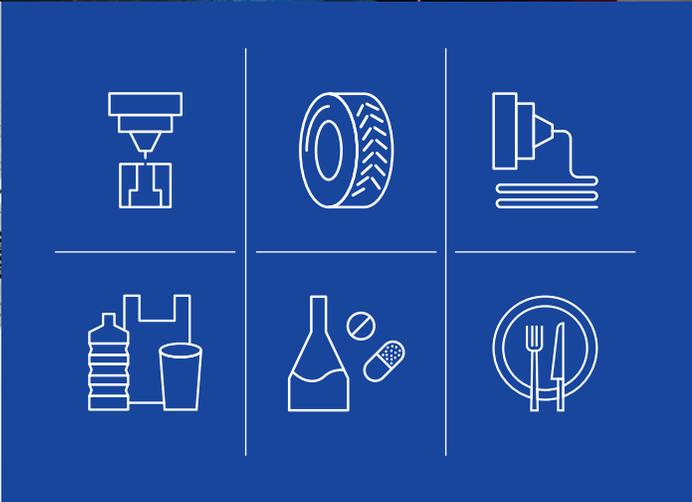
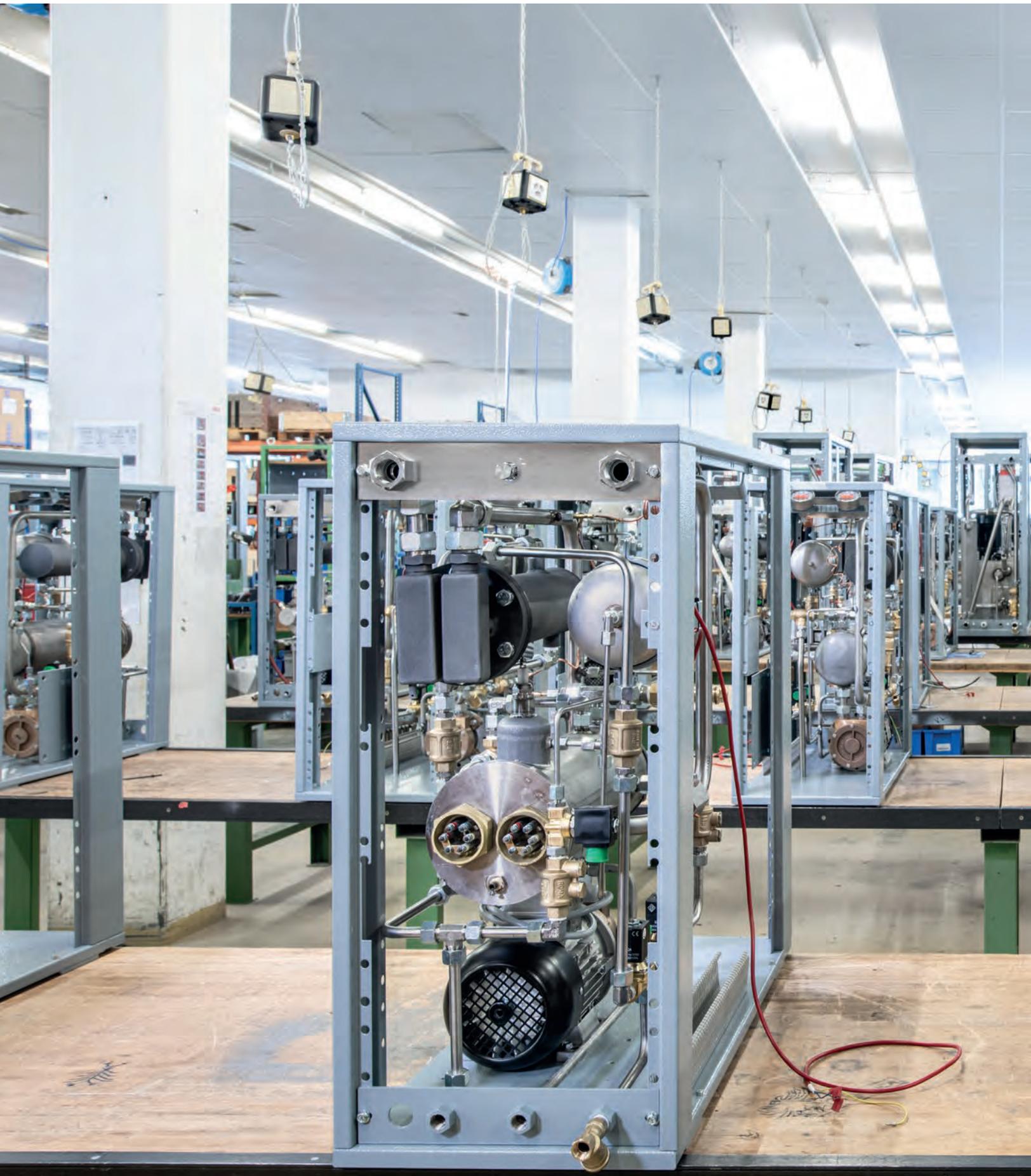
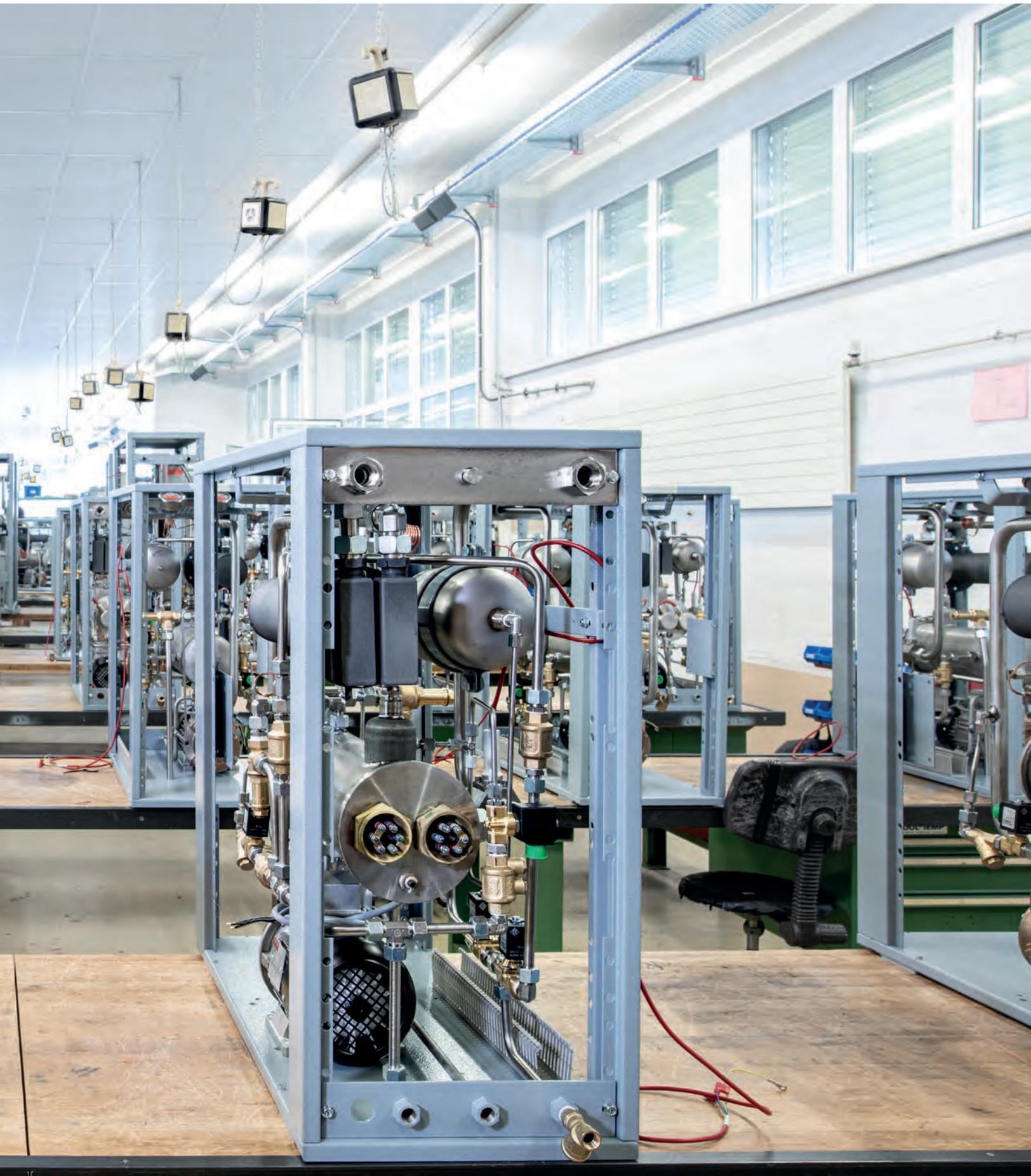


Swiss Thermal Management









Dear Reader

For us as siblings and the second generation of the business, Tool-Temp has always been part of the family. We've grown up in and with the business. Working here during the holidays, tagging along on business trips, getting souvenirs and hearing stories from distant lands was simply part of this.

That's why it was completely natural for us to focus our academic studies based on Tool-Temp's core business. It soon became clear that we would get involved in the family business, which we did after completing our degrees. This meant we were well prepared – to a certain extent – when we took the reins.

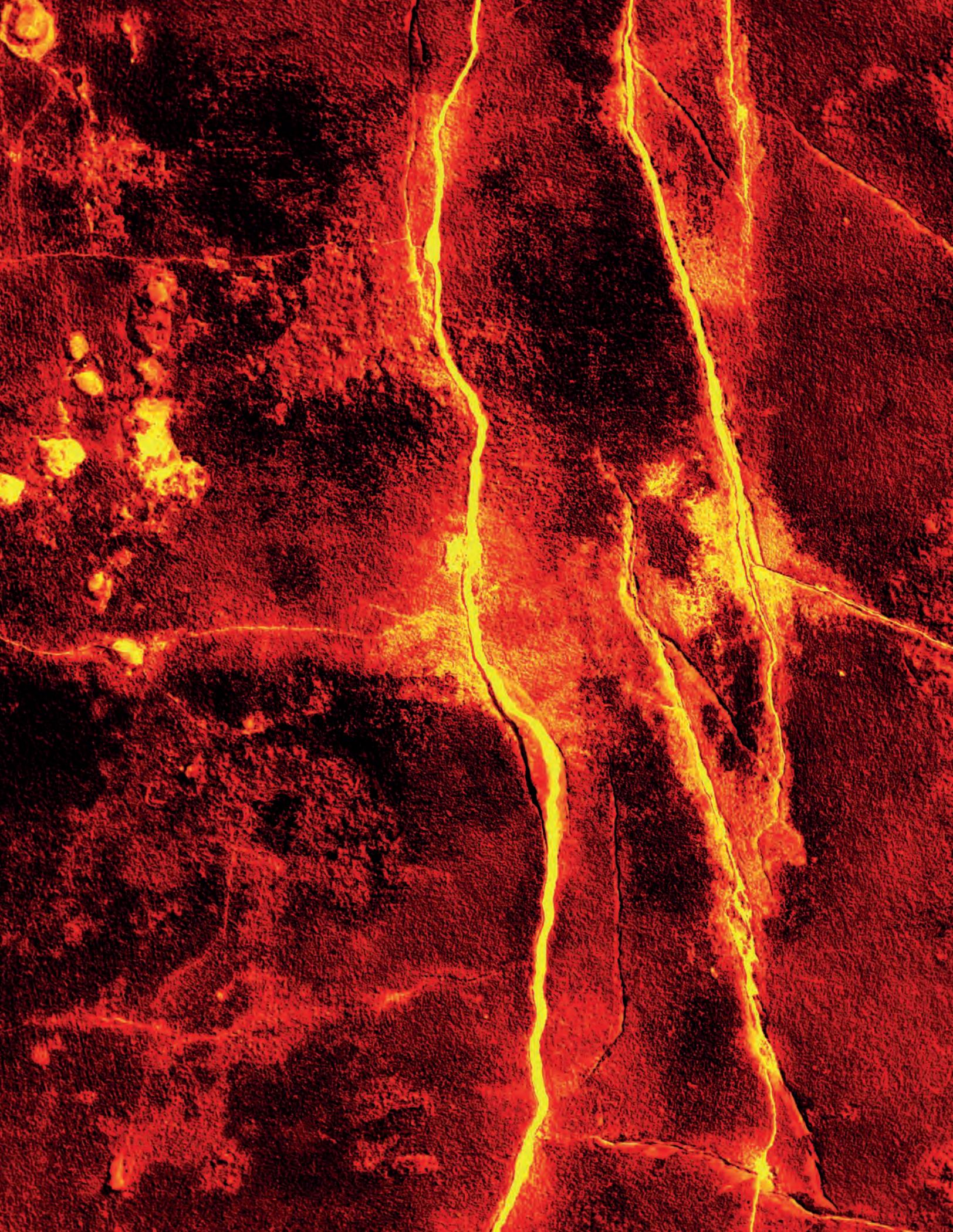
An occasion like this is filled with emotion and expectation. It was important for both sides to be patient and have faith, which allowed us to successfully take this leap. We owe it to our dedicated employees, loyal customers like you and longstanding partner companies more than anything for the fact that the gradual transition passed off without a hitch. We took over full executive management of the company in 2015.

Our philosophy is all about upholding values, building trust among you and our employees, developing the strengths of the company and getting new ideas off the ground. We want to manufacture products that meet the highest quality standards and stand out thanks to their unparalleled quality. It's not without reason that we've made substantial investments in our fleet of machinery and expanded our distribution network.

We've set ourselves ambitious goals for the future. We're going to set new standards in temperature control technology and captivate you with our smart solutions. We want to exceed the current demands and requirements of both the market and you as our customers. That's why we see it as our mission, as a company, to solve problems in a creative yet cost-efficient way. To this end, we want to make sure we're close at hand wherever you are in the world, and support you on the ground with our services and advice. Smart solutions for facilities across the globe, made in Switzerland – we give you this promise as our customers, our employees and our partners. And to ourselves as a family.

Jasmine Koller
Executive Management

Serge Koller
Executive Management



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Experience in delivering the perfect temperature

For you and your line of work, we are all about temperature. We've been manufacturing temperature-control and cooling units for production industries for more than 45 years now. Whether you work in plastics processing, metal die casting, rubber industry, printing or laminating, the chemical or pharmaceutical industry, or food production, we ensure that your processing facilities are kept at the ideal temperature – offering over 60 standard models and enough individual solutions to satisfy any special wishes you may have.

From Switzerland to the world – and vice versa

As the second generation of a family business, we manufacture all our products in Sulgen in the Swiss canton of Thurgau. From here, we manage our national and international activities with 15 subsidiaries, 30 country representatives and 180 experienced employees worldwide. 9,000 temperature-control and cooling units leave our assembly line each year. This only succeeds because we too provide an ideal working environment in our own production facility.

From a name to a brand

Over the past decade, we have transformed ourselves into a household name across the globe. Throughout the world, Tool-Temp stands for smart and leading-edge temperature-control and cooling technology developed and made in Switzerland. In other words, we have blossomed into a brand. Just like our products, we want this to stay on trend. That's why we decided to reposition Tool-Temp brand and radically overhaul our image in 2019.

The result is clear to see – the Tool-Temp brand of today embodies our core values of expertise, quality awareness and an international outlook. We have given the logo and entire typography a look that does justice to the stature of a global brand. Our colour scheme not only reflects all things hot and cold, but also our Swiss origin. Finally, with the new visual concept, we're focusing on what keeps us on the road to success – our customers, our employees, our products and our expertise.

A brand that moves with the times is a brand that moves with you. Because innovations and smart yet affordable solutions are born from the wishes and needs of ambitious customers like you, and from expert makers like us. With the Tool-Temp brand, we'd like to accompany you on your journey for many years to come – hopefully far beyond our generation.



Logo 1973–2018



Logo since 2019

Leading-edge since 1973, unparalleled each and every day

Our work has always centred on the quality and reliability of your Tool-Temp devices. That's why we manufacture the key components ourselves, or at least play a part in their development. This is how we can ensure the quality of the components.

With this philosophy in mind, we produce maintenance-free and service-friendly devices that give you highly precise temperature control. Our commitment to quality also includes logical operation and ease of repair. This allows us to keep your initial and operating costs low.

A lot has changed since our story began in 1973. But one thing is set in stone – you and your wishes are still at the heart of our operations, day in day out. We set the bar ambitiously high – for your satisfaction.



Global presence but always by your side

Over the past two generations, we have built up a dense distribution and service network throughout the world, with many of our branches being opened in the last 14 years. This evolution goes hand in hand with permanent investment in our operating resources.

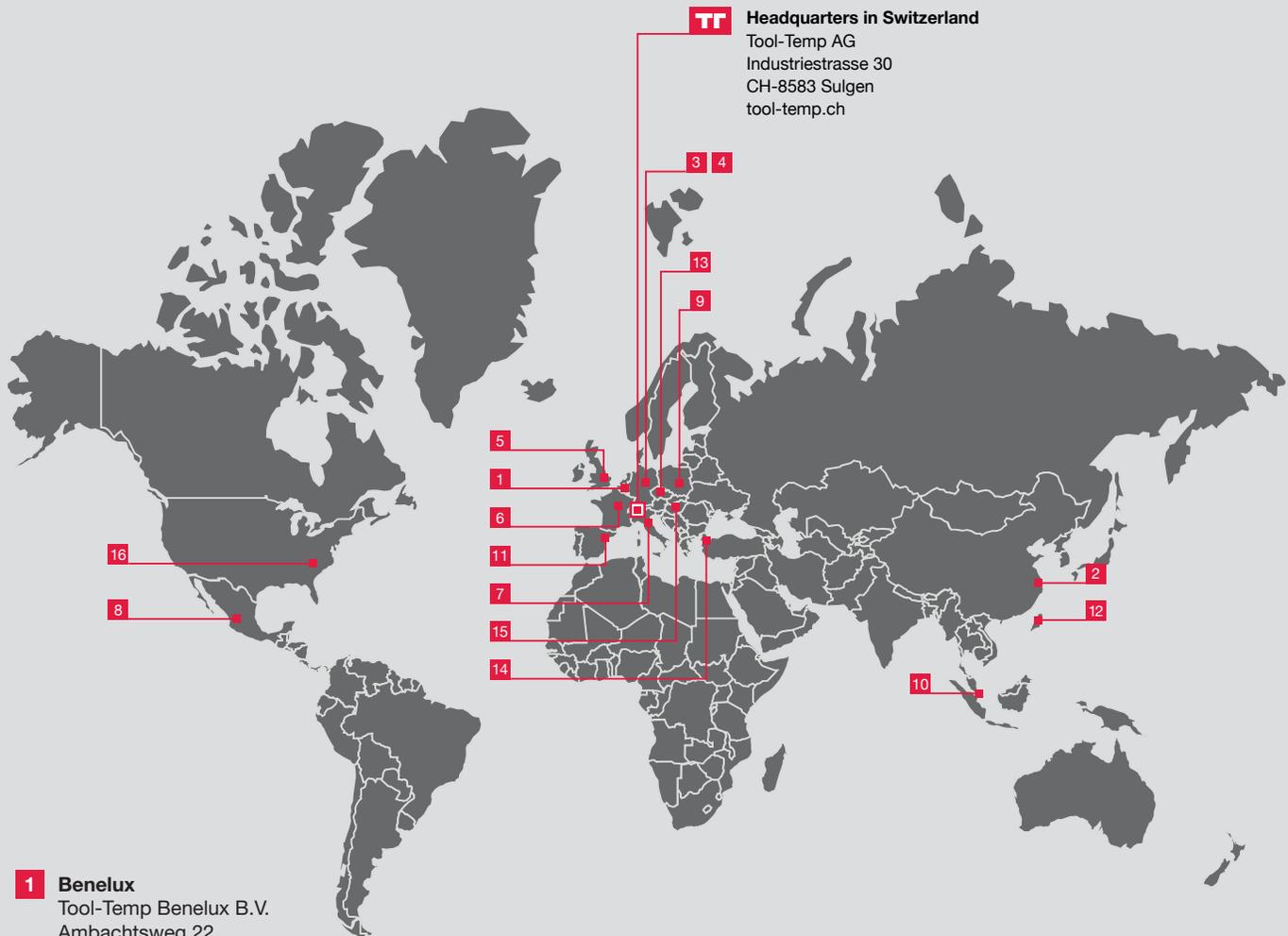
Today, we can assist you with highly qualified professionals who have sound expertise in your Tool-Temp products. With our quick repair, and spare parts service, and well-stocked warehouses, we're on hand to help at any time – no matter what you manufacture, where your production plants are located, what language you speak and when you need us. Technical advice and troubleshooting assistance is also one of our top priorities.

1973 Established

16 Branches

30 Representatives

180 Employees

**TT Headquarters in Switzerland**

Tool-Temp AG
 Industriestrasse 30
 CH-8583 Sulgen
 tool-temp.ch

1 Benelux

Tool-Temp Benelux B.V.
 Ambachtsweg 22
 NL-5683 CD Best
 tool-temp-benelux.nl

2 China

Tool-Temp Shanghai Co. Ltd
 Room 3B06-1, Third Floor
 No. 561 SanMen Road, Baoshan
 CN-200439 Shanghai
 tool-temp.asia

3 Germany

Tool-Temp Deutschland GmbH
 Am Rottland 2
 DE-58540 Meinerzhagen
 tool-temp-info.de

4 Germany

Tool-Temp GmbH Deutschland
 Wiesentalstrasse 34
 DE-88074 Meckenbeuren
 tool-temp.de

5 France

Tool-Temp France SAS
 7, Avenue Christian Doppler
 FR-77700 Serris
 tool-temp.fr

6 Great Britain

Tool-Temp LTD.
 Unit 3 Everitt Close Dennington
 Industrial Estate
 GB-NN8 2QE Wellingborough
 tool-temp.net

7 Italy

Tool-Temp Italia Srl.
 Via Gorini 37
 IT-21023 Besozzo (VA)
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8 Mexico

Mexico S. de R.L. de C.V.
 Carretera Federal 57 México-Querétaro
 Lateral Norte KM 201+100
 Business Park Advance Conin
 Módulo 13 El Colorado
 76246 El Marqués, Querétaro
 tool-temp.com.mx

9 Poland

Tool-Temp POLSKA SP. Z.O.O.
 Zagnańska 149 C
 PL-25 563 Kielce
 tool-temp.pl

10 Singapore

Tool-Temp ASIA PTE LTD
 15 Changi North Street 1, #01-15
 I-Lofts at Changi
 SG-498765 Singapore
 tool-temp.asia

11 Spain

Tool-Temp España S.L.U.
 Passeig Dr. Ferran, 16 Nau 17
 Pol. Ind. Can Alzamora
 ES-8191 Rubi (Barcelona)
 tool-temp.es

12 Taiwan

Tool-Temp Taiwan Co., Ltd
 No. 15, Sec. 1, Wenhua Rd.
 Wuqi Dist.
 TW-435 Taichung City
 tool-temp.asia

13 Czech Republic

Tool-Temp CZ s.r.o.
 Starozuberská 1455
 CZ-756 54 Zubří
 tool-temp.cz

14 Turkey

Tool-Temp Makina Ticaret Anonim Şirketi
 Mustafa Kurtuluş Cad. No. 19/1
 Bakırcılar ve Pirinççiler OSB
 TR-34520 Beylikdüzü/Istanbul
 tool-temp.com.tr

15 Hungary

Tool-Temp Hungária Kft
 Paulini B. u. 11.
 HU-8083 Csákvár
 tool-temp.hu

16 USA

Tool-Temp US Inc.
 7148 Weddington Rd NW STE 180
 US-Concord, NC 28027 USA
 tool-temp.com

On the way to you, from our warehouses

As a Swiss family business, we're deeply rooted in the canton of Thurgau. And as an international niche supplier, we operate across the globe – wherever you need us. We maintain customer relationships that are as long-lasting as our products – in other words generations long. This is important to us in two respects. Firstly, your Tool-Temp devices should perform to an exceptional level for you. Secondly, we're constantly developing them further to ensure they are still going strong in years to come. Part of this involves supplying spare parts from our stocks, even for first-generation equipment. This service is extremely popular as it translates into an immediate benefit with long-lasting effects for you – zero downtime.



Vital for you, all part of the service for us

Breakdowns, malfunctions, disruptions – downtime can be costly for your production process. But it doesn't have to be this way. As part of our servicing offer, we inspect, maintain and repair all equipment models and components, covering all generations. This enables our experienced service team to extend the service life of your facilities and ensure that they're running smoothly.

What we offer at the Sulgen Service Centre

- Condition-based maintenance
- Prevention
- Repair
- Remote service through telephone support
- General overhaul and upgrading

Dedicated to your efficiency

From our initial contact and commissioning through to phasing out a generation of units – you can count on us throughout the entire life cycle of your temperature-control and cooling units. We consider support to include technical support, maintenance and a fast spare parts and replacement service straight from the manufacturer. This ensures that your production is a success over the long term and keeps your operating costs attractively low.

Your success, our commitment

Reliability and efficiency are two important ingredients in your recipe for success. We take this to another level and help make a positive difference – by adding three more variables to the mix with our expertise, passion and top-class advice.

You start planning, we'll find a way

We offer analysis, advice and solutions from a single source. Because our equipment combines technology and value for money in one single solution to meet your requirements. This helps us keep our sales staff at the top of their game in terms of technology and ensures their finger is on the pulse in regards to your industry and facilities. Ultimately, the most sustainable systems are born from a thorough examination of all the framework conditions – and from an open dialogue with you.





Used by you, put through its paces by us

Temperature is our line of work, and our experience has helped us refine what we do in this area. We make use of this expertise for you in our laboratory.

Water analysis: preventing material damages

If you use water for industrial processes such as when operating heating and cooling circuits, it will often be treated chemically. Particularly with pressurised water systems, you need to keep an eye on the water quality. This is because dissolved salts, too much chloride or a high copper content may cause corrosion, calcification or material fatigue.

We carry out water analysis for you in our laboratory to make you aware of any changes at an early stage and allow you to react to them appropriately. This enables you to reduce maintenance work, significantly cut costs in that regard and keep your equipment efficient in the long term.

Initial temperature analyses: guaranteeing process security

In our in-house primary laboratory, we conduct high-precision testing of thermodynamic temperatures for controlled systems in accordance with the ITS-90 standard. If requested, we can review the accuracy of the control units for all generations. Based on the results from our initial measurements, you can guarantee flawless production processes.

Committed with hard work an sweat

In our welding workshop, we use various welding techniques, depending on the specific application and requirement. Here our highly trained welders have a state-of-the-art welding robot and orbital welding equipment at their disposal. With the help of these machines and the extensive experience of our experts, we can produce complex, laborious welded structures economically and precisely in high volumes.



Welder Liliana Alves Rodrigues keeps a cool head, even though her job can get hot at times.



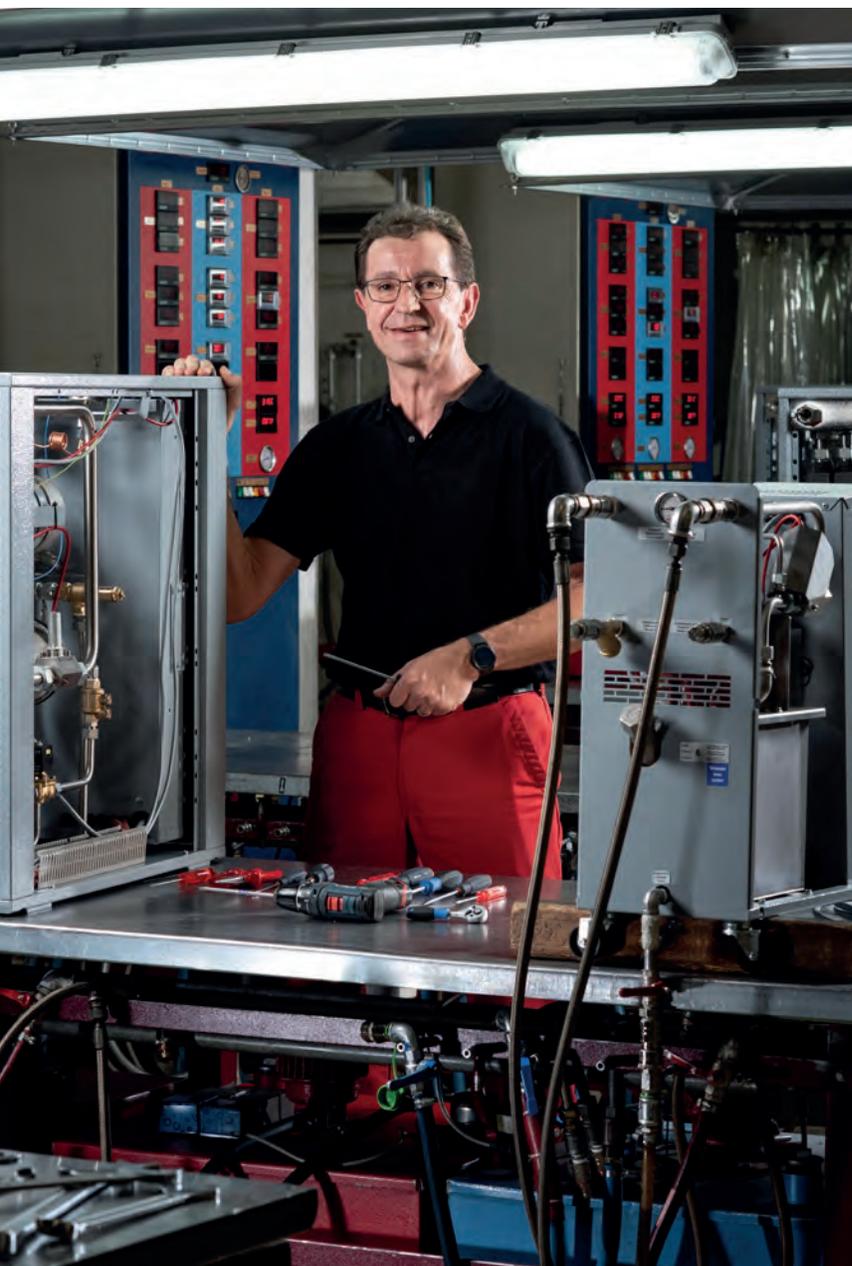
Mirela Sinanovic ensures that everything runs smoothly in terms of mechanics.

Guided by experience, executed by technology

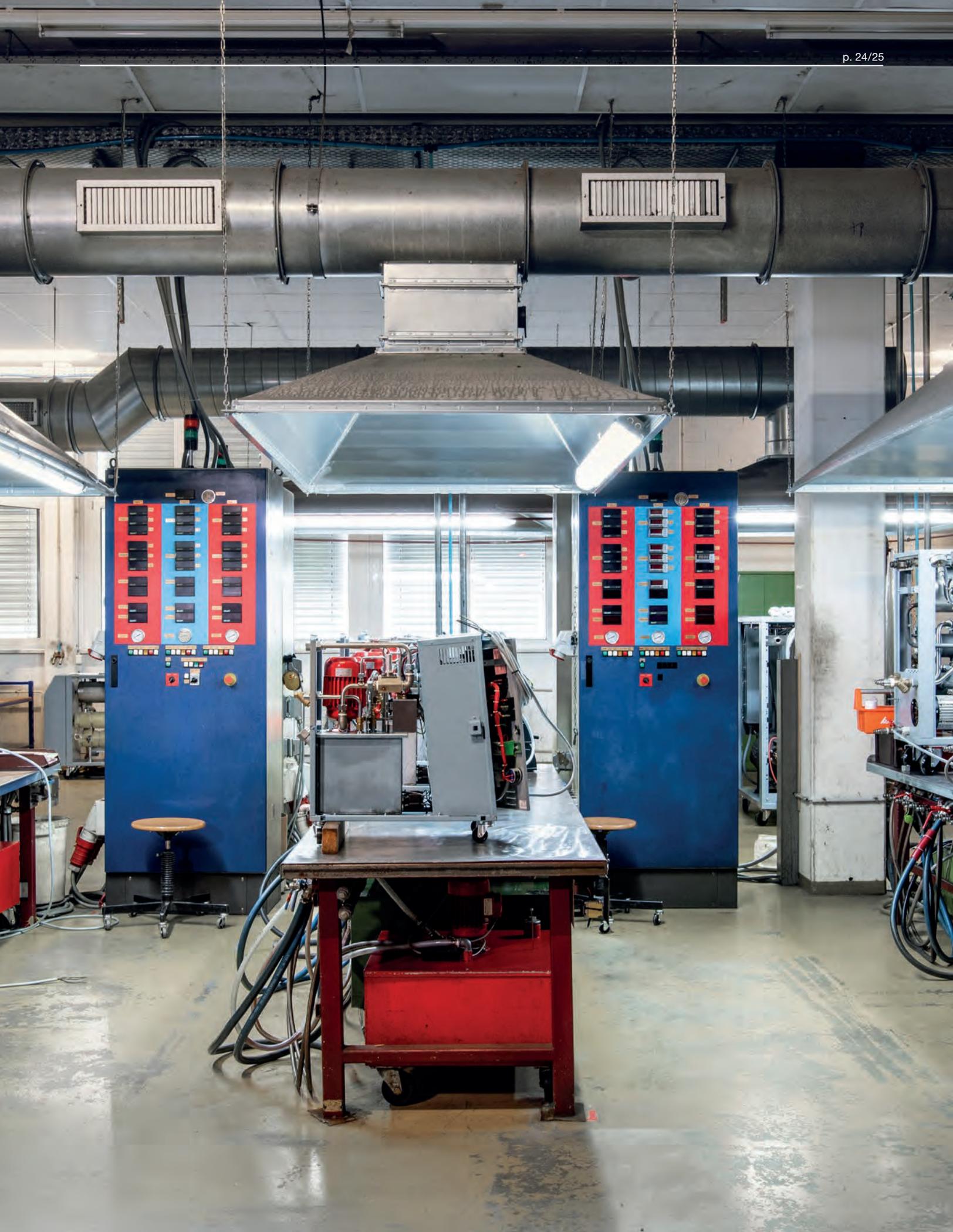
The names of our facilities sound as contemporary as our fleet of machines – plasma cutter, welding robot, fully automatic bending machine, orbital welding equipment. This is where we produce components such as heat exchangers, tanks, rolls, floats and complete pipework in our own production facility. This comprehensive depth of production allows us to optimise and continuously monitor the quality of our products. What's more, we remain as flexible as possible to cater to your wishes and concerns and can reproduce components even years after your initial order. And in the end, our production is still cost-effective as we have automated many aspects.

Put through its paces with passion and precision

We don't give the final green light to your Tool-Temp equipment until it has passed a test run that spans several hours. This involves testing all the functions and ramping the machines up to their maximum temperature. This is done before applying the insulation so that we can detect any leaks. The tests are carried out at the voltage and frequency you ordered, i.e. under real conditions, so to speak. This is the only way we can guarantee that your Tool-Temp device will function perfectly right from the get-go.



Alex Bieri, the Quality Manager, exposes your temperature-control unit to real conditions in a test run.



Layers of excellence

As soon as we receive the sheet metal parts, we apply the appropriate powder coating to them in the paint shop. We not only use the standard paint, but also special colours and a high-temperature paint for pipes, tanks and rolls. The powder coating is applied by a fully automatic system. More than 6,000 parts are processed here every month. Thanks to this system, we can react flexibly to your wishes and specific applications, guarantee consistent quality of the coating and work to an extremely efficient level.



Our employee from the paint shop, Vethanesan Arokiyarajah, oversees the automatic powder coating process.



For assembler Jaroslaw Czarnocki, only the best is good enough.

Perfectly assembled, perfectly thought out

Even with high volumes, experienced specialists add that personal touch. They expertly assemble all components during installation. Special devices are directly incorporated into standard production runs so they're quickly available to you. In terms of assembly, we work on the principle of continuous improvement. This means that we constantly scrutinise our own processes and are always increasing our output rate. It goes without saying that we use modern work equipment and special tools – ergonomics are just as important to us as efficiency and quality.

**As diverse as your line
of work, are the solutions
we offer**

Temperature control and cooling is always an issue when a production plant works with liquids that are pumped through an external consumer. In this case, the consumer needs to be at exactly the right temperature. This is why you'll find our temperature control-units in a wide variety of industries.



Plastics industry



Die casting



Pharmaceutical/chemical industry



Rubber industry



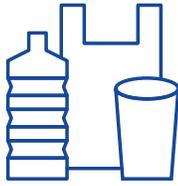
Food industry



Wood industry

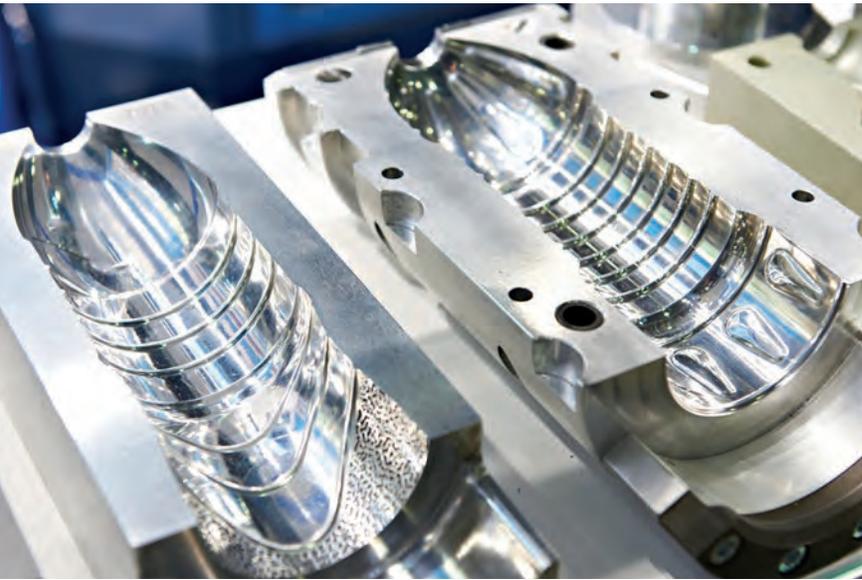


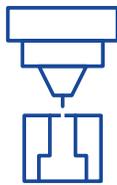
Printing/laminating/textile industry



Plastics industry

Whether in the injection molding process, in thermoforming, for sheet products, in pressing or in extrusion – the costs for the tool usually make up a major part of the investment and have a significant influence on the profitability of your production. In most processes in the plastics industry, constant mold temperature control or zone temperature control play a key role. This is because they increase the quality of the product and ensure consistent dimensional accuracy. Your manufacturing processes also become more stable, which has a positive impact on the productivity of your systems.





Die casting

In the manufacture of die cast parts from aluminium, zinc and magnesium controlling the thermal processes in the mold is crucial when it comes to the efficiency of your processing. A stable heat balance and reduction of the peak temperature on the mold surface prevent premature damage to the die cast, e.g. from tension cracks, and significantly increase its service life. A high reject rate in die casting is usually due an inadequate die temperature control.



Pharmaceutical/chemical industry

In the pharmaceutical/chemical industry, you're tasked with the application-optimised temperature control of plant components, reactors, double-walled vessels, extruders and similarly complex facilities. These tasks are often solved with costly special designs such as steam systems. But it doesn't have to be this way. Our solutions for the pharmaceutical and chemical industry can be adapted to your specific area of application. Devices with explosion protection, compliance with exceptional control accuracies, fast temperature changes or ramp control are included in our standard programming.



Rubber industry

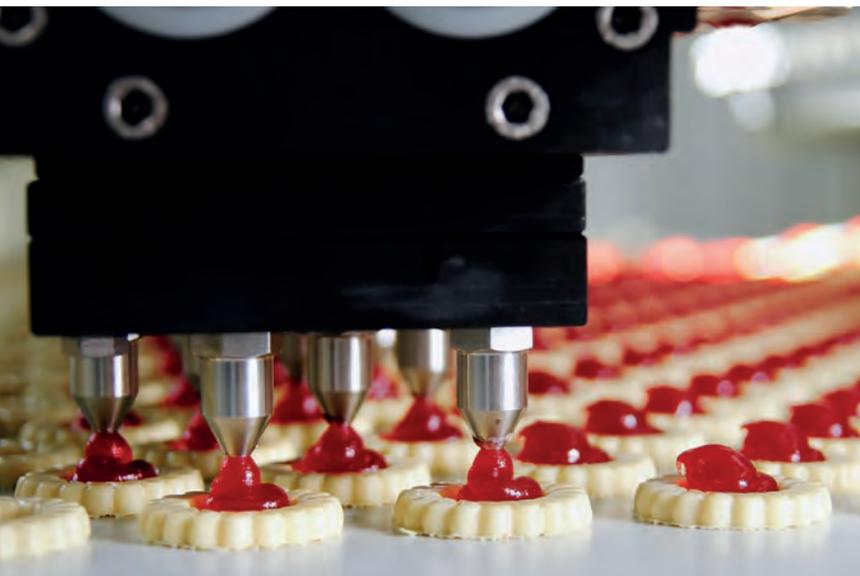
There are several processes used in the manufacture of rubber products. Some of the most common techniques used for rubber processing are extrusion, immersion in latex, molding and calendering. We offer you a wide range of temperature control systems that meet the manifold requirements of temperature ranges, volume flows and system integration and are adapted to the various process methods. The reliability of raw material quality, exact weight proportions of the various ingredients, a controlled mixing procedure and optimised forming processes are essential requirements for the production of components made of high-performance elastomer materials. Within this complex environment, we meet all your temperature control requirements – either in the form of standalone solutions, or fully integrated into your system.

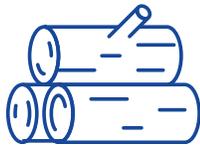




Food industry

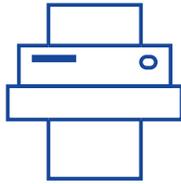
In food production, you face similar challenges as in the pharmaceutical and chemical industries. Added to this are the properties of the food itself, such as the crystallisation of chocolate. When it comes to these processes, temperature control determines the success or failure of your production. Having said that, you don't necessarily have to resort to expensive special solutions. Our standard applications can be adapted to your production requirements, because functions such as exceptional control accuracy, reacting to immediately changing temperature gradients or ramp control are built in standard.





Wood industry

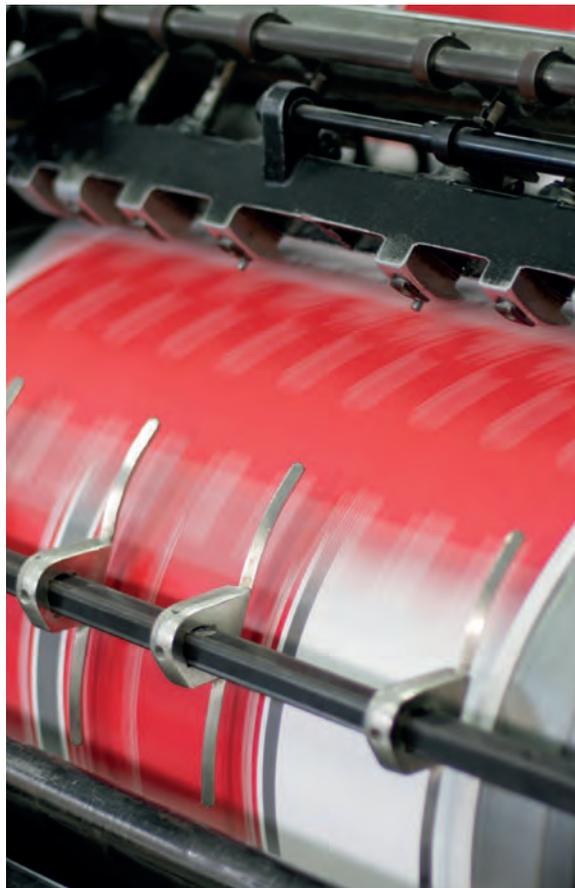
As part of the industrial processing of wood and wood-like materials into fibre and wood panels, water and oil temperature-control units are used to control the temperature of calibration zones, extrusion lines or laboratory facilities. Temperature control has a vital influence on the efficiency of the processing and the quality of the product in this industry too. With a smart temperature control solution, you can prevent your mold from overheating and your products from having impurities.



Printing/laminating industry/textile

Hollow or double-walled rollers are used in the printing industry and for laminating as a finishing process. Achieving first class results with these processes requires perfectly handled temperature control measures – which means high performance and failure free temperature control units. Constant temperature control is also a vital factor for success in this industry. You might be interested to know that our temperature control units can be integrated into your systems via a digital interface at the control end. In the event of a printing plate change, the corresponding temperature control unit settings are automatically loaded.

In the textile industry, too, fabric meshes are bonded to other materials using a roller application. Due to the many different textile fibres involved in this process, it calls for meticulous temperature control, as this is the only way the desired function of the textile laminate can be achieved through gluing or fusing. Our temperature control units meet these requirements to the letter.



One solution, multiple benefits

State-of-the-art temperature-control units control temperatures to the tenth of a degree and constantly monitor circulation of the medium concerned. This gives you several benefits.

- It boosts your process stability.
- You can enjoy round-the-clock control of your production process and constantly improve them.
- You can optimise the cycle time and thus productivity as a whole.
- The constant mold temperature control ensures consistent dimensional accuracy and thus the quality of your products, enables optimum surface quality and avoids time-consuming corrections down the line.
- You can increase your quantities and reduce your overall production costs.

Greater performance, added value

We develop and manufacture our temperature-control units exclusively in Switzerland. As early as the development stage, we make sure device components are of high quality. All parts that come into contact with water are made of stainless steel or bronze. We deliberately avoid flexible connections and use robust piping. Our devices also contain an integrated flow measurement feature, which constantly monitors the circulation of the medium.

The majority of our temperature-control units comprise self-manufactured components. Key components such as pumps, heat exchangers, flow meters, special switches and relays produced in-house at our factory in Sulgen. The quality of our equipment and components is guaranteed thanks to our strict quality control. And if you need a solution that's slightly out of the ordinary, rest assured that we'll be there for you.

Our products

- 01 Universal water and oil temperature control units up to 90°C/150°C**
- 02 Water temperature control units up to 90°C**
- 03 Pressurised water temperature control units up to 160°C**
- 04 Oil temperature control units up to 360°C**
- 05 Cooling units from -25°C up to +40°C**



01 Universal water and oil temperature control units up to 90°C/150°C

Product	Unit	TT-180	TT-181	TT-188	TT-168 E H
Temperature range					
Water	°C	90	90	90	90
Oil	°C	150	150	150	150
Heat transfer medium					
		water/oil	water/oil	water/oil	water/oil
Filling amount max.	l	7	7	7	20
Heating capacity					
Water	kW	9	9	9	12
Oil	kW	3	3	3	6
Cooling system indirect					
Tubular heat exchanger					
	kW	35	35	35	45
at flow temperature	°C	90	90	90	90
Pump system see diagram					
Typ E: 60 l/min; max. 4.0 bar; motor 0.75 kW		●	●	●	●
Typ H: 60 l/min; max. 7.0 bar; motor 1.50 kW					●
Suction capacity vacuum	mH2O	-	8	8	8
Controller MP-888					
Temperature sensor					FeKo Type J
Connections					
Medium		1/2" BS	1/2" BS	1/2" BS	1/2" BS
Cooling water		3/8" BS	3/8" BS	3/8" BS	3/8" BS
Dimensions incl. castors L×W×H	mm	670×260×650	670×260×650	670×260×650	710×325×785
Weight empty approx.	kg	55	55	55	67
Colour silver grey RAL 7001					

Functions					
Flow control		-	-	●	●
Leakstopper device		-	●	●	●
Mold drain		-	●	●	●
Temperature regulation at the consumer		-	-	-	●
Time-limited water refill		-	-	-	●
Interface controller		-	-	○	○
Automatic refill		●	●	●	●
Level control		●	●	●	●
Visual fault indications		●	●	●	●
Acoustic warning		●	●	●	●
Pressure regulation		-	-	-	-

●	standard	○	optional	-	not possible
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02 Water temperature control units up to 90°C

Product	Unit	TT-170 L	TT-168 E/A H/A	TT168 E/PHE H/PHE TT168 E/A PHE H/A PHE	TT-118 K
Temperature range	°C	90	90	90	90
Heat transfer medium		water	water	water	water
Filling amount max.	l	5	20	20	40
Heating capacity	kW	3	18	12 18	18 27 36 45
Cooling system		indirect	indirect	indirect	indirect
tubular heat exchanger	kW	30	45	50	200
Plate heat exchanger	kW			130	400
Direct	kW				
at flow temperature	°C	90	90	90	90
Pump system see diagram					
Typ L: 19 l/min; max. 2.9 bar; motor 0.27 kW		●			
Typ E: 60 l/min; max. 4.0 bar; motor 0.75 kW			●	●	
Typ H: 60 l/min; max. 7.0 bar; motor 1.50 kW			●	●	
Typ K: 200 l/min; max. 4.3 bar; motor 2.2 kW					●
Typ W: 250–350 l/min; max. 4.5 bar; motor 4.0 kW					
Typ V: 580 l/min; max. 4.1 bar; motor 7.5 kW					
Suction capacity vacuum	mH2O	-	8	8	8
Controller		MP-888			
Temperature sensor		FeKo Type J			
Connections					
Medium		3/8" BS	1/2" BS	3/4" BS	1" BS
Cooling water		3/8" BS	3/8" BS	1" BS	1" BS
Compressed air		-		-	-
Dimensions incl. castors LxWxH	mm	640x200x490	710x325x785	980x365x750	1240x480x1400
Weight empty approx.	kg	36	67	90	180
Colour		silver grey RAL 7001			

Functions					
Flow control		-	●	●	●
Leakstopper device		-	●	●	●
Mold drain		-	●	●	-
Temperature regulation at the consumer		-	●	●	●
Time-limited water refill		-	●	●	●
Interface controller		-	○	○	○
Automatic refill		●	●	●	●
Level control		●	●	●	●
Visual fault indications		●	●	●	●
Acoustic warning		●	●	●	●
Pressure regulation		-	-	-	-

●	standard	○	optional	-	not possible
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TT-1548 E	TT-108 E	TT-108 K	TT-1500 W	TT-1368 W	TT-1368 V
90	90	90	90	90	90
water	water	water	water	water	water
20	20	40	75	70/100	100
12	6 12 18	18 27 36 45	48	24 48 72 96	72 96 144
air cooled	direct	direct	direct	indirect	indirect
5				400	400
	100	260	285		
70	90	90	80	70	80
●	●				
		●			
			●	●	
					●
8	8	8	-	-	-
MP-888 FeKo Type J					
3/4" BS	1/2" BS	1" BS	flange DN32/PN16	flange DN32/PN16	flange DN32/PN16
	Inlet 3/8" BS Outlet 1" BS	Inlet 1/2" BS Outlet 1 1/2" BS	1" BS	1 1/2" BS	1 1/2" BS
-	-	-	1/4" BS		-
870×360×915	710×325×785	1250×480×1400	1600×800×1550	1710×790×1540/ 2150×1300×1950	2150×130×1950
95	67	160	430	520/850	915
silver grey RAL 7001					

●	●	●	●	●	●
●	●	●	-	-	-
●	●	●	●	-	-
●	●	●	-	-	-
-	-	-	-	-	-
○	○	○	○	○	○
-	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
-	-	-	○	○	○

03 Pressurised water temperature control units up to 160°C

Product	Unit	TT-1398 N	TT-142 N	TT-137 N	TT-137 B/BP
Temperature range	°C	140	140	140	160
Heat transfer medium		water	water	water	water
Heating capacity	kW	6	12	12	12
Cooling system		indirect	indirect	indirect + direct	indirect + direct
Tubular heat exchanger	kW	20 @ 140°C	60 @ 140°C	65 @ 140°C	90 @ 160°C
Plate heat exchanger	kW				
Direct	kW			60 @ 50°C	60 @ 50°C
Pump system see diagram					
Typ N: 110 l/min; max. 5.0 bar; motor 1.8 kW		●	●	●	
Typ B: 75 l/min; max. 6.5 bar; motor 1.8 kW					●
Typ P: 36 l/min; max. 5.0 bar; motor 1.1 kW					
Typ W: 250 l/min; max. 4.5 bar; motor 4.0 kW					
with booster pump		-	-	-	●
Suction capacity vacuum	mH2O	-	8	8	8
Controller		MP-888			
Temperature sensor		FeKo Type J			
Connections					
Medium		1/2" BS	3/4" BS	3/4" BS	3/4" BS
Cooling water		3/8" BS	3/8" BS	3/8" BS	3/8" BS
Compressed air		-	-	1/4" BS	1/4" BS
Dimensions incl. castors L×W×H	mm	680×305×760	870×360×915	870×360×915	870×360×915
Weight empty approx.	kg	70	107	120	120
Colour		silver grey RAL 7001			

Functions					
Flow control		●	●	●	●
Leakstopper device		-	-	●	●
Pressure relief		●	●	●	●
Mold drain by compressed air		-	-	●	●
Temperature regulation at the consumer		-	-	●	●
Interface controller		○	○	○	○
Automatic refill		●	●	●	●
Level control		●	●	●	●
Visual fault indications		●	●	●	●
Acoustic warning		●	●	●	●

●	standard	○	optional	-	not possible
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TT-138 N	TT138 B/BP	TT-DW160	TT-1358 W
140	160	160	130
water	water	water	water
18 24	18 24	9 18	24 48
indirect + direct	indirect + direct	indirect	indirect
85 @ 160°C	85 @ 160°C		180 @ 130°C
		40 @ 150°C	400 @ 70°C
60 @ 60°C	60 @ 60°C		
●			
	●		
		●	
			●
-	●	●	-
8	8	-	-
MP-888 FeKo Type J			
3/4" BS	3/4" BS	1/2" BS	flange DN32
1" BS	1" BS	1/2" BS	1 1/2" BS
1/4" BS	1/4" BS	-	-
1240×480×1400	1240×480×1400	750×180×550/750×285×550	1710×790×1540
180	180	55/67	530
silver grey RAL 7001			

●	●	●	●
●	●	-	-
●	●	●	●
●	●	-	-
●	●	-	-
○	○	○	○
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●

04 Oil temperature control units up to 360°C

Product	Unit	TT-248	TT-288	TT-OIL300	TT-388	TT-388	TT-388
Temperature range	°C	200	250	300	360	360	360
Heat transfer medium		oil	oil	oil	oil	oil	oil
Filling amount	l	8	9	9	15/21	27	70
Expansion volume	l	6	11	17	16	36	36
Heating capacity	kW	8	8	12	16 24	32	48
Cooling system	indirect						
Tubular heat exchanger	kW	20	60	60	90	160	230
Plate heat exchanger	kW						
at flow temperature	°C	200	250	290	360	360	360
Pump							
Motor	kW	1.8	1.8	1.8	1.8	1.8	1.8
Pump system see diagram							
Typ Z: axial face sealed 100 l/min; max. 5.5 bar		●	●	●	●	●	●
Typ A: magnetic drive 100 l/min; max. 5.5 bar		-	○	○	○	○	○
Typ X: 260 l/min; max. 4.0 bar							
Typ Y: 200–500 l/min; max. 4.0 bar							
Suction capacity vacuum	mH2O	8	8	8	8	8	8
Controller		MP-888	MP-888	MP-888	MP-888	MP-888	MP-888
Temperature sensor		FeKo Type J	FeKo Type J	FeKo Type J	FeKo Type J	FeKo Type J	FeKo Type J
Connections							
Medium		3/4" BS	3/4" BS	3/4" BS	3/4" BS	3/4" BS	1" BS
Cooling water inlet		1/2" BS	1" BS	3/4" BS	1" BS	1" BS	1" BS
Cooling water outlet		1/2" BS	1" BS	3/4" BS	1" BS	1" BS	1" BS
Water-glycol		-	-	-	-	-	-
Compressed air min.	bar	-	-	-	-	-	-
Dimensions incl. castors L×W×H	mm	880×360×920	1130×390×1070	1130×390×995	1240×480×1400	1240×480×1500	1240×720×1500
Weight empty approx.	kg	120	150	150	205/215	235	335
Colour	silver grey RAL 7001						

Functions							
Flow control		●	●	●	●	●	●
Leakstopper device		●	●	●	●	●	-
Mold drain		●	●	●	●	●	-
Temperature regulation at the consumer		●	●	●	●	●	-
Interface controller		-	○	○	○	○	○
Level control		●	●	●	●	●	●
Visual fault indications		●	●	●	●	●	●
Acoustic warning		●	●	●	●	●	●
Pressure regulation		-	-	-	-	-	-
Double circuit version		-	●	-	●	-	-

●	standard	○	optional	-	not possible
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TT-390	TT-508 X	TT-510 X	TT-708 Y	TT-407 Z	TT-409 Z	TT-410 X	TT-608 Z
360	300	300	300	240	240	240	300
oil	oil	oil	oil	oil	oil	oil	oil
15/21	75	125	100 200 200	11	60	75	50 + 50
16	75	100	100	16	36	75	75
16 24	48	96	72 120 144	8	24	48	24 48
indirect							
90	480	480	600	67	93	150	
				143	150	175	93
360	see diagram	see diagram	see diagram	230 80	230 80	230 80	90
1.8	4	4	7.5	1.8	1.8	4	1.8
●				●	●		●
○							
	●	●					
			●			●	
8	-	-					
MP-888	MP-888	MP-888	MP-888	MP-988	MP-988	MP-988	MP-888
FeKo Type J	FeKo Type J	FeKo Type J	FeKo Type J	Pt-100	Pt-100	Pt-100	FeKo Type J
3/4" BS	flange DN32	flange DN32	flange DN50	3/4" BS	1" BS	flange DN32/PN16	3/4" BS
1" BS	1 1/2" BS	1 1/2" BS	1 1/2" BS	3/4" BS	3/4" BS	1 1/2" BS	3/4" BS
1" BS	1 1/2" BS	1 1/2" BS	1 1/2" BS				
				3/4" BS	3/4" BS	1 1/2" BS	-
-	-	-	-	5	5	5	3
1240x480x1400	1710x790x1540	2150x1300x1950	2150x1300x1950	1140x480x1400	1380x720x1500	1710x790x1540	1710x790x1540
205/215	520	845	110 /127/1270	220	340	590	540
silver grey RAL 7001							

●	●	●	●	●	●	●	●
●	-	-	-	-	-	-	-
●	-	-	-	-	-	-	-
●	-	-	-	●	●	●	-
○	○	○	○	○	○	○	-
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
-	○	○	●	●	●	●	-
●	-	-	-	-	-	-	-

05 Cooling units from -25°C up to +40°C

Product	Unit	TT-5'500 E	TT-14'500 H	TT-28'500	TT-29'800 WK
Temperature range	°C	+10°C bis +40°C	+10°C bis +40°C	+10°C bis +40°C	-25°C bis +25°C
Ambient temperatures	°C	+45°C	+45°C	+45°C	+45°C
Refrigerating agent		R-134a	R-134a	R-134a	R-404a
Heating capacity	kW	5	6	9	-
Content water tank	l	25	50	150	170
Cooling capacity nominal	kW	5	14	28	54
Pump system		E	H	CR5-7	CR5-7
Motor	kW	0.75	1.5	1.1	1.5
Pump pressure max.	bar	4.5	8.5	5	4.8
Flow capacity max.	l/min.	75	75	145	140
Flow capacity internal max.	l/min.				
Compressor	hermetically sealed				
Condenser					
Air-cooled		●	●	●	
Water-cooled		-	○	○	●
Air volume	m³/h	1'700	2'850	5'700	-
Power consumption heating/cooling model	kW	6/4	8/5	11.3/6	-/15
Controller		MP-888	MP-888	MP-888	MP-888
Temperature sensor		Pt-100	Pt-100	Pt-100	Pt-100
Connections					
Flow		3/4" BS	3/4" BS	1" BS	1" BS
Return flow		3/4" BS	3/4" BS	1" BS	1" BS
Automatic water refill		3/8" BS	3/8" BS	3/8" BS	3/8" BS
Drain			3/8" BS	1/2" BS	1/2" BS
Cooling water in only if water-cooled			3/4" BS	3/4" BS	1" BS
Cooling water out only if water-cooled			3/4" BS	1" BS	1" BS
Dimensions incl. castors LxWxH	mm	950x365x740	950x660x1300	1100x790x1660	1100x790x1660
Weight empty approx.	kg	115	190	330	390
Colour	silver grey RAL 7001				

Functions					
Flow control		●	●	●	●
Interface controller		○	○	○	○
Version without tank		-	○	○	-

●	standard	○	optional	-	not possible
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TT-54'500	TT-108'000	TT-216'000	TT-300'000
+10°C bis +40°C	+10°C bis +40°C	+10°C bis +40°C	+10°C bis +15°C
+45°C	+45°C	+45°C	-
R-134a	R-134a	R-134a	-
12	-	-	-
250	360	600	-
54	108	216	300
CR10-6	CR10-6	CR15-4	CR32-2
2.2	2.2	4	3
6.2	6/4	5/3.5	
250	100/200	200/400	600
	200	500	-
hermetically sealed			-
●	●	●	●
○	○	○	
8'000	2×8'000	4×8'000	4×8'000
18/14	-/35	-/66	6.8
Mp-888	Mp-888	MP-888	○
Pt-100	Pt-100	Pt-100	Pt-100
1 1/4" BS	1 1/2" BS	2" BS	3" BS
1 1/2" BS	2" BS	2" BS	3" BS
3/8" BS	3/8" BS	3/8" BS	-
1" BS	1" BS	1" BS	1" BS
1" BS	1" BS	2" BS	-
1" BS	1" BS	2" BS	-
1350×1050×1950	2000×1300×2090	3350×1300×2090	3350×1900×2090
585	1160	2040	1400
silver grey RAL 7001			

●	-	-	-
○	○	○	○
○	○	○	-





Robinair Commercial Compressors
Model: MTZ 100 WAVE
Serial No: 641007772
MADE IN FRANCE
990-402V 3-50 Hz
400V 3-50 Hz
UR 13PA 36A MAX
THERMALLY PROTECTED
P.E.D. LP side HP side
Marking 22.6 bar 24.4 bar
PS 50 °C 68 °C
TS max 50 °C -35 °C
TS min -35 °C 1.2 l
Volume 37 l
Lubricant P.O.E. 160 P2
Mlancuop
WORKING COMPRESSORS
CAUTION
WARNING: This product is approved only for use in accordance with the instructions provided in the user manual. Do not use for purposes other than those intended. For details, refer to the user manual or contact the manufacturer.
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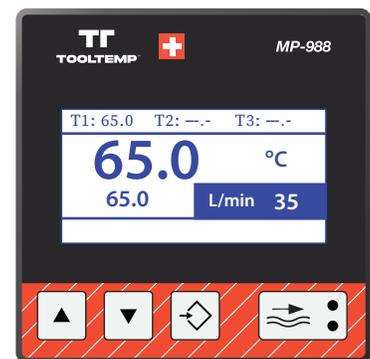
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Standard controller MP-888



Digital controller MP-988



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