

# maax<sup>®</sup> BF

Automation solution for backflush screen changer



maax<sup>®</sup> BF is Maag's well-proven control system for the fully automatic backflush screen changers. It allows the processor of highly contaminated polymer melts a simple handling of the backflush screen changer and a fully automatic screen cleaning and manifold use of the screens. The automation system is particularly well suited for retrofitting extrusion lines with screen changers with backflush function. Operation, control, and regulation as well as monitoring of operating parameters are simplified. Process and operation reliability of the entire system are increased.

## Your benefits

- Simple and clear operation of filter and system functions
- Increased productivity through storage of recipes in parameter lists
- Integrated temperature control of the system components
- Rapid error detection via clear text messages
- Scalable visualization of different operation parameters in a trend display
- Increased productivity

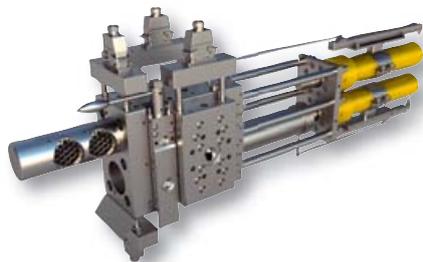
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## Features

- Convenient and safe operation via color display with touch function and key
- Teleservice function for PLC program and visualisation
- Online language changeover
- Signaling of operating mode and plant status
- Anti-block mode with motion monitoring
- Melt pressure measurement
- Recipe memory

On the basis of a Simatik, the control system maax<sup>®</sup> BF fulfils the requirements of simple recycling plants up to process-constant direct recycling applications, such as the processing of PET bottle flakes to thermoforming sheet on an extrusion line. Depending on the specific needs, the extruder and melt pumps can be incorporated in the control system.



CSC/BF-4F: For many years the benchmark for cost-efficient and reliable filtration of highly contaminated polymer melts. The fully automated screen cleaning permits multiple uses of the screen.



## Technical specifications:

<b>Control cabinet:</b>	Rittal system cabinet
<b>Operating voltage (standard):</b>	3 x 400 V/N/PE
<b>Control voltage:</b>	24 VDC
<b>Solenoid valves:</b>	24 VDC
<b>Displacement transducer:</b>	Micropulse transducer with Profibus DB interface
<b>Melt pressure:</b>	DMS 3.3 mV/V
<b>PLC:</b>	SIMATIC ET 200S
<b>Operating panel:</b>	Touch Panel 10", color
<b>Heating:</b>	Heating control for 8 heating zones

## Mode 1: Pressure-dependent piston positioning

In all commercial recycling filters, cyclical screen cleaning and screen venting take place for functional reasons due to small amounts of material from the main melt stream. By these volume losses a negative impact on the process could not always be excluded in the past. The new, dynamic piston positioning in Mode 1 constantly monitors the maximum deltaP requirement of the user, in which the piston distances and retention times are adjusted in a self-optimizing manner. This will limit pressure fluctuations and prevent exceeding the permissible product tolerances.

## Mode 2: Pressure-dependent volume control

The new control guarantees an almost absolute pressure and throughput consistency in the process in conjunction with a conveyor stiff extruder or an extrex<sup>®</sup> melt pump. Here, in mode 2 during screen cleaning or venting cycles the constant extruder or pump speed is temporarily suspended. As a result, the pressure reduction due to volume loss is proportionally compensated by short-term speed increases. With a constant flow rate and melt pressure at the tool a consistently high product quality is guaranteed. Thereafter, the control switches back to the normal operation with constant speed of the extruder or melt pump.

## maax<sup>®</sup> BF offers you a full service

- Supply of all electrical equipment mounted in the control cabinet
- Complete supply of the functional system
- Screen changer integrated into your production line control system
- Technical guidance and advice and process optimization
- System commissioning and operator training
- "Round-the-clock" service with short response times