

Press Release
SINGLE at Fakuma 2009: Hall A3, Stand 3102

SINGLE presents compact system for distributing cooling or transfer media to multiple circuits

New SWV water distribution system with integrated flow meter for injection moulding machines and moulds

At Fakuma 2009 in Friedrichshafen/Germany, SINGLE Temperiertechnik GmbH of Hochdorf/Germany presents SWV, a new, compact water distribution system with integrated flow meter. As a central system, SWV distributes cooling or transfer media to up to 32 circuits in injection moulding machines. The system is designed for highly precise, wear-resistant flow metering according to the eddy current method with a metering range of between 1 and 12 or 2 and 40 l/min and temperatures of up to 100°C as standard. With its compact footprint, the new SWV is easily integrated into injection moulding machines or mould spaces.

The new SINGLE SWV water distribution system is designed for three main areas of application:

1. as a compact water distribution system for injection moulding machines,
2. as a contour-aligned water distribution system for injection moulding machines with a separate control system,
3. in combination with an upstream temperature control system and SINGLE EcoTemp intermittent mould temperature control system for variotherm mould temperature control.

In contrast to conventional float-type flow meters, the SWV water distribution system is wear-resistant and maintenance-free. Equipped with a wear-resistant flow meter that operates according to the eddy current method, SWV provides superior functional reliability, maximum precision and a particularly efficient and economical operation.

Combining SWV with the SC controller

Operating in combination with the SINGLE SC controller, SWV is ideal for flow metering of between 4 and 32 temperature control circuits and automatic flow metering as well as end-to-end monitoring of the media return temperatures of up to 16 circuits. The SC controller provides a wide variety of interfaces for transferring data to the injection machine's control system for process monitoring or to other data acquisition systems or central computers for process documentation. The combination of SWV with temperature measurement and SC controller is ideal for highly transparent processes.



The system offers optional metering ranges of between 1 and 12 l/min and between 2 and 40 l/min as well as a measuring point for median pressure and overall flow temperature. Solenoid valves for shutting off individual circuits are available as an option.

SWV - Water distribution system for injection moulding machines

With its compact footprint, the SINGLE SWV water distribution system is a space-saving solution for installation in injection moulding machines. As a maintenance-free system, SWV is an economically viable alternative to conventional float-type flow meters. While float-type flow meters are inexpensive, they have a significant drawback. Incidence of light leads to algae growth, which contaminates the system. The algae layer obstructs the view through the inspection window and leads to a gradual reduction of the flow rate, deterioration of the heat transport from the mould, which results in uncontrollable variations of the part quality. In contrast, the SINGLE SWV water distribution system guarantees functional reliability, highly precision metering and automatic monitoring.

Contour-aligned water distribution in injection moulding machines

SINGLE SWV is also ideal as a contour-aligned water distribution system for integration into injection moulding machines with a separate control system. This is a particular benefit for processors who, in the past, were frequently compelled to use and integrate specially constructed, customised systems for segmented temperature control processes in injection moulds. Despite the fact that SWV provides distribution as well as flow metering and temperature measurement functions, it is more compact than conventional products, delivers all required processes in one single system and helps processors introduce multi-circuit mould temperature control to their production processes.

Variotherm mould temperature control with upstream temperature control system and SINGLE EcoTemp

Used in combination with an upstream temperature control system and SINGLE EcoTemp intermittent mould temperature control, the SINGLE SWV water distribution system is a particularly economic variotherm mould temperature control option.

In addition to these benefits, SWV is a cost-efficient alternative to conventional pulsed cooling methods, as the solenoid valves used by these systems are prone to malfunction and require frequent servicing. Pulsed cooling systems often use impeller flow meters with moving components. These components break down very easily, which has a detrimental effect on the repeatability of process parameters. The SINGLE SWV water distribution system uses the cycle-controlled valves of the upstream temperature control system and saves solenoid valves in every temperature circuit. The SWV water distribution system with cold water inlet is easily and cost-efficiently combined with cooling water inlet and a temperature control system and is sufficient for most applications suitable for pulsed cooling. Compared with pulsed cooling, the combination of SWV with EcoTemp is superior because of significantly lower system costs and particularly easy and low-maintenance operation.

SWV live at Fakuma 2009

SINGLE demonstrates the benefits of the compact SWV water distribution system at Fakuma 2009. It is integrated as a central water distributor into an injection moulding machine that can be viewed in live operation at the Krauss Maffei Technologies GmbH stand no. 7204 in hall A7.



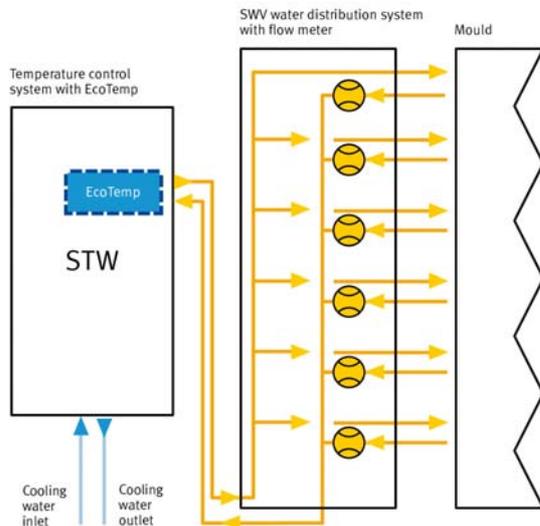
The SWV water distribution system is ideal for wear-resistant, high-precision flow metering in injection moulding machines.

*Photo by
SINGLE
Temperiertechnik GmbH,
Hochdorf/Germany*

	Temp. °C	Flow l/min		Temp. °C	Flow l/min
1	65	8.0	←	9	82 2.9
2	75	6.5		10	69 6.2
3	67	7.4		11	64 8.3
4	72	5.9		12	63 8.6
5	55	11.0		13	57 10.4
6	61	9.2		14	76 4.7
7	68	7.1		15	65 8.0
8	62	8.9		16	62 8.9
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The SWV water distribution system is combined with an SC controller for metering and monitoring the flow rate and media return temperatures

*Photo by
SINGLE
Temperiertechnik GmbH,
Hochdorf/Germany*



*Hydraulic principle of
variotherm mould
temperature control with
SWV and EcoTemp*

*Diagram:
SINGLE
Temperiertechnik GmbH,
Hochdorf/Germany*

SINGLE in profile

SINGLE has been developing, producing and selling high-performance temperature control systems for more than 40 years. The company's product portfolio consists of water and oil-operated, high-quality temperature control systems, heat transfer units, water-to-water chillers, as well as customized solutions. SINGLE uses only high-quality components and materials. Long-standing customers testify to the ease-of-use and the reliable operation of SINGLE systems even under a high workload.

In addition to plastics processors and manufacturers of plastics processing machines, SINGLE caters to customers in the chemical and pharmaceutical industry as well as to the metal plating industry, the food production segment and is used for test bench technology and many more applications.

A network of regional sales partners and service points as well as a subsidiary in the US are the cornerstones of SINGLE's international presence. Services and after-sales support on all temperature-control related problems, commissioning, on- and off-site training complete SINGLE's portfolio. SINGLE is certified to EN ISO 9001:2000, has technology and manufacturer certifications that meet the European Pressure Equipment Directive (PED) and complies with standards such as UL and regional directives to CSA and GOST.

The company, which employs about 110 people, has been a member of Looser Holding AG of Arbon/Switzerland since 2006.

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