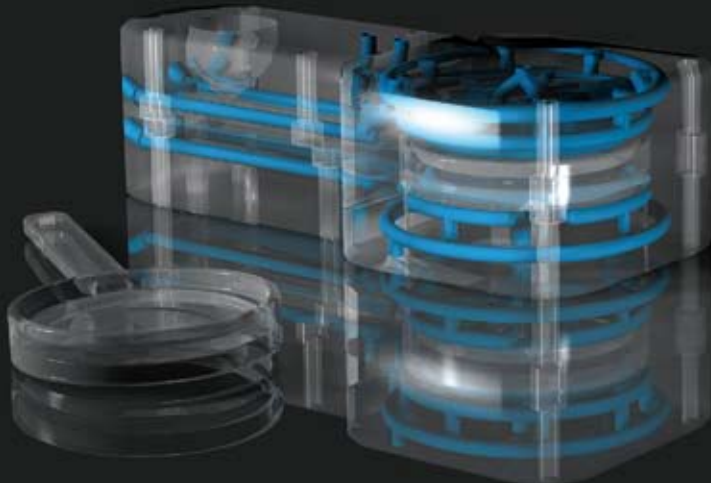


## Near-surface temperature control

Perfect optics on complex plastic parts



Clear glass optic, no joint lines ... the demands on the production of high quality plastic parts are constantly growing. In order to achieve perfect components without shrink marks and distortion, or to produce surfaces without joint line or flaking, a targeted and fast temperature control within the mould by means of a near-surface arrangement of heating/cooling channels is required.

Through the controlling of the surface temperature in the mould, the viscosity of the plastic is specifically influenced. The thus enlarged process window in the production helps the user to have a clear reduction as well as complete avoidance of possible defect characteristics.

Moreover the variotherm temperature control allows the manufacture of qualitative high grade components with extremely different wall thicknesses. Thereby the temperature at the mould wall during the injection operation is clearly increased in order to achieve a complete mould filling in the thick-walled areas of the parts. At the end of the cycle the mould wall is cooled down again to the temperature of demoulding.

We produce for you pre-series and series injection moulding tools which are appropriate for the operation of this variotherm temperature control system. We build the mould inserts or valves with near-surface cooling/heating channels necessary for this using the lasercusing technology.

### An example in practice

#### Task

Series injection moulding tool for the production of a single part magnifying glass in clear glass optic

#### Challenge

- wall thickness differences of 10 mm
- perfect surface condition in clear glass optic
- avoidance of cavities, visible joint lines and shrink marks

#### Solution

Sauer lasercusing mould inserts in connection with variotherm temperature control

**Your contact partner:** Mr. Armand Bayer

sauer product | Sauer & Sohn KG | Groß-Zimmerner Straße 51 | 64807 Dieburg, Germany

Telephone: +49 (0)60 71 206-154 | Telefax: +49 (0)60 71 206-199 | E-mail: abayer@sauerproduct.com | Website: www.sauerproduct.com

Product Design | Engineering | Prototyping | Lasercusing | Dispensing Technology  
Alu-Tooling | Mould Making Series | Injection Technology



**sauer product**

Sauer & Sohn KG  
Centre for Mould Making

Groß-Zimmerner Straße 51  
64807 Dieburg, Germany

Telephone: +49 (0)6071 206-0  
Telefax: +49 (0) 6071 206-199  
E-mail: [info@sauerproduct.com](mailto:info@sauerproduct.com)  
Website: [www.sauerproduct.com](http://www.sauerproduct.com)



**sauer product**

Sauer & Sohn KG  
Centre for Technical Development

Frankfurter Straße 73  
64807 Dieburg, Germany

Telephone: +49 (0) 6071 2070-100  
Telefax: +49 (0)6071 2070-190  
E-mail: [info@sauerproduct.com](mailto:info@sauerproduct.com)  
Website: [www.sauerproduct.com](http://www.sauerproduct.com)