



controlled energy flow

Interview with Ralf Schwarzkopf,
CEO of Hotset GmbH

hotset is presenting itself with a new logo and a new appearance. Is this a visible expression of a fundamental transition within the company?

Ralf Schwarzkopf: I would say that this is a part of a consistent development. Over the past years, hotset has increasingly developed from being a manufacturer for electrical heating elements to become a provider of complete thermodynamic systems and an engineering partner for sophisticated, individual customer projects.

What are the reasons for these changes?

Ralf Schwarzkopf: The increased presence of our company in important international markets, our experience gathered from intensive collaboration with many new customers and with partners in our technology networks.

And this has changed hotset's self-perception?

Ralf Schwarzkopf: That is correct. Over many decades, the corporate brand »hotset« has primarily stood for hot runner technology, and for the production of industrial heating elements – predominantly for plastics processing. However, for a long time now, this image has ceased to correspond with reality. Over the past years, we have not only expanded geographically, but we have also developed beyond the boundaries of plastics technology. And in the course of this, our systems expertise and our engineering competencies have been significantly extended.



To what effect?

Ralf Schwarzkopf: For some time now, we have been realizing interdisciplinary and strongly internationally-orientated customized thermodynamic problem solutions in the form of complete systems. And in the project business, we provide our customers with individual solutions which can also be of great complexity. As a result, we cover all services: From actual state analyses via engineering and prototype construction, right up to serial production. Both of these business areas are developing extremely dynamically.

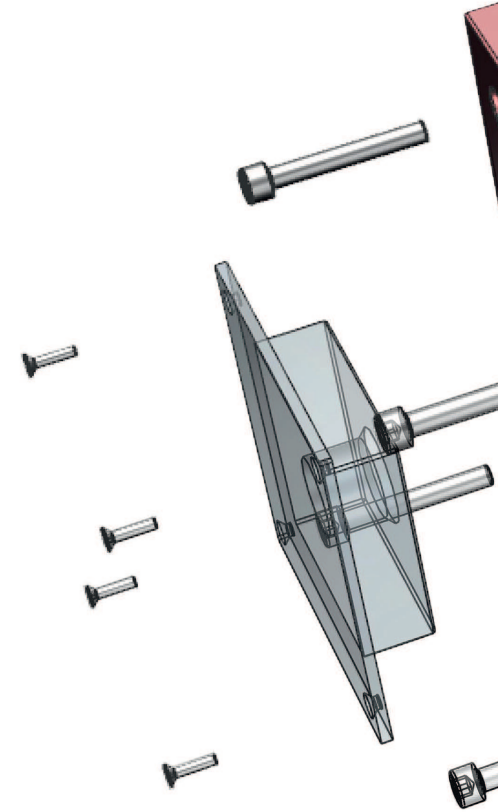
Will hotset still continue to be a component manufacturer?

Ralf Schwarzkopf: Of course, we are and continue to be one of the leading manufacturers of heating elements, thermal sensors and control technology. These products, in their endless variations, play an essential role both in our project business and in customer-specific individual solutions. As an experienced manufacturer, we have all the options to provide our heating and cooling system customers with great savings, to optimize production processes and to improve the quality of their products. During this process, we also focus on the environment – for example, through modern control technology. We deliver the right temperature at the right time to the right place.

Therefore you can offer many attractive new benefits for the customer?

Ralf Schwarzkopf: Exactly! We have defined a new claim within the scope of our development process: »controlled energy flow«. This accurately formulates our aspiration to develop, manufacture and provide the best thermodynamic solutions for the processes of our customers. Furthermore, it also reflects our ability to process completely new ideas and projects on-schedule in an intercultural team around the globe. What flows between the customer and ourselves is »controlled energy«.

Components Systems Projects



Components

We provide our customers with an extensive portfolio of technically mature products from the field of heating elements, thermal sensors and control technology. Since 1973, we have manufactured heating elements in Germany, and since 2002, we have been continuously developing our production location in Malta. The manufactured products are usually individually-tailored to the customer – in extremely small unit numbers or in large quantities, at an attractive price. Our core process is organized highly efficiently using our own software, and we provide customer storage in all significant global markets. We work with our own specialists in order to select the best product for our customers.

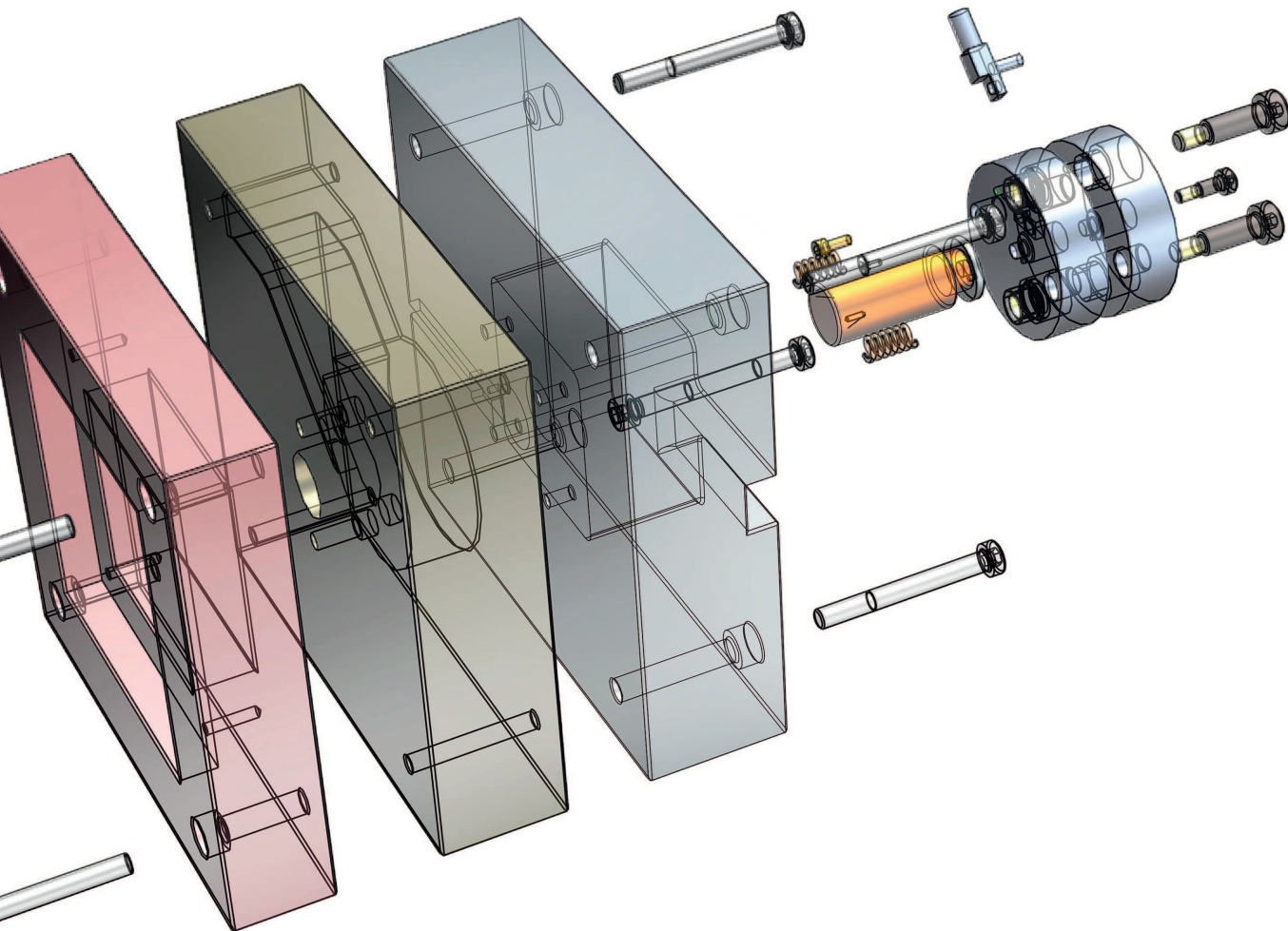
Systems

The whole is more than the sum of its constituent parts. This applies in particular to thermodynamics. The right heating element requires the appropriate thermal sensor and a suitable control unit. Is protective insulation needed? The matching plugs? A box around it? What about active cooling? If our customers pose these questions, then they need not only a component from us, but a whole, suitable system.

Projects

Industrie 4.0 (Fourth industrial revolution initiative of the German Government), high-tech materials, regenerative energies – we live out our advancements. New thinking, new processes, new products – all this drives us to find new solutions which pave innovative ways for our customers to a successful future. In the course of this, we accompany them with sound technological expertise and a solid basis of many years of experience in almost all production disciplines. And we always keep an eye on the bigger picture, because wearing blinders is obsolete; today 3D glasses and augmented reality characterize current perspectives.

We analyze the thermal processes of our customers and are ideally able to develop a completely new solution. We not only wish to become a little quicker or hotter, but rather we have the aspiration of »the other« solution which enables significantly greater efficiency and quality. Our focus here is not only on the technical aspects of the task, but also on the human factors in the project phase. Using agile project methods, we provide interconnected, fast and highly-effective cooperation.



So that you can see what we are talking about

A little technology has never hurt anyone. Here are several current examples for innovative product development from the »Complete systems« and »Customer-specific solutions« divisions.

Example 1:

The challenge: Significant quality improvements for thermal forming.

The solution: hotset develops application-specific heating plates for the processing of packaging film, which is used as a replacement for the previous usual standard products.

The result: A pronounced and homogenous temperature distribution on the films in a dynamic process, and therefore a significant quality improvement with the products manufactured through thermal forming. This concept can also be transferred to hot presses or used to seal packaging films.

Example 2:

The challenge: Optimization of the process procedure with simultaneous improvement of the product quality.

The solution: The patented hotcast ZD sprue nozzle for zinc die casting, which replaces the conventional cold sprue bushing, keeps the molten mass at the

melting temperature until just prior to entry into the cavity. The melting point is located directly at the separating plane.

The result: The now-shortened sprue reduces the cycle time and re-melting costs. Thanks to the molten mass being kept warm longer, the fine contours in the casting are formed more significantly, the surface is visually improved and the porosity and the shrinkage cavity formation are reduced.

Example 3:

The challenge: Holistic quality improvements in the injection molding process.

The solution: Conception and development of the new Z system for targeted partial and dynamic temperature control of molding tools in injection molding.

The result: Visually flawless surfaces, excellent molding of microstructures, extremely thin wall thicknesses and the possibility to selectively heat or cool cavities extremely quickly. As a result, cycle times for injection molding can be reduced, which ultimately leads to an increase in productivity.

Example 4:

The challenge: Improvement of the energy efficiency of a milk heater (»white goods« sector).

The solution: Conception and implementation of a joint development project for a flow heater.

The result: A particularly energy-efficient and simultaneously extremely environmentally-friendly appliance solution.

Example 5:

The challenge: Logistical optimization in the assembly process of control cabinets.

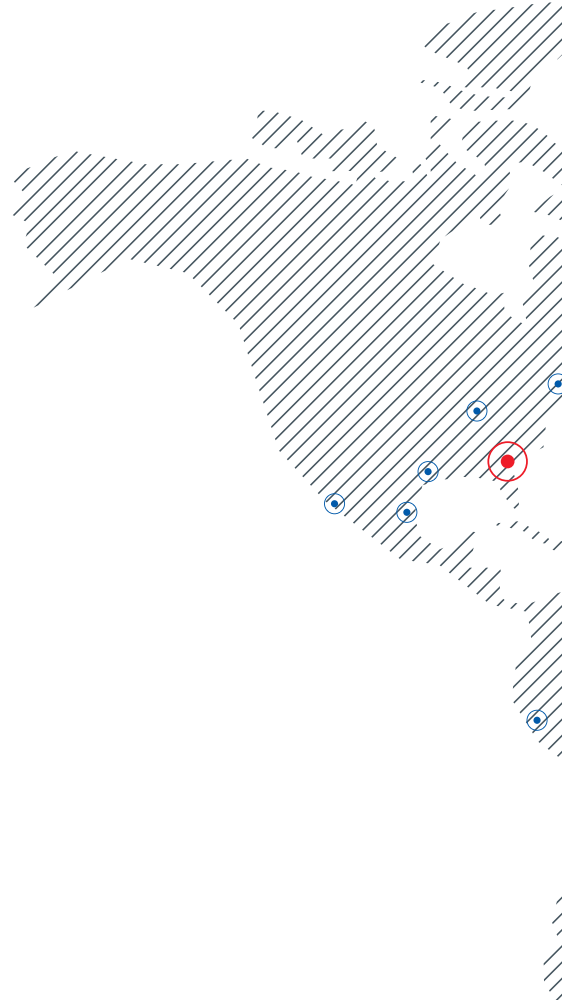
The solution: Development of a completely new assembly line for a renowned control cabinet manufacturer.

The result: Relief for the customer through the takeover of responsibility for a significant part of the value-adding chain.

Further examples:

Further projects are currently opening up many doors for hotset in new markets – for example, in the area of fuel cell technology. Heating is usually not the sole issue here, but rather complex thermodynamic solutions which focus on intelligent temperature control.

Global

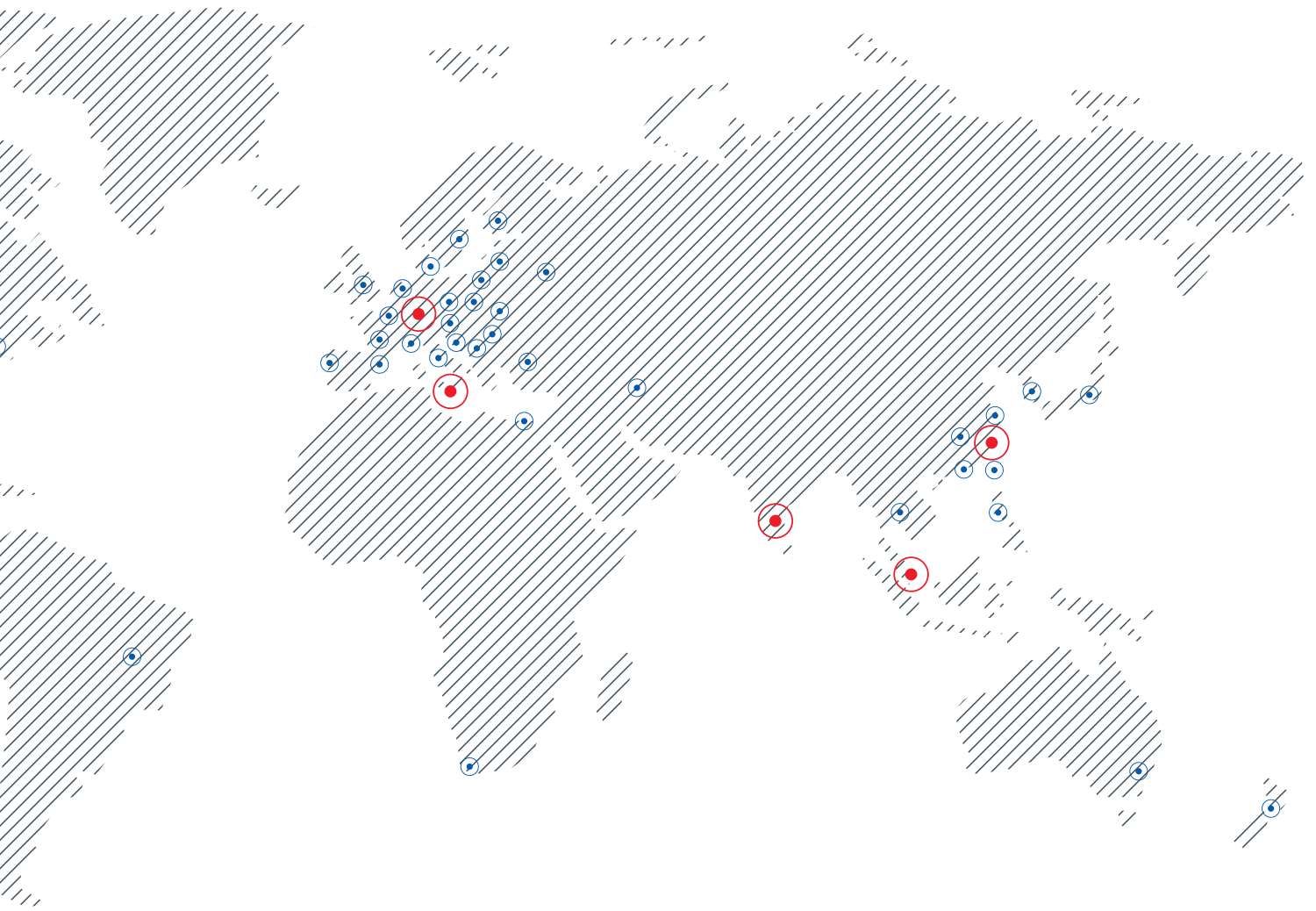


Constancy

Constant economic success is not something regarding which you can rest on your laurels. Not only technologies, but also markets are permanently changing, and this at a breath-taking speed; in constant transition. Those wishing to be successful, have to be quick, through the adaptation of production processes and through process optimization, quality improvement or innovations.

How does it work? Simple: Increase energy efficiency; reduce cycle times; reduce production costs; optimize workflow. We at hotset will be delighted to show you what is possible and how it works. We will help you to make wishes become reality through sound analysis of your processes and procedures and intelligent changes – so that you can concentrate on your future success.

A second constant is the family. We are a family-run company which thinks and plans in generations. We do not take any risks, and are independent and reliable. We place great value on continuity and trust. This is also reflected in our long-term relationships with our suppliers, employees and customers.



The principle of proximity – in a global sense

Customer proximity is a virtue. Things become difficult for a medium-sized company when they wish to internationalize this principle. hotset realized at an early stage that customer proximity in global dimensions can only function through expediently-positioned subsidiaries. This is how direct dialogue with our customers can be successful. Regardless of whether in Singapore, New York or New Delhi – we understand your language and we are familiar with your cultures, religions and markets.

The initial step was taken through the formation of *Hotset Malta Ltd.* in 2002 as a production location for heating elements and temperature sensors. In 2008, the establishment of *Hotset Singapur Pte Ltd.* followed, intended to supply the Asian market. *Hotset America Corporation*, with its headquarters in Georgia, USA, started in 2010, designed to supervise customers in Canada, the United States and Mexico. One year later, *Hotset Heating Elements (Suzhou) Co. Ltd.* in China opened its doors. The most recent subsidiary, established in 2014, is *HIPL India Pvt. Ltd.* with its headquarters in Bidadi. This branch is located around 30 kilometers from Bangalore, the third-largest city in India.

These are the best prerequisites for global thinking and for obtaining valuable inspirations from the most significant international markets. At hotset, these prerequisites are ingeniously coupled with German thoroughness and the ingenuity of a medium-sized company.



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