REGLOPLAS

Product portfolio

REGLOPLAS. Intelligent Temperature Control.

Product portfolio

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for intelligent temperature control

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for temperature control pay off

Regloplas - Your partner for intelligent temperature control

Company
- Founded in 1961
- Head office in Switzerland
- Leading on temperature control technology
- R&D and production at our Swiss site
- Represented in over 50 countries
- Know-how transfer in a global network

Partners
- Machine manufacturers
- Regloplas agents
- Universities

Sectors
- Industrial temperature control

Industry end users
- Automotive
- Aircraft
- Medicine
- Food
- Packaging/thin films
- Toys & household items
- Electronics & electrical
- Confectionery industry
- ...and more

Application technologies
- Die-casting
- Injection moulding
- Extrusion
- Metal/powder injection moulding
- Blow moulding/PET pre-forming
- High-pressure resin transfer injection moulding
- rubber injection press
- ...and more

Your sales & service contact
- More than 50 agents worldwide
- Dedicated branches in USA, France, China and Germany
- Headquarters, Switzerland

We make technological change possible

We offer you progress and reliability with intelligent temperature control for the technological revolution. We've been by your side. Digitally networked. Fit for the future.

More than 60 years of Regloplas products. Consistently committed to our quality and the technological revolution, we are developing and producing temperature control units and temperature control solutions based on state-of-the-art technology at our site in Switzerland. We are therefore able to offer our customers optimum reliability for the temperature control of their industrial processes. Energy efficient and intelligent control.

We are close to our customers. Thanks to valuable ongoing dialogue with our customers and our partners in research and development we are keeping the art of Swiss Engineering at the very highest level.

Our customers benefit from individual advice from our established network of agents and experience in over 50 countries. Our certified experts around the world guarantee a top quality service for efficiency-optimised temperature control solutions.

Intelligent temperature control is our mission

Our mission is the optimisation of customised intelligent temperature control technology with simultaneously efficient and environmentally-conscious handling of resources.

Your advantage – cross-platform communication with Ethernet, WIFI and OPC UA

Networked Smart Factory

Networking is the central trend in the organisation of production processes in many different industries, including the plastics and metal processing industry. One of the core elements of the Smart Factory is that data is collected, evaluated, related, documented and visualised throughout the entire production process. The first requirement for factory networking is that all relevant devices and systems communicate with one another at all levels. An IP-based network takes on this task and enables communication via standardised protocols. The core concept of digitisation relates to the exchange of all process and machine data via the network, including to higher-level IT systems such as MES, ERP, PPS ...). (1)

(1) MES - Manufacturing Execution System
ERP - Enterprise Resource Planning
PPS - Production Planning System

Benefits of networking

All peripheral machines, devices and systems involved in the production process communicate with one another. This permits process optimisations in real time and leads to higher productivity, less downtime, optimised machine-use and improved product quality.

RT200 control system

The new Regloplas control system RT200 for Smart Factory

OPC UA interface

Regloplas temperature control units and its temperature control solutions are optimally equipped for the latest technical needs for Industry 4.0 and open up a new dimension in communication. Regloplas AG offers OPC UA data models for various European Standards including EUROMAP 82.1 for temperature control units in the plastic processing industry. The preconditions are created by an integrated OPC UA-Server in the control systems of the temperature control units. This makes us the leading provider in networking temperature control units with OPC UA. The OPC UA interface can be integrated into the well-established RT100 control unit as well as into the new RT200 control system.

Since temperature control has a major influence on both productivity and product quality, Regloplas offers its customers the new OPC UA interface (Unified Architecture) – a reliable solution for simultaneous parallel data exchange at every level in industrial production.

New control system RT200

The new Regloplas RT200 control system with Touch Screen for temperature control units and the multiFlow stand-alone set a new standard for operating units and include all necessary requirements for the digital production environment of tomorrow.

With HTML5 browser technology the new control system is ideally equipped for the requirements of cross-platform communication. Ethernet, WIFI and OPC UA interfaces are available as standard on the RT200 control system. Services such as remote maintenance and access via mobile phone or tablet can be implemented with the integrated WLAN interface. Remote access is also enabled via TeamViewer or VNC® (Virtual Network Computing). Control system software can be updated over the internet as soon as the control system is connected to the internet.

The new RT200 control system is also used with the stand-alone version of the multiFlow in injection moulding.

AT A GLANCE

OPC UA interface

- To guarantee optimum process integration, each temperature control unit has its own OPC UA server with the option to connect to several clients. This enables maximum flexibility for data exchange with machinery from different manufacturers and equally for recording data with superior control systems
- The Regloplas OPC UA interface is specified in accordance with Euromap 82.1, which was created for temperature control units
- The temperature control unit can be integrated into a network via a DHCP Server
- The physical connection is based on an Ethernet patch cable which enables «Plug & Play»

New RT200 controller

- WLAN is integrated as standard in the RT200 control system, in order to enable communication to tablet, mobile phone or laptop
- Interfaces are Ethernet, WLAN, OPC UA. The temperature control unit can be integrated into the WLAN network as an Access Point or Client
- Remote maintenance can be provided via TeamViewer. Each temperature control unit has an integrated TeamViewer IoT Agent
- Remote operation is possible in any browser on a tablet, mobile phone or laptop
- Remote support can be provided via TeamViewer or VNC®
- The latest software can be downloaded at any time from the internet

Regloplas product portfolio. Offering a wide range of standard products

We offer worldwide customized solutions for industrial temperature control. Based on state-of-the-art technology, our customers can choose from an extensive portfolio of temperature control units and temperature control solutions.

Regloplas temperature control units

- Open bath technology for maximum 90 °C / 194 °F water or up to 200 °C / 392 °F oil
- Pressurised water technology, 100 °C / 212 °F up to 230 °C / 446 °F
- High temperature technology oil 300 °C / 572 °F up to 350 °C / 662 °F

Regloplas temperature control solutions

- Variothermal temperature control technology
- multiFlow and multiPulse multi-distributor system technology
- jetPulse core cooling and distributor system multiJet

P100XS temperature control unit (custom colour) / RT200 control system

Plus custom solutions for individual needs

Application technologies and markets

We combine intelligent technologies and long-term market experience in temperature control technology to provide our customers with a constantly state-of-the-art portfolio. The Regloplas AG consistently stands out from the competition with impressive innovations. With pressurised water temperature control units up to 230 °C / 446 °F and integrated patented pressure stabiliser we are a pioneer.

Temperature control units and temperature control solutions of the brand Regloplas are proven to offer years of service. They offer advanced and dependable Swiss quality for various industrial
applications including injection moulding and die-casting technology as well as extrusion.

Our temperature control technology meets the highest technical requirements for components, moulds or films in the small and large series production of our customers. They are used in a wide range of different markets including automotive, entertainment and household electronics, chemical industry, medical engineering, optics, food industry and packaging. Customers around the world value our years of experience, our precisely-performing and durable products and our personal and competent worldwide customer service.

Devices are produced in sizes from XS up to XL. The temperature control units can be differentiated in accordance with pump capacity and heating capacity. From very small delivery rates of approx. 10 l/min up to XL devices with over 200 l/min and
heating capacities from 3 kW up to 60 kW.

The Regloplas smart line, equipped with the RT70 control system, is ideal for simple temperature control applications.

Regloplas - Your partner for the right solution

We offer our customers a broad standard range with predefined options and interfaces for many applications.

We are also specialised in the production of customer-specific solutions for challenging individual needs.

Intelligent temperature control technology

The core element of the Regloplas temperature control units is the intelligent, in-house developed controller with a control precision of 0.1 K. The new Regloplas RT200 control system with touch display allows users to design their own control interfaces and select exactly what and how process data should be displayed. The controller contains an OPC UA Server which means that operating and process data is permanently available (temperature, volumetric flow, pressures, operating status etc.) for all communication levels.

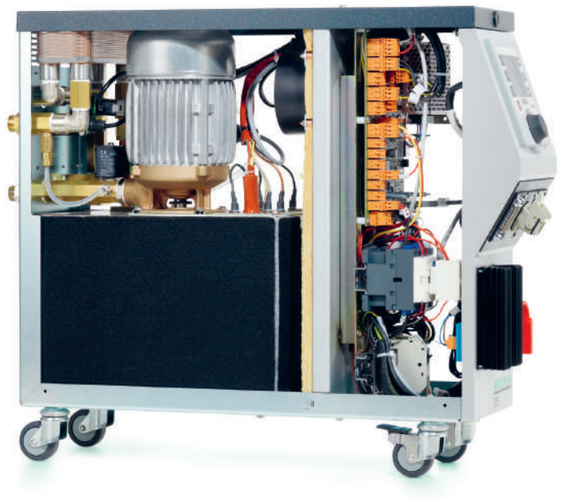
Market-leading interface spectrum

The temperature control units and temperature control solutions can be equipped with more than 20 standardised interfaces and with 10 specific interfaces for the largest injection and die-casting machines suppliers for industrial communication. Particularly of note is the OPC UA interface for the Smart Factory with integrated OPC UA Server for connection to temperature control units.

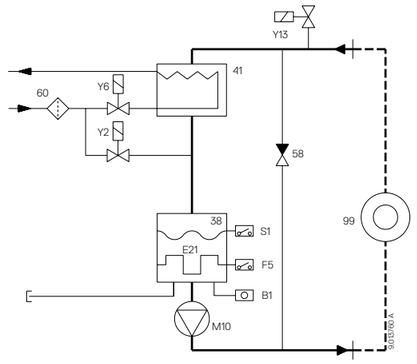
Multiple options for all applications

We also offer for the different temperature control unit series with around 200 options for function expansion and industrial automation. Together with all the customized solutions this results in an almost unlimited number of temperature control solutions for the different requirements of our customers such as, for example, our energy efficient solution for the control of feed pumps with frequency converters.

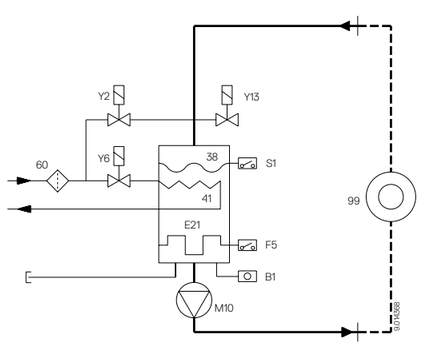
Regloplas temperature control units
Open bath water
up to maximum 90 °C / 194 °F
or oil up to 200 °C / 392 °F



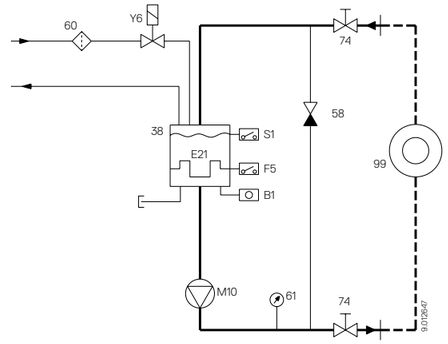
90S temperature control unit / RT100 control system



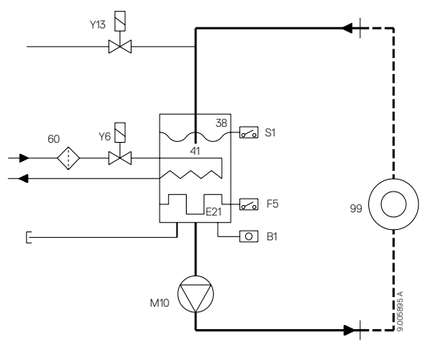
90smart/ 90S «Water»



150smart/ 150S «Water»



90XL DK «Water»



150smart/ 150S/ 150 «Oil»

38	Tank
41	Cooler
58	Bypass
60	Filter cooling circuit
61	Pressure gauge
74	Hand valve
99	Consumer
B1	Temperature sensor internal
E21	Heater
F5	Safety thermostat
M10	Pump
S1	Level control upper level
Y2	Solenoid valve, automatic water refill
Y6	Solenoid valve, cooling
Y13	Solenoid valve, consumer drainage

Open bath water		90 °C															
Temperature control unit/Type		90smart		90S		90XL			150smart		150			150S	
Outlet temperature max.	°C/°F	90/194		90/194		90/194			90/194		90/194			90/194	
Heat transfer medium Filling quantity Expansion volume	 l l	Water 7 2.5		Water 7 2.5		Water 36.5 5.5			Water 7.5 4.5		Water 17.6 6.0			Water 7.5 4.5	
Heating capacity at 400 V	kW	6	9	6	9	20	40	60	6	9	6	12	18	6	9
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	51 1K 80 20 1	75 2K 80 20 2	51 1K 80 20 1	75 2K 80 20 2	160 DK 80 20 4			38 1K 80 20 3		58 1K 140 20 6	75 2K 140 20 7		38 1K 80 20 3	
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2	CR5-3 140 0.55 2.0 3	CR5-8 140 1.1 5.4 4	CR10-4 200 1.5 4.4 5	CR10-8 200 3.0 8.7 6	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2
Control system Measuring mode (Standard)		RT70 Pt100	RT70 Pt100	RT100/RT200 Pt100		RT100 Pt100			RT70 Pt100		RT100/RT200 Pt100			RT100/RT200 Pt100	
Operating voltage	V; Hz	380-480; 50/60		200-600; 50/60		200-600; 50/60			380-480; 50/60		200-600; 50/60			200-600; 50/60	
Connections Outlet/Inlet Cooling water mains	 	 G1/2" G1/2"		 G1/2" G1/2"		 G1 1/2" IG G3/4"			 G1/2" G1/2"		 G3/4" G1/2"			 G1/2" G1/2"	
Degree of protection	IP	IP40		IP40		IP54			IP40		IP40			IP40	
Dimensions W/H/D	mm	202/560/661		202/560/732		436/1357/1387			202/560/661		346/690/728			202/560/732	
Weight	kg	44		45		229-275			50		78			50	
Colour	RAL	9006/7016		9006/7016		9006/7016			9006/7016		7035/7024			9006/7016	
Ambient temperature max.	°C	40		40		40			40		40			40	
Noise level	dB(A)	<70		<70		<70			<70		<70			<70	

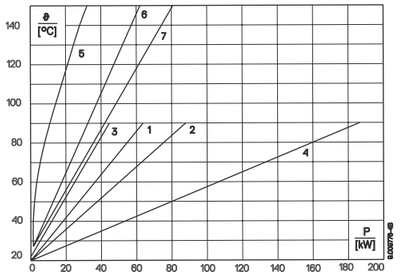
Open bath oil		150 / 180 / 200 °C											
Temperature control unit/Type		150smart		150		150S		150S		200smart		150	
Outlet temperature max.	°C/°F	150/302		150/302		150/302		180/356		200/392		200/392	
Heat transfer medium Filling quantity Expansion volume	 l l	Oil 7.5 4.5		Oil 17.6 6.0		Oil 7.5 4.5		Oil 7.5 4.5		Oil 11.5 3.5		Oil 17.6 6.0	
Heating capacity at 400 V	kW	6		6	12	6	9	6	9	2		6	12
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	29 1K 140 20 5		75 2K 140 20 7		29 1K 140 20 5		29 1K 140 20 5		Emergency cooling 200 20 -		52 1K 190 20 6	86 2K 190 20 7
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2	TP20 60 0.5 3.8 1	TS22 70 0.92 5.4 2	TS22H 70 0.92 5.4 2		TS22H 70 0.92 5.4 2		TS22H 70 0.92 5.4 2	
Control system Measuring mode (Standard)		RT70 Pt100		RT100/RT200 Pt100		RT100/RT200 Pt100		RT100/RT200 Pt100		RT70 Pt100		RT100/RT200 Pt100	
Operating voltage	V; Hz	380-480; 50/60		200-600; 50/60		200-600; 50/60		200-600; 50/60		380-480; 50/60		200-600; 50/60	
Connections Outlet/Inlet Cooling water mains	 	 G1/2" G1/2"		 G3/4" G1/2"		 G1/2" G1/2"		 G1/2" G1/2"		 G1/2" G1/2"		 G3/4" G1/2"	
Degree of protection	IP	IP40		IP40		IP40		IP40		IP40		IP40	
Dimensions W/H/D	mm	202/560/661		346/690/728		202/560/732		202/560/732		203/614/901		346/690/728	
Weight	kg	50		78		50		50		50		78	
Colour	RAL	9006/7016		7035/7024		9006/7016		9006/7016		9006/7016		9006/7016	
Ambient temperature max.	°C	40		40		40		40		40		40	
Noise level	dB(A)	<70		<70		<70		<70		<70		<70	

Regloplas temperature control units

Open bath water
up to maximum 90 °C / 194 °F
or oil up to 200 °C / 392 °F

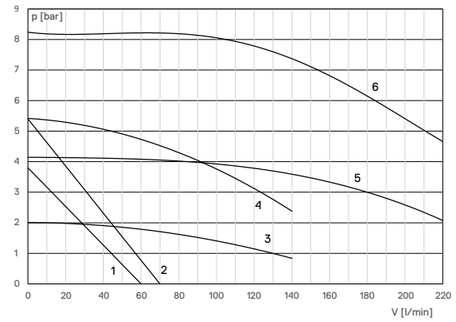
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20 °C
Curve 3/5 »Flow-rate per circuit 10l /min«
Curve 1/2/6/7 »Flow-rate per circuit 20l /min«
Curve 4 »Flow-rate per circuit 36l /min«



1 90smart 1K, 90S 1K
2 90smart 2K, 90S 2K
3 150smart, 150S «Water»
4 90XL DK
5 150smart, 150S «Oil»
6 150 1K
7 150 2K

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m3

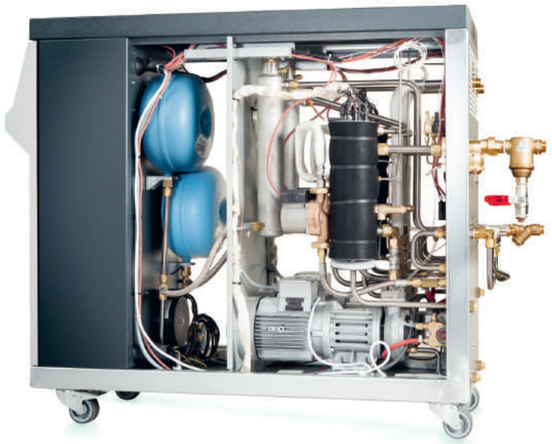


1 TP20
2 TS22; TS22H
3 CR5-3
4 CR5-8
5 CR10-4
6 CR10-8

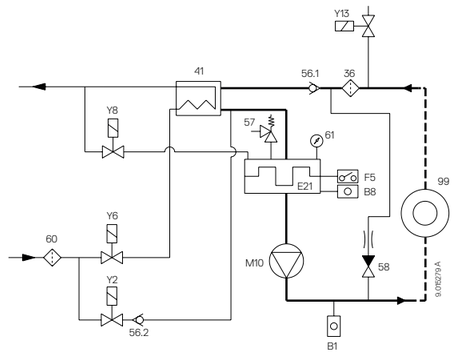
Note

G	Parallel thread
IG	Female thread
SK	Low-scale cooler
DK	Direct cooling
D	Dual zone unit
11	Dual zone unit: Data per zone

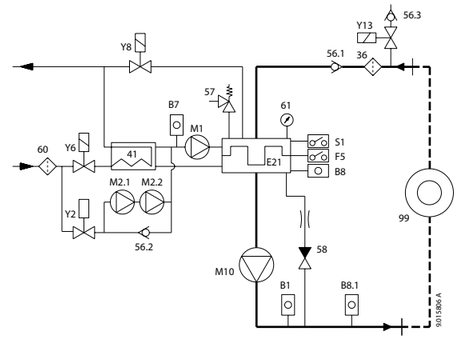
Regloplas temperature control units
Pressurised water 100 °C / 212 °F up to 230 °C / 446 °F



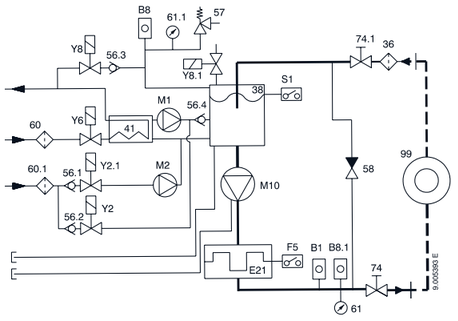
P160LD temperature control unit / RT100 control system



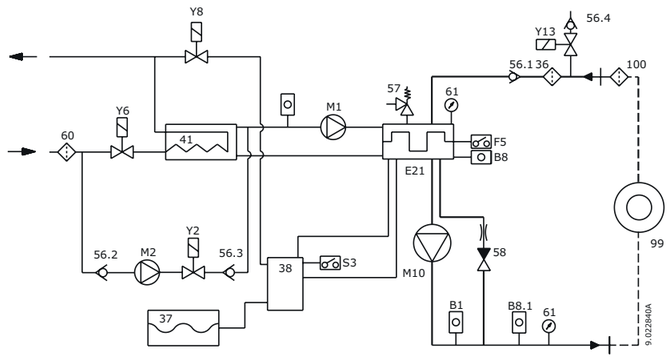
P140smart 1K



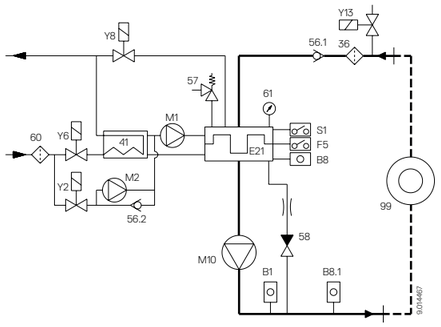
P200M SK/ 2SK



P141XL, P161XL, P181XL SK/ 2SK



P180LD SK/ 2SK



P140S, P160S SK/ 2SK, P140M(D)/ P160M(D) SK/ 2SK

36 Main circuit filter
38 Vessel
41 Cooler
53 Expansion valve
56.1 One way check-valve
56.2 One way check-valve
56.3 One way check-valve
56.4 One way check-valve
57 Safety valve
58 Bypass
60 Cooling circuit filter
61 Manometer
65 Water hammer arrester
74.1 Hand valve
99 Consumer
100 System water filter (sludge separator)
B1 Temperature sensor internal
B7 Gauge/cooling SK
B8 System pressure sensor
B8.1 Outlet pressure sensor
E21 Heating
F5 Safety thermostat
M1 Cooling pump (cooler SK)
M2.1 Filling pump 1
M2.2 Filling pump 2
M10 Pump
S1 Level control upper level
Y2 Solenoid valve automatic water top-up
Y2.1 Solenoid valve automatic water top-up (pressure control)
Y6 Solenoid valve cooling
Y8 Solenoid valve pressure relief
Y8.1 Solenoid valve auxiliary pressure relief
Y13 Solenoid valve extraction

Pressurised water		100 °C - Water conditioning with waterCare recommended												
Temperature control unit/Type		P100smart	P100XS	P100S			P100M			P100L				
Outlet temperature max.	°C/°F	100/212	100/212	100/212			100/212			100/212				
Heat transfer medium Filling quantity Expansion volume	 l l	Water 1.0 -	Water 0.5 -	Water 1.0 -			Water 1.9 -			Water 12.0 -				
Heating capacity at 400 V	kW	8	3	8			8	18		17	34	51		
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	145 DK 90 20 1	32 DK 90 20 2	145 DK 90 20 1	60 1K 90 20 3	78 2K 90 20 4	145 DK 90 20 1	60 1K 90 20 3	78 2K 90 20 4	160 DK 90 20 5				
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	SM22 40 0.5 5.0 1	SG10 11 0.14 3.7 2	SM22 40 0.5 5.0 1	PM23[12] 50 1.1 9.0 7		SM72 60 1.0 6.0 3	SM75 90 1.5 6.0 4	PM75[12] 85 2.2 9.8 8	CRI5 140 1.1 5.4 6				
Control system Measuring mode (Standard)		RT70 Pt100	RT100/RT200 Pt100	RT100/RT200 Pt100			RT100/RT200 Pt100			RT100/RT200 Pt100				
Operating voltage	V; Hz	380-480; 50/60	400; 50, 3PE	200-600; 50/60			200-600; 50/60			380-415; 50	440-480; 60			
Connections Outlet/Inlet Cooling water mains	 	 G1/2" G1/2"	 G3/8" G1/4"	 G1/2" G1/2"			 G3/4" G1/2"			 G1"/60°/Cone G1/2"				
Degree of protection	IP	IP40	IP54	IP54			IP54			IP54				
Dimensions W/H/D	mm	233/595/746	143/420/520	236/589/812			295/711/914			350/967/1366				
Weight	kg	50	25	50			60			170				
Colour	RAL	9006/7016	9006	9006/7016			9006/7016			9006/7016				
Ambient temperature max.	°C	40	40	40			40			40				
Noise level	dB(A)	<70	<70	<70			<70			<70				

Pressurised water		140 °C - Water conditioning with waterCare recommended													
Temperature control unit/Type		P140smart	P140XS	P140S			P140M			P140L			P141XL		
Outlet temperature max.	°C/°F	140/284	140/284	140/284			140/284			140/284			140/284		
Heat transfer medium Filling quantity Expansion volume	 l l	Water 1.0 -	Water 0.5 -	Water 1.0 -			Water 1.9 -			Water 12.0 -			Water 10.0 5		
Heating capacity at 400 V	kW	8	3	8			8	18		17	34	51	20	40	60
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	85 1K 130 20 6	38 1K 130 20 7	56 SK 130 20 8	68 2SK 130 20 9		56 SK 130 20 8	68 2SK 130 20 9		85 SK 130 20 10	95 2SK 130 20 3		115 SK 130 20 11		
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	SM22 40 0.5 5.0 1	SG14 11 0.14 3.7 2	SM22 40 0.5 5.0 1	PM23[12] 50 1.1 9.0 7		SM72 60 1.0 6.0 3	PM75[12] 85 2.2 9.8 8		CRI5H 140 1.1 5.4 6			SG85 200 3.5 5.3 5		
Control system Measuring mode (Standard)		RT70 Pt100	RT100/RT200 Pt100	RT100/RT200 Pt100			RT100/RT200 Pt100			RT100/RT200 Pt100			RT100/RT200 Pt100		
Operating voltage	V; Hz	380-480; 50/60	400; 50, 3PE	200-600; 50/60			200-600; 50/60			380-415; 50	440-480; 60		200-600; 50/60		
Connections Outlet/Inlet Cooling water mains	 	 G1/2" G1/2"	 G3/8" G1/4"	 G1/2" G1/2"			 G3/4" G1/2"			 G1"/60°/Cone G1/2"			 G1 1/2" IG G3/4"		
Degree of protection	IP	IP40	IP54	IP54			IP54			IP54			IP54		
Dimensions W/H/D	mm	233/595/746	143/420/520	236/589/812			295/711/914			350/967/1366			432/1350/1554		
Weight	kg	50	25	52			84			170			265		
Colour	RAL	9006/7016	9006	9006/7016			9006/7016			9006/7016			9006/7016		
Ambient temperature max.	°C	40	40	40			40			40			40		
Noise level	dB(A)	<70	<70	<70			<70			<70			<70		

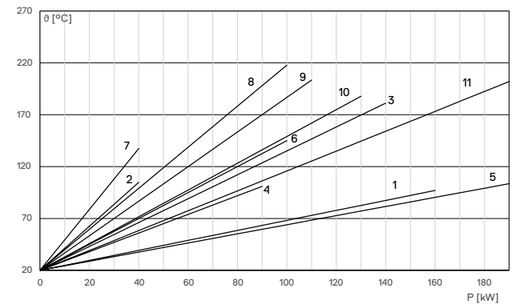
Note

G	Parallel thread
IG	Female thread
SK	Low-scale cooler
DK	Direct cooling
D	Dual zone unit
11	Dual zone unit: Data per zone
12	With frequency converter only

Regloplas temperature control units
Pressurised water 100 °C / 212 °F up to 140 °C / 284 °F

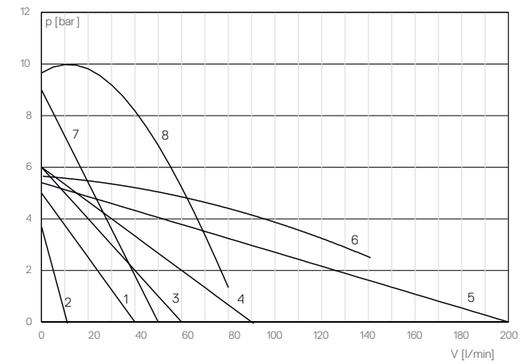
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20 °C
Curve 2/7 »Flow-rate per circuit 6.6l /min«
Curve 1/3/4/6/8/9 »Flow-rate per circuit 20l /min«
Curve 5/10/11 »Flow-rate per circuit 30l /min«



1 P100smart DK, P100S DK, P100M DK
2 P100XS DK
3 P100S 1K, P100M 1K, P140L 2SK
4 P100S 2K, P100M 2K
5 P100L DK
6 P140smart 1K
7 P140XS 1K
8 P140S SK, P140M SK
9 P140S 2SK, P140M 2SK
10 P140L SK
11 P141XL SK

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m3



1	SM22	5	SG85
2	SG10, SG14	6	CRI5, CRI5H
3	SM72	7	PM23[12]
4	SM75	8	PM75[12]

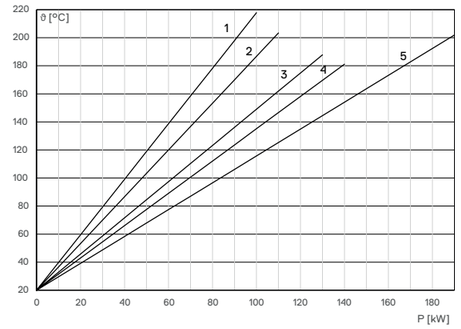
Regloplas temperature control units
Pressurised water 160 °C / 320 °F up to 180 °C / 356 °F

Pressurised water		160 °C - Water conditioning with waterCare recommended															
Temperature control unit/Type		P160S		P160M(D)			P160L			P160LD		P161XL					
Outlet temperature max.	°C/°F	160/320		160/320			160/320			160/320		160/320					
Heat transfer medium Filling quantity Expansion volume	 l l	Water 1.0 -		Water 1.9 -			Water 12.0 -			Water 3.0 2.0		Water 10.0 5.0					
Heating capacity at 400 V	kW	8		8[11]	18[11]		17	34	51	17[11]		20	40	60			
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	66 SK 150 20 1	78 2SK 150 20 2	66[11] SK 150 20 1	78[11] 2SK 150 20 2		101 SK 150 20 3	112 2SK 150 20 4		66[11] SK 150 20 1	78[11] 2SK 150 20 2	135 SK 150 20 5					
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	SM23 40 0.5 5.0 1	PM23[12] 50 1.1 9.0 7	SM73 60[11] 1.0[11] 6.0[11] 2	SM75 90[11] 1.5[11] 6.0[11] 3	PM75[12] 85[11] 2.2[11] 9.8[11] 8	CRI5H 140 1.1 5.4 6			SM82 80[11] 2.8[11] 9.0[11] 4		SM85 200 3.5 8.0 5	PM85[12] 150 5.3 8.5 9				
Control system Measuring mode (Standard)		RT100/RT200 Pt100		RT100/RT200 Pt100			RT100/RT200 Pt100			RT100/RT200 Pt100		RT100/RT200 Pt100					
Operating voltage	V; Hz	200-600; 50/60		200-600; 50/60			380-415; 50	440-480; 60		400; 50, 3PE		200-600; 50/60					
Connections Outlet/Inlet Cooling water mains	 	 G1/2" G1/2"		 G3/4" G1/2"			 G1"/60°/Cone G1/2"			 G3/4" G1/2"		 G1 1/2" IG G3/4"					
Degree of protection	IP	IP54		IP54			IP54			IP54		IP54					
Dimensions W/H/D	mm	236/589/812		295/711/914	416/1430/1037		350/967/1366			507/1167/1492		432/1350/1554					
Weight	kg	52		84	170		170			280		265					
Colour	RAL	9006/7016		9006/7016			9006/7016			9006/7016		9006/7016					
Ambient temperature max.	°C	40		40			40			40		40					
Noise level	dB(A)	<70		<70			<70			<70		<70					

Pressurised water		180 °C - Water conditioning with waterCare recommended															
Temperature control unit/Type		P180S		P180M(D)			P180L			P180LD		P181XL					
Outlet temperature max.	°C/°F	180/356		180/356			180/356			180/356		180/356					
Heat transfer medium Filling quantity Expansion volume	 l l	Water 1.0 -		Water 1.9 -			Water 12.0 -			Water 3.0 2.0		Water 10.0 5.0					
Heating capacity at 400 V	kW	8		8[11]	18[11]		17	34	51	17[11]		20	40	60			
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	76 SK 170 20 1	90 2SK 170 20 2	76[11] SK 170 20 1	90[11] 2SK 170 20 2		116 SK 170 20 3	129 2SK 170 20 4		76[11] SK 170 20 1	90[11] 2SK 170 20 2	156 SK 170 20 5					
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	SM23H 40 0.5 5.0 1	PM23H[12] 50 1.1 9.0 7	SM73H 60[11] 1.0[11] 6.0[11] 2	SM75H 90[11] 1.5[11] 6.0[11] 3	PM75H[12] 85[11] 2.2[11] 9.8[11] 8	CRI5H 140 1.1 5.4 6			SM82H 80[11] 2.8[11] 9.0[11] 4		SM85H 200 3.5 8.0 5	PM85H[12] 150 5.3 8.5 9				
Control system Measuring mode (Standard)		RT100/RT200 Pt100		RT100/RT200 Pt100			RT100/RT200 Pt100			RT100/RT200 Pt100		RT100/RT200 Pt100					
Operating voltage	V; Hz	200-600; 50/60		200-600; 50/60			380-415; 50	440-480; 60		400; 50, 3PE		200-600; 50/60					
Connections Outlet/Inlet Cooling water mains	 	 G1/2" G1/2"		 G3/4" G1/2"			 G1"/60°/Cone G1/2" "			 G3/4" G1/2"		 G1 1/2" IG G3/4"					
Degree of protection	IP	IP54		IP54			IP54			IP54		IP54					
Dimensions W/H/D	mm	236/589/812		295/711/914	416/1430/1037		350/967/1366			507/1167/1492		432/1350/1554					
Weight	kg	52		84			170			280		265					
Colour	RAL	9006/7016		9006/7016			9006/7016			9006/7016		9006/7016					
Ambient temperature max.	°C	40		40			40			40		40					
Noise level	dB(A)	<70		<70			<70			<70		<70					

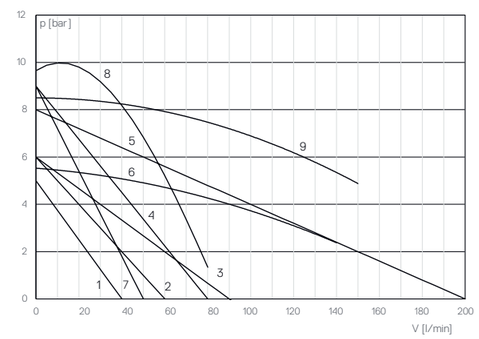
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20°C
Curve 1/2 »Flow-rate per circuit 20l /min«
Curve 3/4/5 »Flow-rate per circuit 30l /min«



1 P160S SK, P160M(D) SK, P180S SK, P180M(D) SK, P160LD SK, P180LD SK
2 P160S 2SK, P160M(D) 2SK, P180S 2SK, P180M(D) 2SK P160LD 2SK, P180LD 2SK
3 P160L SK, P180L SK
4 P160L 2SK, P180L 2SK
5 P161XL SK, P181XL SK

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m3



1 SM23, SM23H
2 SM73, SM73H
3 SM75, SM75H
4 SM82, SM82H
5 SM85, SM85H
6 CRI5H
7 PM23[12], PM23H[12]
8 PM75[12], PM75H[12]
9 PM85[12], PM85H[12]

Note

G	Parallel thread
IG	Female thread
SK	Low-scale cooler
DK	Direct cooling
D	Dual zone unit
11	Dual zone unit: Data per zone
12	With frequency converter only

Regloplas temperature control units
Pressurised water
200 °C / 392 °F
up to 230 °C / 446 °F

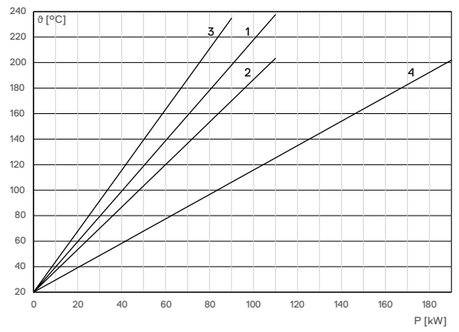
Pressurised water		200 / 230 °C											
Temperature control unit/Type		P200S		P200M(D)			P200XL			200L(D)		P230S	P230M
Outlet temperature max.	°C/°F	200/392		200/392			200/392			2000/392		230/446	230/446
Heat transfer medium Filling quantity Expansion volume	 l l	Water 1.0 -		Water 1.9 -			Water 10.0 5.0			Water 3.0 2.0		Water 1.5 -	Water 1.5 -
Heating capacity at 400 V	kW	8		8	18		20	40	60	17		8	18
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	86 SK 190 20 1	102 2SK 190 20 2	86[11] SK 190 20 1	102[11] 2SK 190 20 2		177 SK 190 20 4			86[11] SK 190 20 1	103[11] 2SK 190 20 2	88 SK 220 20 3	100 SK 220 20 1
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	SM23H 40 0.5 5.0 1	PM23H[12] 50 1.1 9.0 5	SM73H 60[11] 1.0[11] 6.0[11] 2	SM75H 90[11] 1.5[11] 6.0[11] 3	PM75H[12] 85[11] 2.2[11] 9.8[11] 6	SM85H 200 3.5 8.0 4	PM85H[12] 150 5.3 8.5 9		SM82H 80[11] 2.8[11] 9.0[11] 10		PM23H[12] 40 1.1 5.0 5	PM75H 85 2.2 8.5 6
Control system Measuring mode (Standard)		RT100/RT200 Pt100		RT100/RT200 Pt100			RT100/RT200 Pt100			RT100/RT200 Pt100		RT100/RT200 Pt100	RT100/RT200 Pt100
Operating voltage	V; Hz	200-600; 50/60		200-600; 50/60			200-600; 50/60			200-600; 50/60		200-600; 50/60	200-600; 50/60
Connections Outlet/Inlet Cooling water mains		 G1/2" G1/2"		 G3/4" G1/2"			 G1 1/2" IG G3/4"			 G3/4" G1/2"		 G1/2"/SAE1" G1/2"	 G3/4" /SAE1" /60°/Cone G1/2"
Degree of protection	IP	IP54		IP54			IP54			P54		IP54	IP54
Dimensions W/H/D	mm	236/589/812		295/711/914		416/1430/1037	432/1350/1554			507/1167/1492		297/711/971	310/711/1126
Weight	kg	52		84		170	265			280		90	95
Colour	RAL	9006/7016		9006/7016			9006/7016			9006/7016		9006/7016	9006/7016
Ambient temperature max.	°C	40		40			40			40		40	40
Noise level	dB(A)	<70		<70			<70			<70		<70	<70

Note

G	Parallel thread
IG	Female thread
SK	Low-scale cooler
DK	Direct cooling
D	Dual zone unit
11	Dual zone unit: Data per zone
12	With frequency converter only

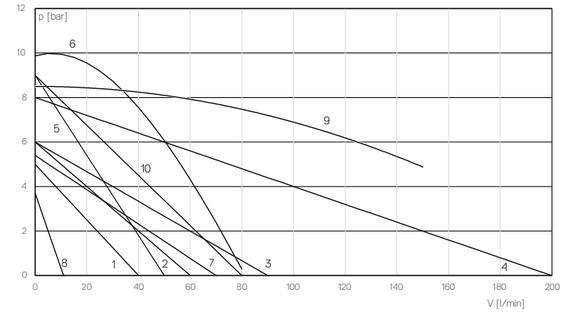
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20 °C
Curve 1/2 »Flow-rate per circuit 20l /min«
Curve 3/4 »Flow-rate per circuit 30l /min«



1 P200S SK, P200M SK, P200MD SK, P200LD SK, P230M SK
2 P200S 2SK, P200M 2SK, P200MD 2SK, P200LD 2SK
3 P230S SK
4 P200XL SK

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m3



1	SM23H	6	PM75H[12]
2	SM73H	7	TS22
3	SM75H	8	SG10
4	SM85H	9	PM85H[12]
5	PM23H[12]	10	SM82H

Water treatment
waterCare recommended from 140 °C / 284 °F and required from 180 °C / 356 °F

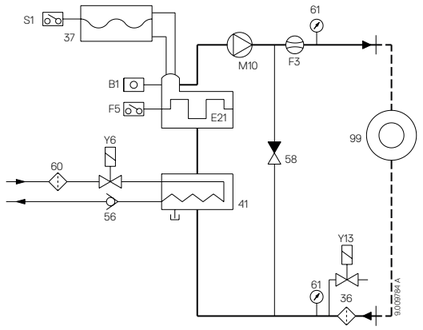
waterCare		from 40 °C	
Temperature control solution/Type		waterCare 23L	waterCare 80L
System water temperature max. Filling quantity	°C/°F l	60/140 23	60/140 80
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	TS22 70 0.92 5.4 7	SG10 11 0.14 3.7 8
Control system		Siemens SPS	Siemens SPS
Operating voltage	V; Hz	200-600; 50/60 3PE	200-600; 50/60 3PE
Connections Outlet/Inlet Cooling water mains Drainage	 	 G1/2"/60° G1/2" G3/8"	 G1/2"/60° G1/2"/60° G1/2"/60°
Degree of protection	IP	IP40	IP40
Dimensions W/H/D		274/725/812	395/740/873
Weight	kg	50	75
Ambient temperature max.	°C	40	40
Noise level	dB(A)	<70	<70

waterCare - AT A GLANCE

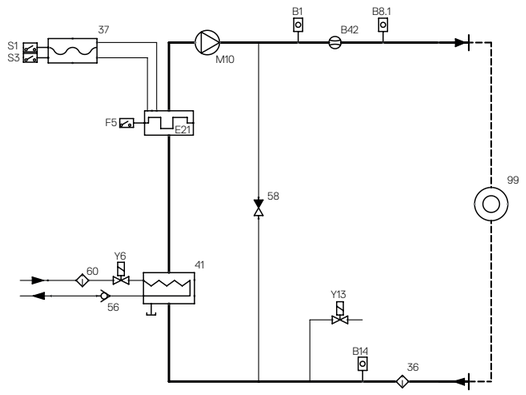
- For applications from 140 °C / 284°F
- Mobile system water conditioning plant
- Energy efficiency thanks to pressure accumulation
- Minimum pump switch-on duration
- System water volume 23 / 80 litre
- Controlled system water temperature
- Use of waterCare with appropriate corrosion inhibitor prevents build-up of lime and dirt
- Maintenance and cleaning intervals for the system and for the connected temperature control units can be considerably extended

Regloplas temperature control units
High temperature oil 300 °C / 572 °F
up to 350 °C / 662 °F

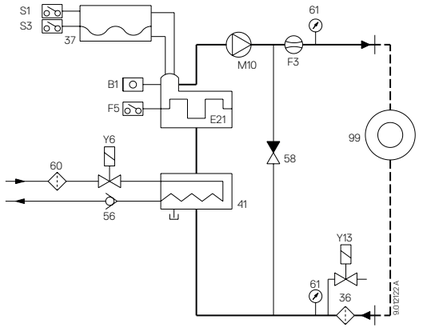
300L temperature control unit / RT100 control system



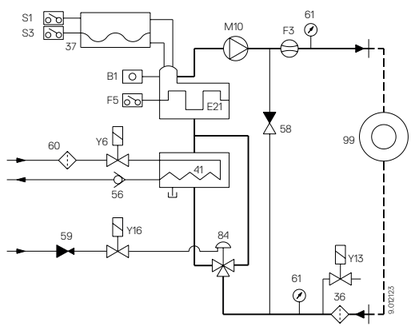
300S 1K



300MD 1K



300L(D) 1K, 350L(D) 1K



350L(D) 2K, with cooler bypass switch

36	Main circuit filter
37	Expansion vessel
41	Cooler
56	One-way check valve
58	Bypass
59	Pressure reducing valve
60	Cooling circuit filter
61	Pressure gauge
84	Three-way valve
99	Consumer
B1	Temperature sensor internal
B8.1	Outlet pressure sensor
B14	Inlet temperature sensor
B42	Flow rate meter internal (option)
E21	Heater
F3	Flow monitor
F5	Safety thermostat
M10	Pump
S1	Level control, top
S3	Level control, bottom
Y6	Solenoid valve cooling
Y13	Solenoid valve extraction
Y16	Solenoid valve compressed air

Regloplas temperature control units
High temperature oil 300 °C / 572 °F up to 350 °C / 662 °F

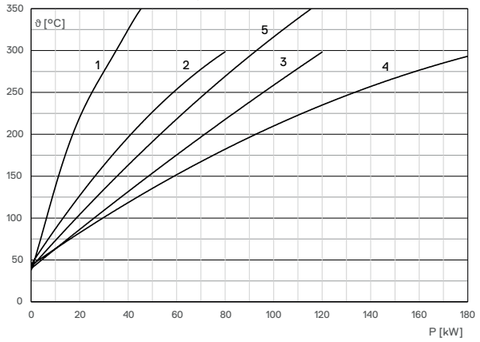
High temperature oil		300 / 350 °C							
Temperature control unit/Type		300S	300MD		300L(D)		350L(D)		
Outlet temperature max.	°C/°F	300/572	300/572		300/572		350/662		
Heat transfer medium Filling quantity Expansion volume	 l l	Oil 6.0 7.0	Oil 22.0 14.0		Oil 15.0 20.0	Oil 24.0 20.0	Oil 15.0 20.0	Oil 24.0 20.0	
Heating capacity at 400 V	kW	6	12[11]		10/17.5/20/30/40[11]	10/17.5/20/30/40[11]	20[11]		
Cooling capacity Cooler at outlet temperature at cooling water temperature Diagram	kW °C °C	70 1K 280 20 2	130[11] 1K 280 20 3		160[11] 1K[12] 280 20 4		30[11] 1K[12] 280 20 1	85[11] 2K[12] 280 20 5	
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	FM25 60 1.0 6.0 1	FM32 80[11] 1.5[11] 7.5[11] 2	FM35 85[11] 2.2[11] 8.0[11] 3	FM65 90[11] 2.8[11] 9.5[11] 4		FM65 90[11] 2.8[11] 9.5 [11] 4		
Control system Measuring mode (Standard)		RT100/RT200 Pt100	RT100/RT200 Pt100		RT100/RT200 Pt100		RT100/RT200 Pt100		
Operating voltage	V; Hz	200-600; 50/60	400-480; 50/60		200-600; 50/60		200-600; 50/60		
Connections Outlet/Inlet Cooling water mains		 G1/2" G1/2"	 G3/4" IG G1/2"		 G3/4" IG G3/4"		 G3/4" IG G3/4"		
Degree of protection	IP	IP54	IP54		IP54		IP54		
Dimensions W/H/D	mm	322/758/909	400/1150/1330		432/1350/1476	542/1351/1474	546/1621/1465		
Weight	kg	87	235		246	365	323	373	
Colour	RAL	9006/7016	9006/7016		9006/7016		9006/7016		
Ambient temperature max.	°C	40	40		40		40		
Noise level	dB(A)	<70	<70		<70		<70		

Note

G	Parallel thread
IG	Female thread
SK	Low-scale cooler
DK	Direct cooling
D	Dual zone unit
11	Dual zone unit: Data per zone
12	With cooler bypass switch

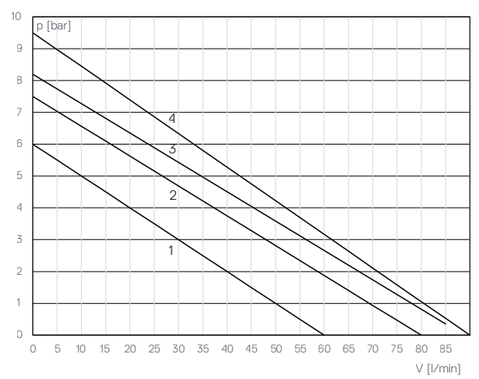
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20 °C
Curve 1/2 »Flow-rate per circuit 20l /min«
Curve 3/4/5 »Flow-rate per circuit 30l /min«



1 350L(D) 1K
2 300S 1K
3 300MD 1K
4 300L(D) 1K
5 350L(D) 2K

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m3

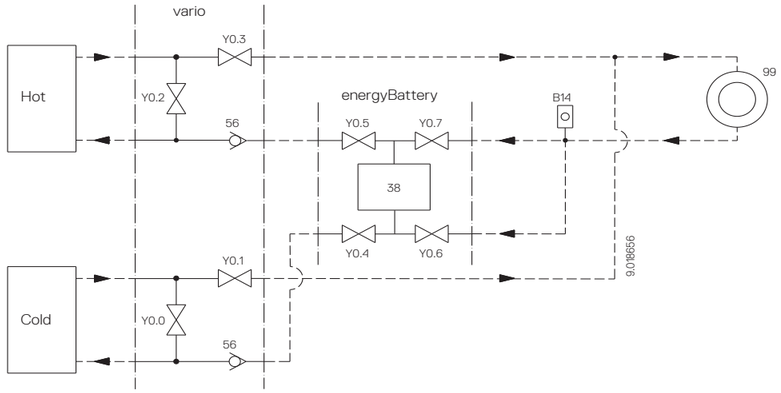


1 FM25
2 FM32
3 FM35
4 FM65

Regloplas temperature control solutions
vario water up to 200 °C / 392 °F and vario oil up to 300 °C / 572 °F coldWater up to 200 °C / 392 °F energyBattery up to 200 °C / 392 °F

vario with energyBattery up to 200 °C / 392 °F

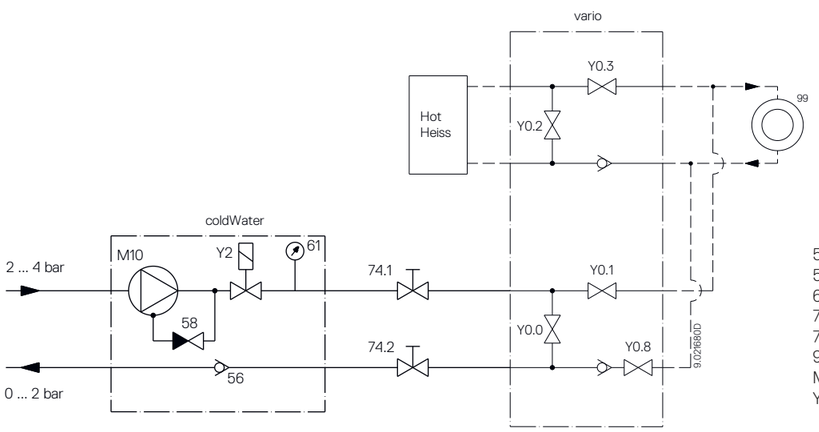
Regloplas was the first to supply a vario switch-over unit for pressurised water units up to maximum 200 °C / 392 °F. It is the ideal solution in combination with the energyBattery and the coldWater. The optimum separation of the hot and cold water circuits means that the heating and cooling phases are reduced, with energy consumption reduced corresponding. The variothermal temperature control process can also be carried out with heat transfer fluid oil up to 300 °C / 572 °F.



Y0.0 Pneumatic valve bypass cold
Y.01 Pneumatic valve outlet cold
Y.02 Pneumatic valve bypass hot
Y.03 Pneumatic valve outlet hot
Y.04 Pneumatic valve inlet cold
Y.05 Pneumatic valve inlet hot
Y.06 Pneumatic valve inlet cold
Y.07 Pneumatic valve inlet hot
B14 Temperature sensor inlet
38 Tank
56 One-way check valve
99 Consumer

vario with energyBattery and P200S

vario with coldWater



56 One-way check valve
58 Bypass
61 Manometer
74,1 Hand valve
74,2 Hand valve
99 Consumer
M10 Pump
Y2 Solenoid valve automatic water top-up

Regloplas temperature control solutions
vario water up to 200 °C / 392 °F and vario oil up to 300 °C / 572 °F
coldWater up to 200 °C / 392 °F
energyBattery up to 200 °C / 392 °F

vario[A]		200 / 300 °C				
Temperature control solution/Type		vario 3/4"	vario 1"	vario SPS 3/4"	vario SPS 1"	vario SPS 3/4"
Outlet temperature max.	°C/°F	200/392	200/392	200/392	200/392	300/572
Heat transfer medium		Water	Water	Water	Water	Oil
Control system				Siemens S7-1200	Siemens S7-1200	Siemens S7-1200
Operating voltage Ext. control voltage	v/Hz V	110-240; 50/60 1PE 24 VDC	110-240; 50/60 1PE 24 VDC	110-240; 50/60 1PE 24 VDC	110-240; 50/60 1PE 24 VDC	110-240; 50/60 1PE 24 VDC
Compressed air connection Compressed air range	 bar	G1/4" 4-10	G1/4" 4-10	G1/4" 4-10	G1/4" 4-10	G1/4" 4-10
Connections Inlet TCU COLD Inlet TCU HOT Outlet TCU COLD Outlet TCU HOT Inlet consumer COLD Inlet consumer HOT Outlet consumer COLD Outlet consumer HOT		 G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60°	 G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60°	 G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60°	 G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60°	 G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60°
Pressure controlled valves		2/2 Ways; 3/4"; 200 °C	2/2 Ways; 1"; 200 °C	2/2 Ways; 3/4"; 200 °C	2/2 Ways; 1"; 200 °C	2/2 Ways; 3/4"; 300 °C
Degree of protection	IP	IP40	IP40	IP40	IP40	IP40
Dimensions W/H/D	mm	203/563/742	266/705/822	203/563/742	266/705/822	266/705/822
Weight	kg	34	48	34	50	50
Colour	RAL	9006/7016	9006/7016	9006/7016	9006/7016	9006/7016
Ambient temperature max.	°C	40	40	40	40	40

ATTENTION!

A **Temperature control units in the same temperature range must be used for the hot and cold water circuits**

Note

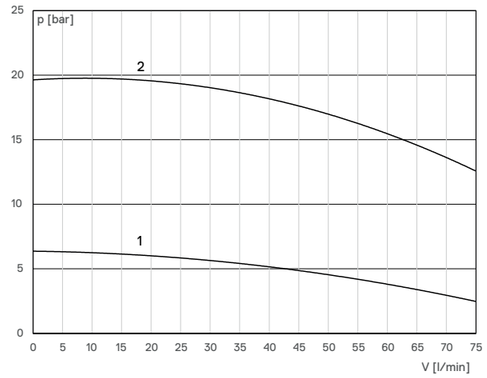
G Parallel thread
IG Female thread
SK Low-scale cooler
DK Direct cooling
D Dual zone unit
11 Dual zone unit: Data per zone
12 With cooler bypass switch

energyBattery		200 °C	
Temperature control solution/Type		energyBattery	energyBattery
Outlet temperature max.	°C/°F	200/392	200/392
Heat transfer fluid Filling quantity	 l	Water 3.6	Water 8
Connessioni compressed air Area compressed air	 bar	G1/4" 4-10	G1/4" 4-10
Operating voltage	V; Hz	110-240; 50/60 1PE	110-240; 50/60 1PE
Connection vario/Consumer Output vario COLD (OUT COLD vario) Output vario HOT (OUT HOT vario) Inlet consumer COLD (IN COLD MOLD) Inlet consumer HOT (IN HOT MOLD)		 G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60° G3/4"/BSP 60°	 G1"/BSP 60° G1"/BSP 60° G1"/BSP 60° G1"/BSP 60°
Pressure sensitive valves		2/2 Ways; 3/4"	2/2 Wege; 1"
Degree of protection	IP	IP40	IP40
Dimensions W/H/D	mm	203/563/715	274/705/650
Weight	kg	32	53
Colour	RAL	9006/7016	9006/7016
Ambient temperature max.	°C	40	40
Noise level	dB(A)	<70	<70

coldWater		160 / 200 °C	
Temperature control solution/Type		coldWater 160	coldWater 200
Outlet temperature max.	°C/°F	160/320	200/392
Heat transfer medium		Water	Water
Pump capacity/Type Flow rate max. Power consumption Pressure max. Diagram	 l/min. kW bar	CRI3H 50 0.75 4.6 1	CRIE 70 3.0 13.8 2
Operating voltage	V; Hz	220-415; 50/60	380-415; 50/60
Connections Outlet/Inlet Cooling water mains	 	 G3/4" G3/4"	 G3/4" G3/4"
Degree of protection	IP	IP40	IP40
Dimensions W/H/D	mm	317/820/748	317/820/748
Weight	kg	48	48
Colour	RAL	9006/7016	9006/7016
Ambient temperature max.	°C	40	40
Noise level	dB(A)	<70	<70

Pump capacity coldWater

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m3



1 CRI3H
2 CRIE

vario - AT A GLANCE

- Switch-over unit for pressurised water up to 200 °C / 392 °F
- Can be used with all standard temperature control units with hot and cold water circuits of the same temperature range
- Temperature control in the high temperature range without pressure surges
- Stable, long-life system for metal, powder and plastic injection moulding and composite processes

energyBattery - AT A GLANCE

- Energy efficient temperature control in the high temperature range without pressure surges
- Energy consumption can be further reduced through optional use of the Regloplas energyBattery
- Ideally, the energyBattery can be combined with the coldWater in the variothermal process

coldWater - AT A GLANCE

- Rapid cooling cycles are achieved with the coldWater unit
- Cooling temp. below 40 °C/ 104 °F
- Use temperature of the heat transfer medium up to 200 °C / 392 °F
- Reduction of cycle times
- coldWater unit reduces the cost of ownership of the machine

Regloplas temperature control solutions
multiFlow variants

Variant 1
multiFlow connected to temperature control unit

multiFlow compact and multiFlow modular (injection moulding and die-casting versions) can be connected directly to the temperature control unit. They are fully integrated into the control system of the temperature control units with sensors, monitoring, displays and controllers. The Regloplas temperature control units can control up to 16 channels simultaneously.

Variant 2
multiFlow stand-alone

The Regloplas multiFlow can all be built as stand-alone variant. The control of the multiFlow is done by a RT200 controller, which is autonomous from the temperature control unit. The RT200 controller can manage stand-alone variants multiFlow compact and multiFlow modular (injection moulding and die-casting) up to 48 channels. Temperature control by means of direct cold water supply is also possible. The stand-alone controller system offers easy integration into the control system of the injection moulding or die-casting machine.

AT A GLANCE

multiFlow compact

- More-compact four- or eight-multiple distributor systems are fitted to the temperature control unit close to the tool
- Fully integrated into control system of the temperature control unit
- Saves costs and energy, fewer temperature control units needed
- Four-multiple distributor systems for temperatures up to 200 °C / 392 °F water, and 350 °C / 662 °F oil, with individual flow control for each circuit, are available as standard
- Up to max. 16 possible temperature control circuits per temperature control unit with control valves or manual ball valves
- Allows the use of the full flow with complete pump capacity in parallel temperature circuits

multiFlow modular

- Tool-proximate, modular multiple distributor systems
- Fully integrated in the control system of the temperature control unit
- Saves costs and energy as fewer temperature control units are needed
- Up to 16-way distributors for temperatures up to 160 °C / 320 °F, with individual flow control for each circuit, are available as standard, in the die-cast version with housing
- Distributors can be combined in stand-alone operation, so that up to 48 circuits can be controlled and monitored as standard with one RT200 controller
- Allows the use of the full flow rate with full pump output in parallel-connected temperature ontrol circuits
- Versions for other application technologies - in addition to injection moulding and die-casting - are possible

multiFlow modular 8-fold

Regloplas Regloplas temperature control solutions
multiFlow compact water up to 200 °C / 392 °F and oil up to 350 °C / 662 °F

multiFlow modular water up to 160 °C / 320 °F

multiFlow compact manual

multiFlow compact

The Regloplas multiFlow distributor system, with sensors, monitoring, displays and controllers, is fully integrated into the control system of the temperature control units. Each circuit is individually set up and monitored. In the manual multiFlow compact variant the flow is adjusted by ball valve. In the automatic multiFlow compact variant the flow in each circuit is automatically adjusted to the set-point value by a control ball valve.
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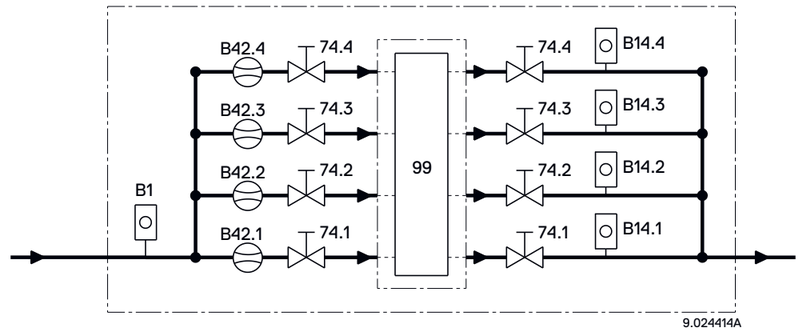
multiFlow compact automatic



74.1 - 74.4	Hand valve
Y0.1 - Y0.4	Valve
99.1 - 99.4	Consumer
B1	Temperature sensor outlet
B14.1 - B14.4	Temperature sensor inlet
B42.1 - B42.4	Flow rate meter

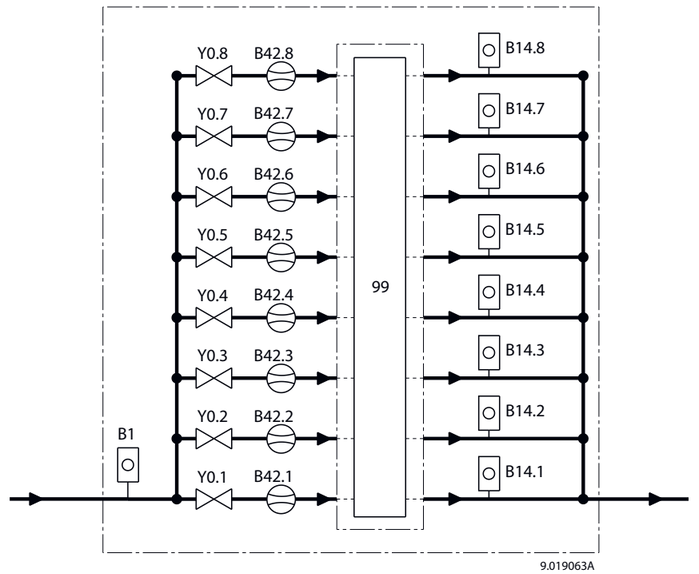
multiFlow compact

multiFlow modular - housing closed, recommended for die-casting

multiFlow modular

Distributors are commonly used in injection moulding and die-casting machinery. The multiFlow distributor system with sensors, monitoring, displays and controllers is fully integrated, close to the tool, in the control system of the temperature control units. The flow in each circuit is automatically adjusted to the set-point value by a control ball valve. Regloplas was the first supplier of this automatic multiFlow modular variant.

multiFlow modular - suitable for injection moulding



99	Consumer
B1	Temperature sensor outlet
B14.1 - B14.8	Temperature sensor inlet
B42.1 - B42.8	Flow rate meter
Y0.1 - Y0.8	Servo valve

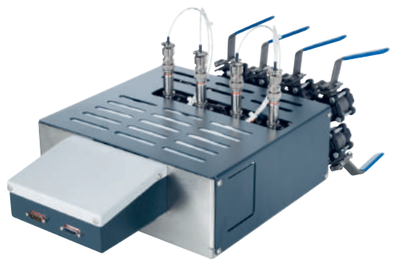
multiFlow modular

Regloplas temperature control solutions
multiFlow compact water up to 200 °C / 392 °F and oil up to 350 °C / 662 °F

multiFlow modular water up to 160 °C / 320 °F

multiFlow compact		**160 / 180 / 200 / 350 °C**							
Temperature control solution/Type		multiFlow compact 160		multiFlow compact 180		multiFlow compact 200		multiFlow compact 350	
Outlet temperature max.	°C/°F	160/320		180/356		200/392		350/662	
Heat transfer medium		Water		Water		Water		Oil	
Number of channels		4-8		4-8		4		4	
Sensors Flow measurement per channel	l/min	VFS 1-18	VFS 2-40	F181 3-30		F181 3-30		F351 8,5-85	
Temperature measurement per channel		Pt100		1-18		Pt100		Pt100	
Models cooling channels		4/8		4/8		4		4	
Control system		RT100/RT200		RT100/RT200		RT100/RT200		RT100/RT200	
Operating voltage	V; Hz	24V DC		24V DC		24V DC		24V DC	
Connections Main connection TCU Outlets to consumer		G3/4" G1/2"		G3/4" G1/2"		G3/4" G1/2"		G3/4" G1/2"	
Dimensions W/H/D manual automatic (*14)	mm mm	237/120/590 333//182/588	463/120/590 655/182/588	237/120/590	463/120/590	237/120/590		700/136/359	
Colour	RAL	7016		7016		7016		7016	
Ambient temperature max.	°C	40		40		40		40	
multiFlow modular		**120 / 160 °C**							
Versions		Die casting		Die casting		Injection moulding		Injection moulding	
Temperature control solution/Type		multiFlow modular 120		multiFlow modular 160		multiFlow modular 120		multiFlow modular 160	
Outlet temperature max.	°C/°F	120/248		160/320		120/248		160/320	
Heat transfer medium		Water		Water		Water		Water	
Number of channels		4-16		4-16		4/8		4/8	
Sensors Flow measurement per channel		VFS 1-18	VFS 2-40	VFS 1-18	VFS 2-40	VFS 1-18	VFS 2-40	VFS 1-18	VFS 2-40
Temperature measurement per channel		Pt100		Pt100		Pt100		Pt100	
Models cooling channels (2 steps) Direction of outgoing channels		4/6/8/10/12/14/16 right/left		4/6/8/10/12/14/16 right/left		4/8 right/left		4/8 right/left	
Degree of protection with housing		IP45		IP45		-		-	
Control system (*15)		RT100/RT200 (*15)		RT100/RT200 (*15)		RT100/RT200 (*15)		RT100/RT200 (*15)	
Operating voltage	V; Hz	24V DC		24V DC		24V DC		24V DC	
Connections Main connection TCU Outlets to consumer		G1 1/2"/60°/Cone G1/2" 60°/Cone		G1 1/2"/60°/Cone G1/2" 60°/Cone		G3/4"/60°/Cone G1/2" 60°/Cone		G3/4"/60°/Cone G1/2" 60°/Cone	
Dimensions W/H/D with housing		(4-fold) 425/236/348	(16-fold) 425/236/948	(4-fold) 425/236/348	(16-fold) 425/236/948	(4-fold) 260/209/361	(8-fold) 260/209/603	(4-fold) 260/209/361	(8-fold) 260/209/603
Colour	RAL	7016		7016		7016		7016	
Ambient temperature max.	°C	40		40		40		40	

Note
G Parallel thread
*14 not for die-casting
*15 optional with SPS multiControl



multiFlow compact manual

multiFlow modular

Regloplas temperature control solutions
multiPulse water up to 160 °C / 320 °F

multiPulse		160 °C		
Temperature control solution/Type		multiPulse 160		
Outlet temperature max.	°C/°F	160/320		
Heat transfer medium		Water		
Number of channels		4-16		
Sensors Flow measurement per channel		VFS 1-18	VFS 2-40	
Temperature measurement per channel		Pt100		
Models cooling channels (2s steps) Direction of outgoing channels		4/6/8/10/12/14/16 right/left		
Degree of protection with housing		IP45		
Interface connection TCU: Cable length		2	5	10
Control system Operation		multiControl Touch 9"		
Operating voltage	V; Hz	24V DC		
Connections Main connection TCU Outlets to consumer		G1 1/2"/60°/Cone G1/2" 60°/Cone		
Dimensions W/H/D with housing (4-fold and 16-fold)		425/236/348	425/236/948	
Colour	RAL	7016		
Ambient temperature max.	°C	40		

multiPulse - AT A GLANCE

- Individually-adjustable cooling times for each circuit
- Reduction of the cycle times with optimum parameter setting
- Energy-saving temperature control solutions with improved product quality
- Process-relevant temperatures of the tool and hotspots are controlled precisely and with best performance stability
- Maximum flexibility thanks to the expansion of temperature control circuits
- Individual monitoring of temperature and flow per circuit
- Tool-proximate outlets and inlets ensure shorter, optimised process times and minimise energy losses
- The multiControl controller must be used to control the multiPulse

Note

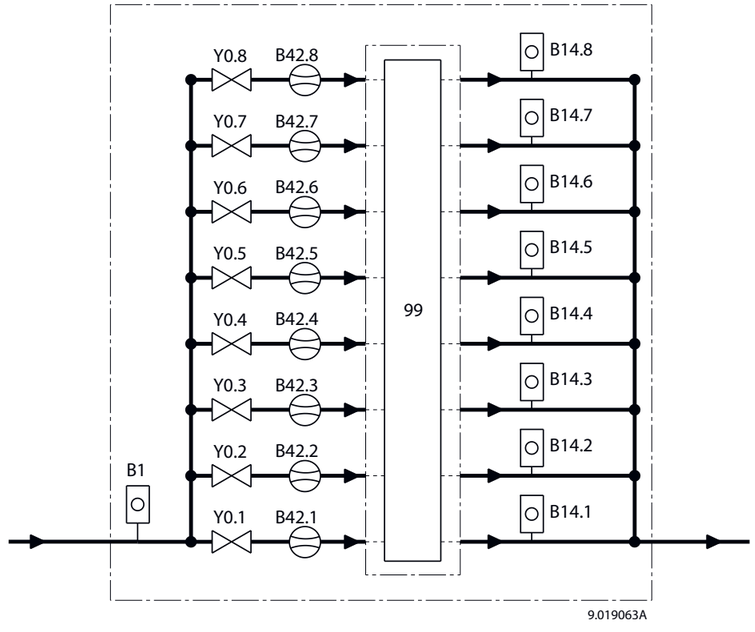
G Parallel thread

multiPulse

For pulse temperature control we offer the multiPulse. This versatile, individually-adjustable solution up to 160 °C / 320 °F is designed for 16 temperature control circuits per temperature control unit.

multiPulse modular - housing closed, recommended for die-casting

multiControl



multiPulse

99	Consumer
B1	Temperature sensor internal
B14.1 - B14.8	Temperature sensor inlet
B42.1 - B42.8	Flow rate meter
Y0.1 - Y0.8	Servo valve

Precise and cycle-accurate temperature control of Hot-Spots

jetPulse

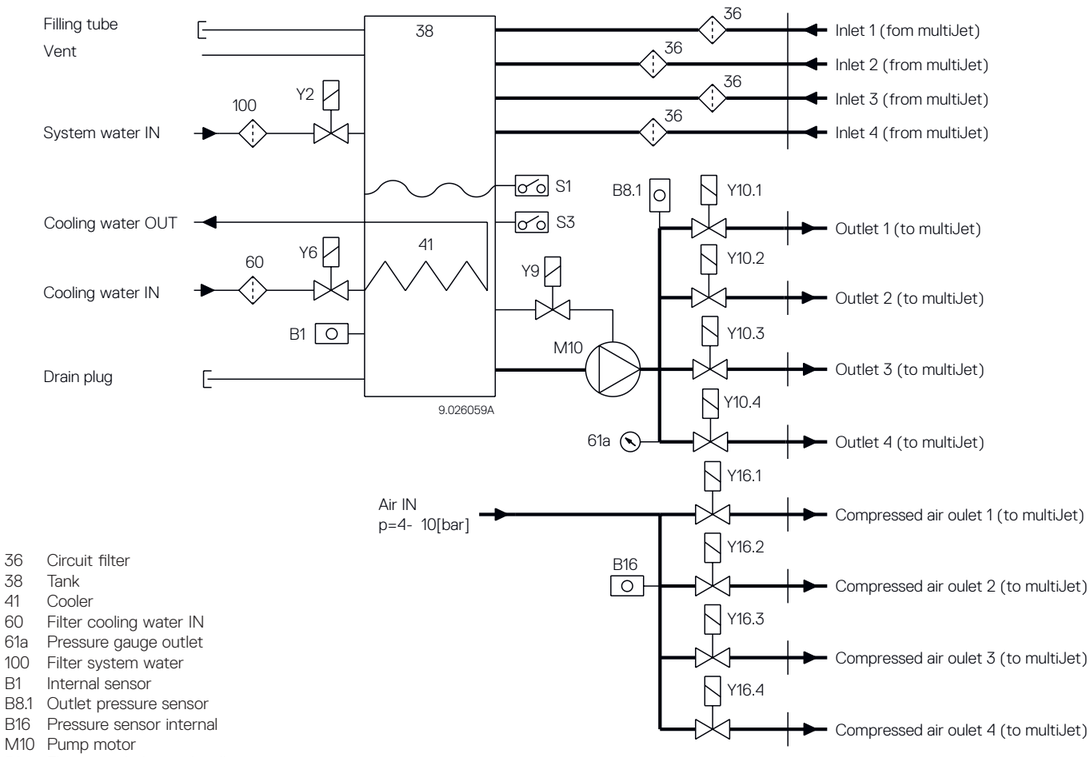
For die-cast temperature control, Regloplas offers the jetPulse, a versatile and individually-adjustable cycle-precise solution, which can offer efficient cooling of tools in areas where conventional temperature control is inadequate. The jetPulse provides pinpoint accuracy and intelligence for the cooling process in die-casting. With 4 / 6 channels and 8 cores per channel the jetPulse 100L provides 48 cooling connections for cooling peaks (cores), the jetPulse 30L provides 32 cooling connections. The jetPulse cycle has an integrated automatic core break monitoring step.

jetPulse features - AT A GLANCE

- Water distribution system with up to 6 zones and 8 channels per zone
- Up to 100 l/min flow rate (jetPulse 100L) at a max. pressure of 30 bar
- Adjustable leak differential pressure
- Core break monitoring integrated into cycle
- Integrated temperature measurement
- Air/water cooling time adjustable
- Leakage monitoring time adjustable
- Blow-out time adjustable
- Automatic water refill
- Siemens PLC-controlled control system with touch screen
- Wait times between the actions can be adjusted
- Energy-saving pump, only active when cooling is running
- Interface to die casting machine

Temperature control solution jetPulse 30L/ control system SPS

Regloplas temperature control solutions
Water core cooling up to 80 °C / 176 °F
jetPulse



36	Circuit filter
38	Tank
41	Cooler
60	Filter cooling water IN
61a	Pressure gauge outlet
100	Filter system water
B1	Internal sensor
B8.1	Outlet pressure sensor
B16	Pressure sensor internal
M10	Pump motor
S1	Float switch (upper level)
S3	Float switch (lower level)
Y2	Solenoid valve automatic water refill
Y6	Solenoid valve cooling
Y9	Solenoid valve bypass
Y10	Solenoid valve outlet
Y16	Solenoid valve compressed air

Regloplas temperature control solutions
Water core cooling up to 80 °C / 176 °F
jetPulse

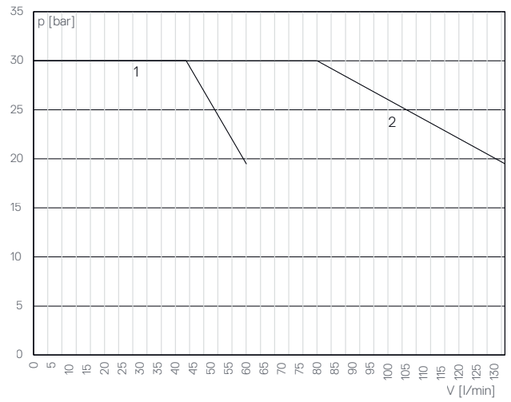
System components
multiJet
jetFlow
flowControl

jetPulse		80 °C	
Temperature control solution/Type		jetPulse 30L	jetPulse 100L
Outlet temperature max.	°C/°F	80/176	80/176
Heat transfer medium Filling quantity	 l	Water 30	Water 100
Cooling channels		4	6
Cooling capacity at outlet temperature	kW °C	20 70	30 / 60 70
Pump capacity/Type Flow rate max. Power consumption Pressure max.	 l/min. kW bar	CRNE1-15 33 4.0 30	CRNE3-15 100 7.5 30
Control system		SPS	SPS
Operating voltage External control voltage	V; Hz V	380-500; 50/60 24 VDC	380-500; 50/60 24 VDC
Connections Connection compressed air Outlet TCU compressed air Cooling water Inlet/Outlet TCU Inlet Systemwater		 G1/4" (IG) G1/4"/BSP 60° G1/2" G1/2"/BSP 60° G3/8"	 G1/4" (IG) G1/4"/BSP 60° G1/2" G1/2"/BSP 60° G3/8"
Degree of protection	IP	IP54	IP54
Dimensions W/H/D	mm	350/966/1314	512/1140/1425
Weight	kg	150	250
Colour	RAL	9006/7016	9006/7016
Ambient temperature max.	°C	40	40

multiJet			jetFlow			flowControl		
System component of jetPulse		multiJet	System component of jetPulse		jetFlow	System component of jetPulse		flowControl
Outlet temperature max.	°C/°F	80/176	Outlet temperature max.	°C/°F	95/203	Cooling channels	Stk	4/6
Heat transfer medium		Water/Air	Heat transfer medium		Water/Air	Control system		SPS
Cooling channels	Stk	8	Cooling channels	Stk	8	Operating voltage	V; Hz	100-230; 50/60
External control voltage	V	24VDC	External control voltage	V	24VDC	External control voltage	V	24VDC
Connections Outlet compressed air Inlet/Outlet TCU Inlet/Outlet core		 G1/4" G1/2"/BSP 60° G1/8" IG	Flow measuremet per channel	l/min	0.7-30	Interface to jetFlow		Han 12Q
			Connection Inlet/Outlet		plug connection d6/G1/4"	Interface to jetPulse		Profinet M12
			Interface flowControl		Han 12Q	Degree of protection	IP	IP54
Interface to jetPulse		Han 4A	Degree of protection	IP	IP54	Dimensions B/H/T	mm	300/200/130
Degree of protection	IP	IP54	Dimensions B/H/T	mm	130/230/96	Weight	kg	5
Dimensions B/H/T	mm	303/188/149	Weight	kg	5	Colour	RAL	7035
Weight	kg	4	Colour	RAL	7016	Ambient temperature max.	°C	40
Ambient temperature max.	°C	60	Ambient temperature max.	°C	60			

Pump capacity jetPulse

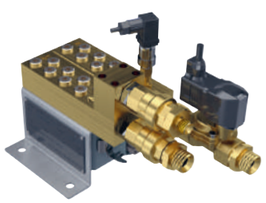
Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m3



1 CRNE1-15
2 CRNE3-15

jetPulse 100L

jetPulse 30L



multiJet multiple distributor

jetFlow flow measurement

flowControl
flow control

Interfaces for Smart Factory

Regloplas. Leaders in custom interfaces

Interfaces
Standardised and customer-specific

In the Smart Factory, everything communicates with everything and everyone. Now, issues such as process safety and friction-less data transfer between machine and the remote periphery, from temperature control units and the production process data from sensors, actuators, pumps, frequency converters and bus devices are more important than ever.

The control system was developed in-house. We offer interfaces to all standard protocols used in industrial communication. We are ready for Smart Factory and Industry 4.0 with our OPC UA connection technology. The standard range of Regloplas interfaces contains more than 20 industry-standard protocols and bus systems including Ethernet/IP, Profibus, Profinet, Modbus and Powerlink, which enable connection to almost all communication systems. Communication can also be cross-site, for instance via the cloud.

OPC UA interface

Our latest generation of Regloplas temperature control units can be networked, via the OPC UA communication protocol, to injection moulding, die-casting and other production machines. Each temperature control unit has its own OPC UA client server and can therefore be integrated fully into the central control, PPS, MES or ERP system of the customer's production lines.

This creates the prerequisites for consistent data exchange in the automated digitalised manufacturing process. Our OPC UA network solution not only offers Peer-to-Peer client/server connection, but also a Master/Slave connection, in which an injection moulding machine is connected via bus system to all the temperature control units used in the process.

Regloplas control systems. Available interfaces

Temperature control units from left to right:
P150smart / control system RT70
P100XS custom colour / control system RT100
P100XS custom colour / control system RT200

Control system interfaces	RT70	RT100	RT200
Customer-specific interface protocols to manufacturer machines			
Interface 20 mA CL, 2 Arburg plugs (X51/X52) to injection moulding machine of Arburg	·		
Interface Battenfeld analog/digital (Han 7d) to injection moulding machine of Battenfeld	·		
Standard interfaces			
Interface RP, 20 mA CL / RS232 / RS422 / RS485, 2 Sub D25 (X61/X62)	·		
Interface 20 mA CL, 2 Arburg plugs (X51/X52)	·		
Analog Interface 0-10V; Including additional analog inputs/outputs, external set point, recorder output, external ON/OFF signal and plug Han 7d	·		
Analog Interface 0-20mA; Including additional analog inputs/outputs, external set point, recorder output, external ON/OFF signal and plug Han 7d	·		
Analog Interface 4-20mA; Including additional analog inputs/outputs, external set point, recorder output, external ON/OFF signal and plug Han 7d			
Interface Profibus DP, 1 Sub D9 (X65)	·		
Interface Profinet, 2 M12 (X72, X73, D-coded)	·		
Interface Profinet, 2 RJ45 (X72, X73)	·		
Interface Powerlink, 2 M12 (X91, X92)	·		
Interface Modbus TCP, 2 M12 (X95, X96, D- coded)	·		
Customer-specific interface protocols to manufacturer machines			
Interface Bühler Dataspeed, 2 Sub D9 (X63/X64)		·	·
Interface Bühler Dataspeed, 2 Sub D9 (X63/X64), Han 10A, Protection type IP54		·	·
Interface Boy, RS485, 2 Sub D9 (X63/X64)		·	·
Interface Battenfeld analog/digital, Han 7d		·	·
Interface Battenfeld analog/digital, Han 10A, Protection type IP54		·	·
Interface Frech, 2 Han 3A (X55/X56)		·	·
Interface Frech, 2 Sub D9-f (X74/X75)		·	·
Interface CAN-Demag, 2 Sub D9 (X57/X58)		·	·
Interface 20 mA CL, 2 Arburg-plugs (X51/X52)			
Standard interfaces			
Interface 20 mA CL, 2 Sub D9 (X51/X52)		·	·
Interface RP, 20 mA CL / RS232 / RS422 / RS485, 2 Sub D25 (X61/X62)		·	·
Interface RP, 20 mA CL / RS232 / RS422 / RS485, 2 Sub D25 (X61/X62), Han 10A, Protection type IP54, only for S/M/L/XL series		·	·
Interface SPI, 1 Sub D9 (X59) for replacement/extension of existing units with SPI Sub D9 wiring		·	·
Interface SPI, 2 Sub D25 (X61/X62) recommended for all new installations with SPI		·	·
Analog Interface 0-10V; Including additional analog inputs/outputs, external set point, recorder output, external ON/OFF signal and plug Han 7d		·	·
Analog Interface 0-20mA; Including additional analog inputs/outputs, external set point, recorder output, external ON/OFF signal and plug Han 7d		·	·
Analog Interface 0-20mA; Including additional analog inputs/outputs, external set point, recorder output, external ON/OFF signal and plug Han 7d		·	·
Interface Profibus DP, 1 Sub D9		·	·
Interface Profinet, 2 M12 (X72, X73, D-kodiert)		·	·
Interface Ethernet IP, 2 M12 (X68, X69, D-coded)		·	·
Interface Frech, 2 Han 3A (X55/X56)		·	·
Interface Frech, 2 Sub D9-f (X74/X75)			
Interface CAN-Demag, 2 Sub D9 (X57/X58)			
Interface Euromap 66, 2 Sub D9 (X76/X77)			
Interface Profinet, 2 RJ45 (X72, X73)		·	·
Interface Ethernet IP, 2 RJ45 (X68, X69)		·	·
Interface Modbus RTU, 2 Sub D9 (X93, X94)		·	·
Interface OPC UA, 2 RJ45 (X78, X79)		·	·
Interface Modbus TCP, 2 M12 (X95, X96, D-encoded)		·	·

We are the only supplier on the market with around 200 options

Regloplas options in control system

There are many options for Regloplas temperature control units and temperature control solutions. For instance, the RT70 control system developed by us has more than 80 extra functions in addition to the standard range. With around 200 options, particularly with the latest RT200 control system and with the RT100, we make temperature control easier, more intelligent and more able to transmit wide-ranging process data to control systems. The RT200 is the 10th generation to be designed and produced in Switzerland by Regloplas AG.

The temperature control units have additional functions, such as flow measurement, interfaces such as the OPC UA interface, process-relevant auxiliary functions such as device flushing and intelligent programs in control systems of the Regloplas AG control system such as ramp programs, cascade control, pressure control, Delta T regulation and safety-relevant monitoring algorithms.

Regloplas options for numerous applications

Regloplas options - examples

External temperature probe connection (RT70, RT100, RT200)
For direct temperature control of consumer an external temperature probe can be connected to the temperature control unit. If the probe is placed directly within the tool, the temperature of the tool can be used as a set-point value for the temperature control system. Thus, the temperature loss via the feed lines can be compensated and a precise temperature profile for a tool enables consistent quality of the components to be produced.

Flow measurement (RT70, RT100, RT200)
For temperature control units control systems (RT70, RT100, RT200) there are many variants for flow measurement of water and oil up to 350 °C / 662 °F. These are not only needed for display, monitoring and data transfer but also for the intelligent control variants offered by the **Regloplas** temperature control solutions.

Time switch / timer function (RT100, RT200)
There are 10 steps (switch points) available for timer programming. For each step a weekday (Mon, Tue, Wed, Thur, Fri, Sa, Su), a group of weekdays (Mon-Thur, Mon-Fri, Mon-Sa, Mon-Su), a time and the action (switch on/switch off/inactive) must be programmed. Heating times can thus be planned precisely and are not dependent on operating personnel.

Flushing (RT70, RT100, RT200)
Automated replacement of the medium in water devices. Flushing is possible when the device is switched on (start-up flushing). Cyclical flushing is also possible during the operation of the device (intermittent flushing). Both flushing types can be parametrised together.

Drainage by suction (RT70, RT100, RT200)
The drainage program by suction enables the emptying of the consumer connected to the temperature control unit. The pump is switched off and once the pump has stopped it can be switched on again in the reverse direction. The consumer is drained by suction during the defined duration (emptying time). Emptying is only possible when the temperature of the heat transfer medium is less than the programmed run-on temperature. If this is not the case, the heat transfer medium is initially cooled to this value.

Leak-stop (RT70, RT100, RT200)
The leak stop operation can be activated as emergency operation. In leakage stop operation, the heat transfer medium (water or oil) is sucked through the consumer with negative pressure and the pump runs in the opposite direction of rotation. This in the event of a leak in the heat transfer circuit. Leak-stop operation with water as the heat transfer medium is only possible if this is supported by the temperature control unit. The setpoint must be in the range of the run-on temperature (0-80 ° C / 32-176 °F). Pressurised water devices do not have a leak stop operation! If oil is used as the heat transfer medium, the set-point value must be in the range of 0-250 °C / 32-482 °F . The heating capacity is then max. 60%, as the thermal load on the oil must be kept low due to the reduced pump capacity.

Autom. rotation direction correction (RT70, RT100, RT200)
The rotary field detection of the control system detects an incorrect phase sequence and reports this to the display and/or corrects the direction of rotation automatically, without impeding the operation.

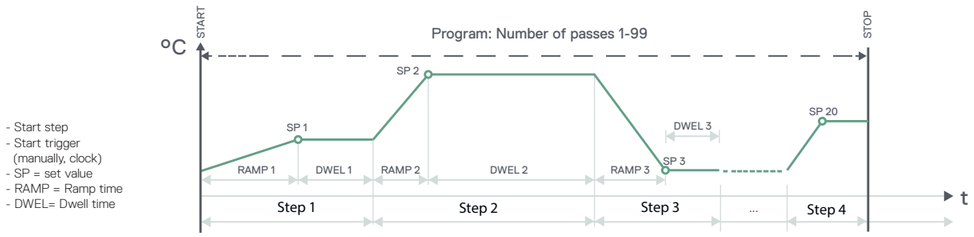
Heat meter (RT100, RT200)
The heat meter measures the loss from the connecting lines including consumer as power consumption (in kWh) for heating and cooling. The principle is based on the formula $Q=m\times c\times \Delta T$. The heat meter requires a flow meter and a temperature probe in the inlet. In addition, when carrying out the settings, the density, and specific thermal capacity of the corresponding medium must be entered for the calculation. The heat meter can then work out how stable the process is and can give the operator a clear indication of any malfunctions occurring.

Energy meter (RT100, RT200)
The energy meter displays the energy consumption (in kWh) of the temperature control unit. The values can be read individually for heating, pump, basic use (standby) and cooling pump or as total consumption. This function also makes it possible to track processes over a long period, record discrepancies and intervene if necessary.

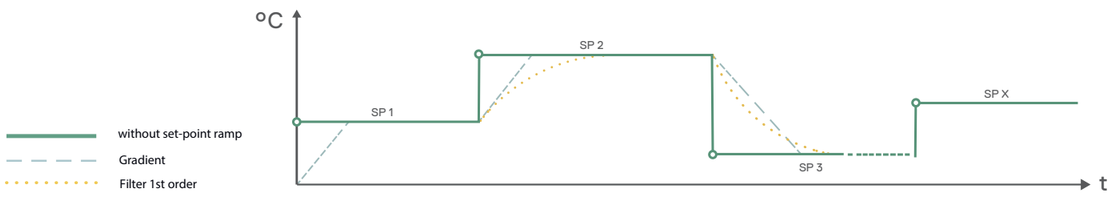
Regloplas options for numerous applications

Regloplas options - examples

Ramp program (RT100, RT200)
The ramp program is used if the customer does not want to actuate the device via an interface but via an automatic procedure. With up to 20 steps per ramp and up to 5 different programs, the ramp cycle can be run 99 times.



Set-point value ramps (RT100, RT200)
Set-point value changes are executed in ramp form and not incrementally. Set-point value ramps can be set in °C/min separately for heating and cooling. Heating thus takes place e.g. by 5 °C / 41 °F per minute. Cooling can be separately defined.



Frequency converter - Frequency control without flow measurement (RT100, RT200)
In this option the frequency of the frequency converter can be preselected so a defined working point can be pre-selected for the pump curve. This enables a defined flow and system pressure to be set.

Frequency converter - Flow control with flow measurement (RT100, RT200)
With this add-on function the user can set a defined flow through the tool so that the temperature control unit controls the pump capacity by means of frequency converters corresponding to the measured flow rate. In this way, fluctuations in the cooling process can be corrected.

Frequency converter - Pump pressure control (RT100, RT200)
With this add-on function the user can set a defined pump pressure through the tool so that the temperature control unit controls the pump capacity by means of frequency converters in relation to the measured system pressure.

Frequency converter - Delta T control outlet / inlet (RT100, RT200)
The „Delta T-control" setting in the **Regloplas** temperature control unit controls the pump capacity using frequency converters so that the difference between the outlet and inlet temperatures remains constant. For this, **Regloplas** offers a technologically high-quality add-on function, with which up to 50% of the previous energy consumption can be saved.

Cascade control, inlet (RT100, RT200)
The cascade control setting is used to control both the outlet and inlet temperatures. For this purpose, temperature measurement is required respectively in the outlet and inlet. Cascade control enables a more precise temperature control and an improvement in the control of the heating / cooling processes in the event of changes within the circuit.

Added value for your company.
We give you individual advice.
Get in touch with us!

In industrial temperature control, optimisation of energy consumption of the application is becoming ever more important. To reduce energy consumption and enable optimisation we offer you intelligent technology, personal solutions and products.

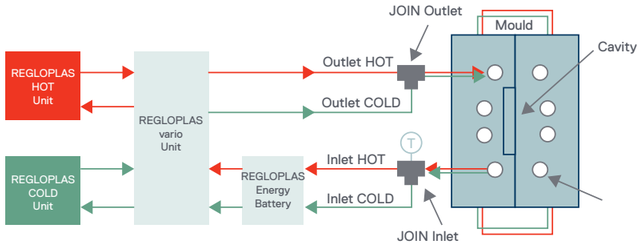
Intelligent technologies, solutions and products including pump pressure control, Delta-T control and flow control are thereby fully within reach and help to drastically reduce energy consumption.

Variothermal temperature control

A feature of variothermal temperature control is increased energy consumption, due to the rapid switch-over between the hot and cold medium. To balance this out and equally to reduce the energy consumption we offer the Regloplas energyBattery.

Regloplas energyBattery - the energy saving

The energy saving for variothermal temperature control. To keep energy consumption as low as possible when switching between hot and cold, particularly during short or frequent cycle times, the Regloplas energyBattery acts as an energy saving for variothermal temperature control. Combined with hot and cold water storage, the hot and cold water circuits are kept optimally separate, which in turn leads to shorter heating and cooling phases and thus reduces energy consumption.



variothermal tempering

Energy-saving solutions for temperature control pay off

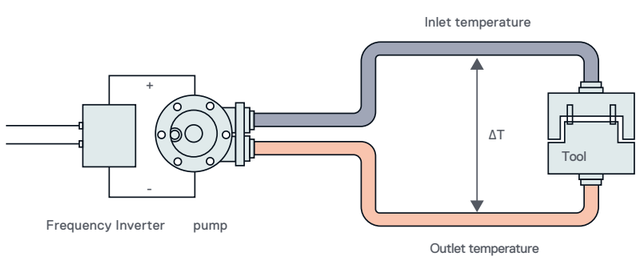
Delta-T control with frequency converter plus centrifugal pump with optimised efficiency

Regloplas AG is the first supplier to the market to keep the temperature difference between the outlet and inlet to a constant value. This is done with the help of frequency converters, which adjust the pump capacity based on the temperature difference. The Delta T-control automatically guarantees the minimum required flow with reduced pump speed. At a 20-percent reduction in speed, the pump uses 50% less energy. At half speed it uses only 12.5%.

We are using centrifugal pumps increasingly. The principle of this type of pump offers outstanding efficiency at a much lower current uptake. Various pump types, e.g. the centrifugal wheel or the peripheral pump which are used at Regloplas AG can be optionally equipped with a frequency converter for pump control. Different types of pump control can enable up to 80% electrical energy savings to be achieved automatically.

Top quality - Top motor efficiency class at Regloplas AG

For further reduction of the energy consumption in our temperature control units and temperature control solutions, we offer the top motor efficiency class – the "High / Premium Efficiency Motors" IE3, IE4 and IE5 with and without frequency converters. Regloplas now equips its temperature control units for the 0.75 – 7.5KW performance range only with pump motors in the motor efficiency class IE3 "Premium Efficiency" standard or higher. To make sure our customers can use the full output capacity of our temperature control units and temperature control solutions, the pumps are fitted as a rule with an additional frequency converter.



Delta-T control

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