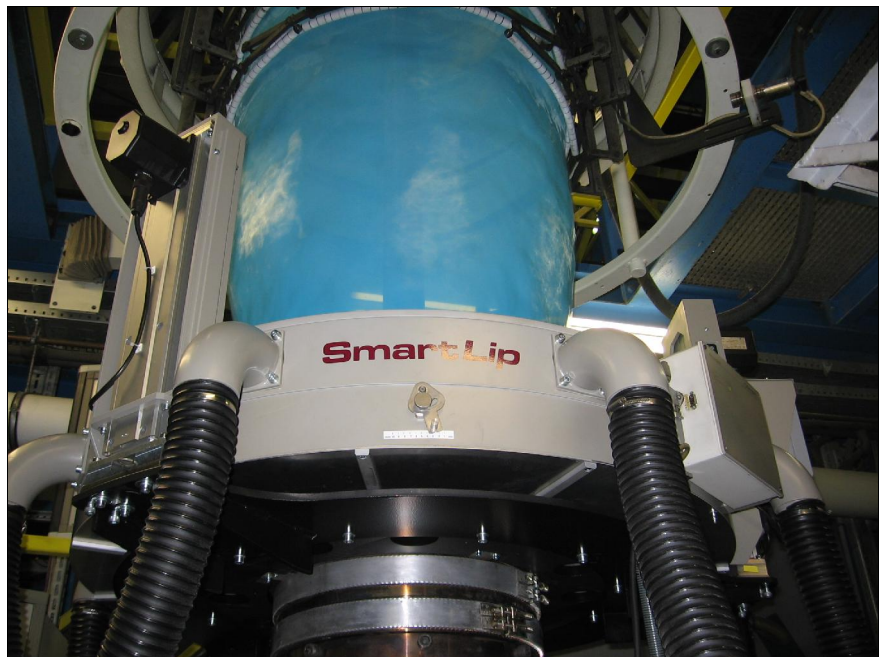


Possible limitations of the extrusion line:

- extruder rpm
- die head pressure limit
- spiral distributor marks
- limited line speed
- limited winder speed
- film that tends to block
- blower power
- melt temperature
- lay-flat width fluctuations

Function principal:

The shape of the film bubble can be adjusted perfectly for various film products. A lip design that is tailored to the requirements given, supports a significant increase in output. By firmly fixing the bubble at a greater diameter the initial tolerances are improved usually. Particular mechanical properties, such as dardrop and shrink properties in machine and transversal direction for instance, can be influenced with the height adjustment.



Better quality

- Reduced gauge tolerances by 50 - 70 % of usual values
- Improved film properties for the downstream confection
- Even geometry of finished reels
- Improved production plan
- Reduced customer complaints

Reduced costs

- Increase in extruder output with dual-lip air ring
- Savings in raw materials by down-gauging
- Considerably less stoppages with downstream confection
- Reduced waste during start-up
- Faster return on investment

Automation

- Safer production process
- Post-centring of die unnecessary
- Automatic correction of gauge profile during production process
- Simple to extend with other Octagon control systems

Octagon gauge profile control: For improved profitability and best quality

Performance facts:

- Customer oriented consulting for process technology
- The height adjustment allows the bubble shape to be adjusted to the process requirement
- Taylor-made lip design for every customer
- Significant increase in output
- By firmly fixing the bubble at a greater diameter the initial tolerances are improved usually
- Particular mechanical properties, such as shrink properties in machine and transversal direction for instance, can be influenced with the height adjustment.



Height adjustment and die head support plate

throughput 150,00 kg/h	x	operating hours 24,00 h/day	x	operating days 300,00 days/year	x	raw material price 1,00 €/kg	=	annual throughput 1.080.000,00 €/year
annual throughput 1.080.000,00 €/year	x	increase in output 20,00 %/100	=	production surplus 216.000,00 €/year				
production surplus 216.000,00 €/year	x	profit 10,00 %/100	=	profit surplus 21.600,00 €/year				
investment 80.000,00 €	:	profit surplus 21.600,00 €/year	=	amortisation time 3,70 years				

Example for amortisation by SmartLip mc⁸

Extent of delivery:

- Controlled or uncontrolled dual- or triple-lip air ring
- Integrated height adjustment
- Taylor-made die head support plate
- Process technology support



SmartLip TL mc⁸

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Technical details subject to alteration