single

created for your perfection

EXCLUSIVE PROGRAMS
WATER-BASEDTEMPERATURE-CONTROL UNITS

TEMPERATURE CONTROL WATER

TEMPERATURE CONTROL OIL

ATT VARIOTHERM

COOLING SYSTEM

YOUR BENEFITS.
EVERY SINGLE DAY.

YOUR SAVINGS.
EVERY SINGLE DAY.

LOWER ENERGY CONSUMPTION
NEW BENCHMARK FOR ENERGY EFFICIENCY

Single temperature-control systems save up to 70% of process energy, depending on the application. To provide our customers with this energy efficiency in production, our developers use a four-pronged approach: An intelligent pump controller adjusts the rotational speed as needed. A speed reduction of 20% saves up to 50% of energy. In addition, the insulation is highly effective. The efficiency of our top-of-the-range centrifugal pumps is excellent. In combination with our ultra-modern class IE3 electric motors, these factors together reduce energy consumption by two thirds! We are happy to use these savings potentials as a measure of our excellence.

YOUR CONTROL.
EVERY SINGLE DAY.

INTELLIGENT CONTROL –
EASY OPERATION AND MONITORING OF TEMPERATURE-CONTROL SYSTEMS

Easy intelligence. That is what our engineers wanted to build into networked temperature-control systems – so they developed the Smart Line IoT system. At the core of this Industry 4.0 application is the Smart Controller, an intelligent unit for open-loop and closed-loop control. Our customers can use Smart Line to control all temperature devices centrally from an in-house website. The sensors capture almost 100 relevant data points, and the data analysis detects faults immediately. Smart Line reduces downtimes, improves product quality and minimises costs. Its ease of use and customising options for special processes set standards in temperature control engineering. Intelligence made easy.

CREATED FOR YOUR PERFECTION

YOUR SPEED.
EVERY SINGLE DAY.

REDUCED CYCLE TIMES –
ECOTEMP CYCLES REDUCED BY 15% ON AVERAGE

Our engineers have thought hard about how to add even more efficiency to our customers‘ production processes – and they came up with a creative solution: EcoTemp uses intelligent valve technology to control the flow of the cooling medium. This achieves a dramatic reduction of the cooling-down phase and hence the cycle time – while ensuring top quality of the parts. One of our customers really did the math: On average, they are saving 15%. That‘s worth it, no doubt!

YOUR QUALITY.
EVERY SINGLE DAY.

OPTIMISED QUALITY –
ATT REACHES ULTIMATE QUALITY

Quality produces quality. This is Single‘s simple credo that drives us to keep improving our systems so that our customers can reach new heights of product quality. EcoTemp, our passive system for mould temperature control, delivers a really good performance. But our developers were not happy yet – they came up with ATT (Alternating Temperature Technology) to take things to the next level. Two separate water circuits for heating and cooling with an intelligent controller allow for extremely quick temperature changes. The result is the perfect temperature in the mould and the perfect quality of the moulded part. And that is what matters after all – ultimate quality.

YOUR PRODUCT.
EVERY SINGLE DAY.

TRULY MADE BY SINGLE

At Single, we are particular about our workmanship. For a simple reason. Because we develop and manufacture our systems completely in-house, we can be 100% certain that they work perfectly. And that is what our customers like.

GLOBAL PRESENCE

Quick, local support is often crucial in production. Our global sales and partner network is always there for you. Just give us a call, and we will be on site to solve whatever problems or challenges have come up.

EASITEMP 2.0 – SIMPLY RELIABLE

The easitemp series focuses on the essentials of temperature control. Many industrial applications do not use temperatures greater than 150 °C. This is the segment where SINGLE easitemp stands out for its solid features, high precision and compact design.

The easitemp series requires no compromises when it comes to robustness, quality or safety.
It ensures maximal permanent running ability and cost-efficient operation.

EXACT

- Microprocessor-based controller: displays actual and target temperatures, resolution configurable as 0.1 °C or 1 °C.

EASI - CONNECT

- TTY interface, 20 mA on 9-pin Sub-D connector (‘Arburg’ assignment) – protocols used by common injection moulding machine makers.

PRECISE

- PID controller; configurable control parameters and self-optimisation.
- 5 LED status indicators (heating, cooling, leak stop mode, temperature warning and alarm).

POWERFUL

- Cooling via powerful copper-soldered stainless steel heat exchanger and solenoid valve.
- Top heating and pump capacity.

RELIABLE

- SSR for heating control – non-wearing closed-loop control of the heating.
- Heating via tubular radiator made from corrosion-proof Incoloy.
- Stainless steel float switch

USER-FRIENDLY

- Reversing circuit for leak stop mode.
- Fill time monitoring, aquatimer, automatic cooling-down at switch-off (all configurable).
- Automatic filling via coolant water.
- Unit mounted on castors, front wheels steerable with brake.
- IEC 60309 plug connection.

ENERGY-SAVING

- Well-insulated components save money.

SAFE

- Level monitoring via magnetic float switch.
- Alarm relay (maximum capacity (250V; 2.5A) e. g. for connecting horns or signal towers.
- IP54.
- Redundant heating shut-off via additional thermal link.
- Top-rated safety architecture with independent TÜV-certified safety valve; additional manometer.
- Dirt traps in from-process line and cooling water inlet.

EASY MAINTENANCE DESIGN

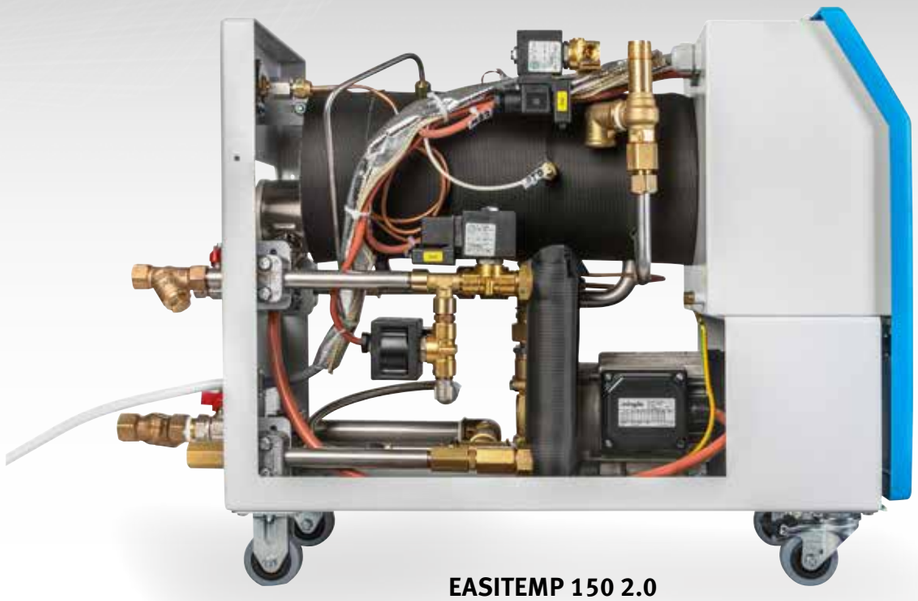
- Easy access to components.

TECHNICAL SPECIFICATIONS

ASSEMBLIES			EASITEMP 95 2.0	EASITEMP 150 2.0
Temperature range max.		°C	95	150
Max. external volume		l	50	9
Heating capacity		kW	6	6
Type of cooling (via heat exchanger)			indirect	indirect
Cooling capacity (80 °C flow / 15 °C cooling water)		kW	45	45
Max. flow rate		l/min	40	27
Max. pressure		bar	3,8	4,5
Pump motor power		kW	0.5	0.5
Circulation medium connectors		G1	1/2″	1/2″
Cooling water connectors		IG	3/8″	3/8″
Dimensions	L	mm	514	600
without connectors	W	mm	238	238
	H	mm	493	493
Weight		kg	30	43

OPTIONAL ACCESSORIES

- Flow metering with spring-loaded floats (only Easitemp 95 2.0)
- Filler neck for manual filling
- Hoses and hose connectors
- Interface cables



EASITEMP 150 2.0

WT3 / TKN / TKS – SERIES

The compact water temperature control units for applications and requirements in the low to medium performance range and temperatures up to 90°C are very popular for plastics injection moulding but can also be used for other processes. They are suited to the temperature control of sophisticated applications and support the documentation of process parameters.

ROBUST

Hydraulic parts made from stainless steel and non-ferrous metals.

SAFE AND LONG-LASTING

SSR heating control

COMPACT AND POWERFUL

Compact design with excellent heating and cooling performance.

MANY OPTIONS

- Flow metering
- Suction mould draining
- Various interfaces
- 7“ touch controller with additional features (4.0 enabled)
- ...

MADE IN EUROPE

Developed and manufactured in Europe.

CONTROL

Ultra-modern controllers offer a wide range of control options. The 7“ SSC controller is 4.0-enabled - Smart Line !

RELIABLE

High reliability and availability thanks to smart and rugged design using corrosion-free materials. High protection rating IP54. (hydraulic and switch cabinet areas) Non-wearing heating control using solid-state relays.

SAFE

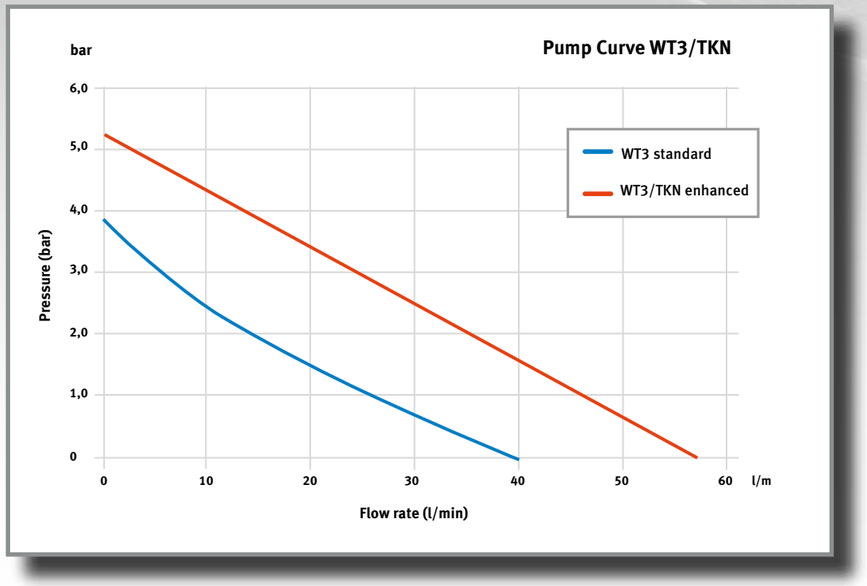
- Leak stop function
- IP54 leak-tightness.

INTERFACES

Connections for various analogue and digital electrical interfaces.

CONVENIENT

Automatic filling and replenishing.



TECHNICAL SPECIFICATIONS

			WT3 IM090J	WT3 IM090K	TKN IM090G	TKS IM090H
Temperature range max.		°C	90	90	90	90
Max. external volume		l	45	45	69	159
Heating capacity		kW	9	9	18	36
Cooling capacity		kW	50	50	80	116
Max. flow rate		l/min	58	58	57	135
Max. pressure		bar	5.2	5.2	5.3	5.5
Pump motor power		kW	0.95	0.95	0.95	1.1
Circulation medium connectors		G	1/2“	1/2“	3/4“	1“
Cooling water connectors		G	3/8“	3/8“	1/2“	1/2“
Dimensions	L	mm	659	659	739	839
(without connectors)	W	mm	265	265	276	356
	H	mm	563	563	772	873
Weight approx.		kg	55	55	75	100

FEATURES

	WT3 IM090J	WT3 IM090K	TKN IM090G	TKS IM090H
3.5“ touch controller	•		•	•
7“ touch controller, network-enabled, SFC-ready, OPC UA-ready		•		
Durable heating control SSR (solid-state relay)	•	•	•	•
Flow metering			•	•
Stainless-steel tank, all corrosion-proof materials	•		•	•
High cooling performance with plate heat exchanger	•		•	•
Frequency converter for speed control				
Return flow temperature indicator				
Pressure sensor in supply flow				
Interface connection via 9-pin D-Sub connector (Current interface) 20mA/TTY, Arburg pin assignment	•	•	•	•
PT 100 for external temperature sensor with 2- or 3-conductor connection can be connected, including socket outlet and plug with quasi cascade control				
Interface connection Euromap 82.1 /OPC-UA		•	•	
Electronic preparation for SFC water manifold for 2 blocks		•		
Tool draining / suction of external consumer		•	•	•
16 A plug / CEE	•	•		
32 A plug / CEE			•	
Plug installed	•	•	•	

WK3 AND WK4 SERIES UP TO 160 °C

The compact water temperature control units for applications and requirements in the low to medium performance range and temperatures up to 160°C are very popular for plastics injection moulding but can also be used for other processes. They are suited to the temperature control of sophisticated applications and support the documentation of process parameters.

ROBUST

- Magnetic drive pump – 160°C and higher
- Stainless steel pressure vessel and pipes reduce corrosion-related failures even with inconsistent water quality.

MULTI-TALENTED

- Broad range of features and options

UPGRADES

- Modular system supports subsequent upgrades.

MADE IN GERMANY

- Developed and manufactured in Germany

COMPACT & POWERFUL

- Top cooling performance in this performance class!
  With plate heat exchanger.

ENERGY EFFICIENCY

- High energy efficiency and low heat losses thanks to complete insulation of all heat-carrying components and optional variable-speed pump.

CONTROL

- Our 3.5“ and 7“ controllers (see photo) offer the latest technology for operation and control!
  State-of-the-art 7“ SSC touch controller with Smart Line is Industry 4.0-enabled (optional).

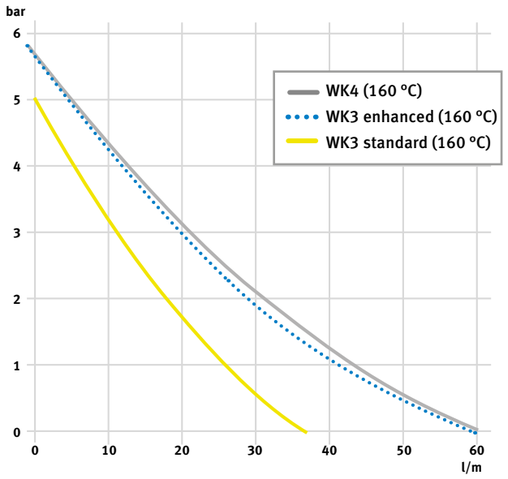
MANY OPTIONS

- Flow metering
- Suction mould draining / via compressed air
- Various interfaces
- 7“ touch controller with additional features (Industry 4.0-enabled)
- Pressure measurement
- Return stop
- Manual filling
  ... and many more

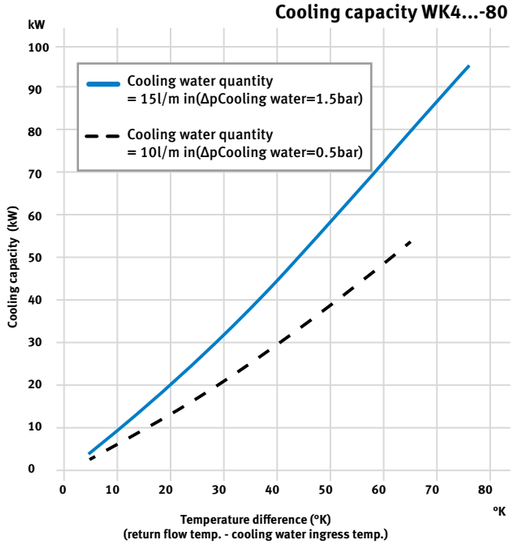
RELIABLE

High reliability and availability thanks to smart and robust design using corrosion-free materials. (Components exposed to water made from stainless steel and non-ferrous metals). High protection rating IP54 (hydraulic area and switch cabinet). Non-wearing heating control using solid-state relays.

Pump curves WK4



Cooling capacity WK4...-80



TECHNICAL SPECIFICATIONS

			WK3 IM160E	WK3 IM160I	WK4 IM160G
Temperature range max.		°C	160	160	160
Max. external volume		l	14	14	14
Heating capacity		kW	9	9	18
Cooling capacity		kW	50	50	80
Max. flow rate		l/min	38	57	57
Max. pressure		bar	5.0	6.0	6.0
Pump motor power		kW	0.5	1.0	1.0
Circulation medium connectors		G	1/2“	1/2“	3/4“
Cooling water connectors		G	1/2“	1/2“	1/2“
Dimensions	L	mm	780	780	780
(without connectors)	W	mm	305	305	305
	H	mm	705	705	705
Weight approx.		kg	72-90	72-90	72-90

FEATURES

	WK3 IM160E	WK3 IM160I	WK4 IM160G
3.5“ touch controller	•		•
7“ touch controller, network-enabled, SFC-ready, OPC UA-ready		•	
Durable heating control SSR (solid-state relay)		•	•
Flow metering	•	•	•
Stainless-steel tank, all corrosion-proof materials		•	•
Heaters made from Incoloy	•	•	•
Robust design	•	•	•
High cooling performance with plate heat exchanger	•	•	•
Excellent insulation of all heat-carrying components	•	•	•
Frequency converter for speed control		•	
Continuous bypass of heat exchanger		•	
Corrosion-proof materials		•	
Return flow temperature indicator		•	
Pressure sensor in supply flow		•	
Interface connection via 9-pin D-Sub connector (Current interface) 20mA/TTY, Arburg pin assignment	•	•	•
Interface connection Euromap 82.1 /OPC-UA		•	
Electronic preparation for SFC water manifold for 2 manifold blocks		•	
PT 100 for external temperature sensor with 2- or 3-conductor connection can be connected, including socket outlet and plug with quasi cascade control		•	
Tool draining / suction of external consumer		•	•
16 A plug / CEE, fully assembled	•	•	•

SMALL SIZE. GREAT PERFORMANCE.
MINI WM3 SERIES!
150 °C / 160 °C

High-tech in a small package. The new SINGLE MINI WM3 series excels in the demanding performance class up to 160° C, boasting maximum precision and reliability. With their compact design, MINI WM3 temperature-control units need only very little space on the shop floor.
And they come in tried-and-tested SINGLE quality. This means: long service life and low energy consumption.

MINI WM3 – the temperature-control unit at the cutting edge.

SAFETY

- IP54 switch cabinet
- Manometer at back of unit
- Temperature monitoring of heating system

PROCESS RELIABILITY

- Level monitoring via float switch
- Flow metering (optional)

COMPACT

- Small size with high performance specifications

SMART / INTELLIGENT

- Intelligenter Regler
- OPC UA Schnittstelle (optional)

EASY MAINTENANCE

- Modular design
- Easy access to components

ROBUST / SERVICE LIFE

- Non-wearing magnetic drive pump (at 160°C)
- Tubular radiator made from Incoloy
- Heating control via SSR
- Corrosion-proof components
- Dirt traps

ENERGY-SAVING

- Streamlined design
- Insulated components (150°C and higher)
- Intelligent control
- Frequency-controlled pump (optional)

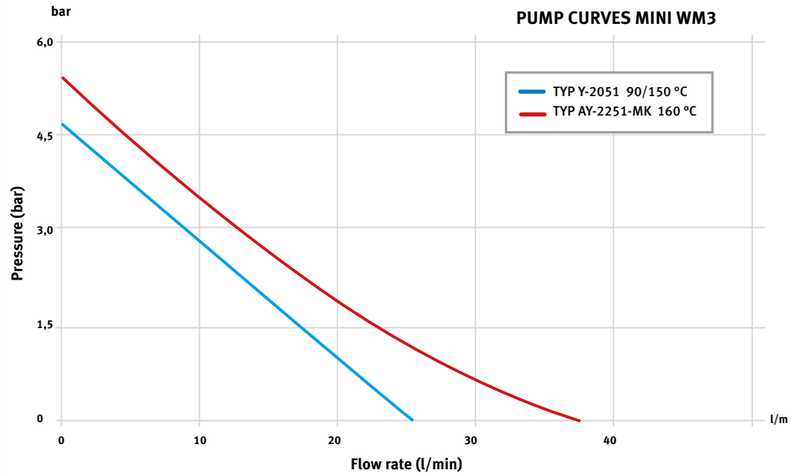
USER-FRIENDLY

- Automatic filling
- Wheels with brakes
- Shut-off valves in supply flow and return

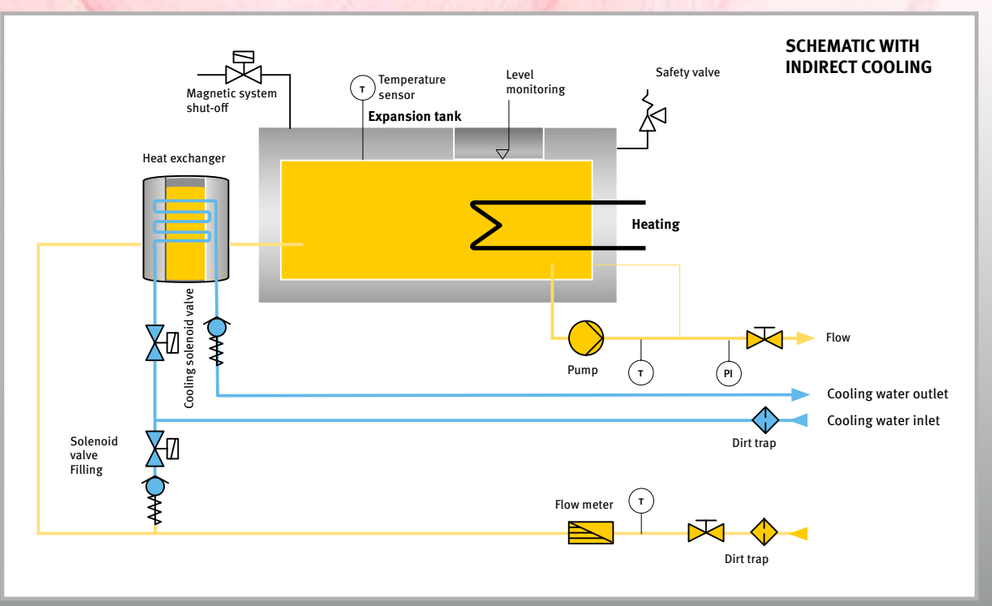
TECHNICAL SPECIFICATIONS MINI WM3

			WM3 IM150A	WM3 IM160H
Temperature range max.		°C	150	160
Max. external volume		L	22	22
Heating capacity		kW	6	6
Cooling capacity		kW	45	45
Max. flow rate (max. values of curve)		l/min	27	38
Max. pressure		bar	5.0	5.1
Pump motor power		kW	0,5	0,5
Circulation medium connectors		G	1/2″	1/2″
Cooling water connectors		G	3/8″	3/8″
Dimensions / with SSC	L	mm	625	625
	W	mm	240	240
	H	mm	490	490
Weight approx.		kg	55	55

PUMP CURVES MINI WM3



SCHEMATIC WITH INDIRECT COOLING



SFC – SMART FLOW CONTROL
WATER MANIFOLD UP TO 120 °C

The SFC water manifold is fully integrated into the control system of the temperature-control units. The water manifold comes with multiple water circuits, but it is also possible to combine two hydraulic blocks. Each circuit is monitored and optionally controlled. Robust, high-quality components guarantee excellent process stability by precisely measuring the temperature and flow rate. This is the foundation for the improved quality of the manufactured parts with less scrap.

FOR VARIOUS SINGLE TEMPERATURE-CONTROL UNITS WITH SSC CONTROLLER.

SFC SEPARAT

For various Single temperature-control systems with SSC controller. This type can be operated with an SSC controller independent of a Single temperature-control unit. In this case, the SSC controller controls the unit and the water manifold.

Technical specifications

	IMSFCA	IMSFCB
Type	separate manifold installed by customer	separate manifold installed by customer
Temperature up to °C	120°C	120 °C
Water circuits	4	6
Control options	Manual fine-dosing	Manual fine-dosing
Flow rate per circuit ltr/min	1-18	1-18
Temp. measurement	return - each zone	return - each zone
Pressure measurement	no	no
In-/outlet connection	1/2”	1”
Shut-off valve	1/2“	1“
Outgoing female thread	1/2“	1/2“

BENEFITS:

OPTIMAL VALUE FOR MONEY

- Cost-efficient control through the Single temperature-control system
- Highly integrated hydraulic blocks
- Modular design

CONFIGURATION OPTIONS

- Many possible configurations

OPTIMAL ENERGY EFFICIENCY

- Manual dosing valves help achieve optimal energy absorption. The manual dosing valves allow for much more precise adjustment than typical shut-off valves.
- Fully insulated hydraulic block prevents heat losses; the externally mounted solution additionally comes with insulated hoses.

ROBUST

- Robust brass blocks; sensors and actuators made by reputable, trusted European manufacturers
- Solid design with sheet steel housing
- Electrical system and cables covered and splash-proof.

SMART

- First smart water manifold on the market through integration with Single Smartline
- OPC UA enabled
- Water manifold stores its own parameter configuration; i.e. if switching to a different temperature-control system, the system continues to run seamlessly without any need to reconfigure the parameters

INTEGRATED SOLUTIONS

- Temperature-control system and water manifold from a single source
- No separate power supply or interface connection required

UNBEATABLE IN EVERY WAY:
OUR FIELDS OF APPLICATION.

Our series of temperature control units are used wherever exact temperatures are of the essence. Here are a few examples:

WE FULFIL THE HIGHEST REQUIREMENTS

For our customers in the **pharmaceutics industry**, we fulfil the strictest requirements even in clean rooms. We guarantee seamless documentation. And operation is gentle on pressure-sensitive devices at high temperatures.

WE ENSURE A LONG SERVICE LIFE

This is a benefit for the **chemical industry.** In this field, we work with maximum precision, for example by heating double-walled vessels. This improves the service life and availability of devices.

WE ENJOY HIGH PRECISION

We are strong in the production of **cereals** and **animal feed**. Also in the food industry. Our exact temperature control systems help our customers improve the shelf life, quality, taste and visual appeal of food items.

WE MOVE THINGS FORWARD

As **partner to the automotive industry**, we can ensure the optimal temperature of the underbody coating, for example. But we also control the operating temperatures of axle or motor test stands.

WE THINK BIG

We enable our customers to manufacture extremely large plastic parts with seamless top quality. This benefits makers of **white goods** as well as the **automotive industr**y. We are also strong in **3K plastics production** with contour-aligned temperature control.

WE THINK AHEAD

Test facilities for **semiconductors** or temperature control units for **extruder systems**, for the product of **PET bottles** and **blanks**.... For our systems, the sky is the limit. Talk to our experts! You will be amazed.

5 REASONS,
TO CHOOSE SINGLE.

All of our work has one single goal – to help you, our customers, do your work a little bit better every time. In this, we support you all the way. – True to our motto: Single – created for your perfection.

EASY MAINTENANCE

The sophisticated design of our units makes them extremely easy to service and repair. This saves a lot of time and money in day-to-day business.

LOWER ENERGY CONSUMPTION

Our new temperature control units save between **40 and 70 per cent** of energy, depending on the application. They also need less cooling water and have a longer service life. This creates a win-win-win situation for our customers.

PREMIUM QUALITY

More than ever, manufacturers today need to produce flawless quality. We are a solid partner. Our temperature control units and their intelligent temperature controllers enable our customers to achieve impressive quality.

REALLY MADE IN EUROPE

We value the quality of European workmanship. For a simple reason: Because we develop our devices in Germany and manufacture our units completely in Europe, we can be 100 per cent certain that they work perfectly. And that is what our customers like.

GLOBAL PRESENCE

Quick, local support is often crucial in production. Our global sales and partner network is always there for you. A phone call is all it takes ... and we will be there to solve any problems and handle any challenges our customers might face.s

YOU HAVE QUESTIONS? OR A TASK FOR US?
Then please contact us directly!

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