

# Flow Control

## Effective Flow Monitoring

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With our Flow Control, the flow measurement device, you can detect at an early stage whether flow reductions in the temperature control circuits have exceeded a critical threshold.

Flow Control continuously measures the flow rate and return temperature of individual temperature control zones while your injection molding machine works.

If the predefined tolerance limits are exceeded, an error signal is immediately sent to the machine operator and the injection molding machine, enabling a quick response.

Our Flow Control is highly reliable and can be easily retrofitted to the existing water flow regulators of your injection molding machine.



### Quick and precise responses

Immediate and clear alarm output upon error detection



### Time savings during commissioning

Stores all setting parameters for approximately 200 tools



### Industry 4.0 (OPC-UA)

Enables seamless integration of measurement data into process automation



### Modular expandability

Easily retrofits into the return lines of your injection molding tools



### Improved maintenance and repair planning

Provides reliable data on flow rates and return temperatures in injection molding tools



# How It Works

## Water Flow Measurement for Injection Molding

Flow Control ensures continuous electronic flow measurement of the cooling circuits in the injection molding tool.

It permanently monitors the flow rate and return temperature of individual cooling zones while the injection molding machine is running. If the predefined tolerance limits for flow or temperature are exceeded, the machine operator is immediately alerted via light signals on the status lamp.

Additionally, Flow Control can send an error signal to the injection molding machine, allowing you to process it in your preferred way - whether as a reject part signal or by stopping the production process. This enables you to detect flow reductions in the water cooling circuits - typically caused by mineral deposits - before they reach a critical level.

Flow Control can be easily retrofitted to your existing water flow regulators and operates with exceptional reliability.



## Additional Advantages

- ✓ Easy integration into existing return lines of injection molding tools
- ✓ Simple self-installation without extensive effort
- ✓ Pre-assembled sensors and actuators in the measuring units
- ✓ Compact measuring units available in 4-zone and 6-zone versions
- ✓ Flexible module combinations, easily connectable via a Combi-BUS cable
- ✓ Quick and highly visible alarm output via status lamp or error transmission to the injection molding machine
- ✓ Comprehensive documentation of all measured values, with the ability to transfer data to MES and QM systems
- ✓ Storage of all error messages, status updates and user changes

# Digital and Versatile

## The Flow Control Monitoring Unit

The Flow Control monitoring unit is much more than just a digital flow meter. Its user-friendly touch display provides an instant overview of the current, zone-specific flow rates and return temperatures of all connected circuits. You can individually set temperature and flow limits for each injection molding tool.

Flow Control currently supports up to 40 cooling circuits per injection molding tool. Additionally, you can assign a unique name to each cooling circuit and store up to 250 tool data sets in the integrated memory.

- ✔ Supports up to 40 cooling circuits per injection molding tool
- ✔ Precision display and adjustment for temperature ( $\pm 0.1^{\circ}\text{C}$ ) and flow rate ( $\pm 0.1\text{ L/min}$ )
- ✔ Individually adjustable temperature and flow limits for each circuit within the measurement range
- ✔ Alerts for exceeded limits displayed on the screen, signaled via status lamp, or transmitted to your injection molding machine
- ✔ Import/export of data sets via FTP or USB
- ✔ Transmission of measurement data via OPC-UA to your IT system, such as a MES or QM system
- ✔ Industry 4.0 interface for seamless digital integration

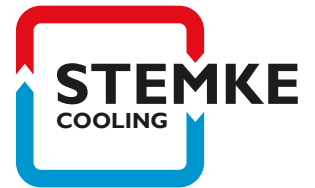
### Unique Feature:

Only Flow Control offers cycle-synchronous monitoring that operates exclusively during the molding phase. Fluctuations in temperature and flow caused by tool movements or hose deformations are detected but do not trigger unnecessary error messages.



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Are you interested? We would be happy to explain our STEMKE technology to you in person.



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