

A photograph showing two men in a workshop or factory setting. They are focused on a piece of industrial machinery. One man is using a tool to adjust or inspect a part of the machine. The other man is looking on, possibly assisting or observing. The background is bright and slightly blurred, emphasizing the workers and the machine.

HELLER

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Saarbrücken
Salem

BRAZIL

Belo Horizonte
Gravataí
Joinville
Sorocaba

CHINA

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Shanghai

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INDIA

Pune

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Queretaro

RUSSIA

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Barcelona

SWEDEN

Värnamo

SWITZERLAND

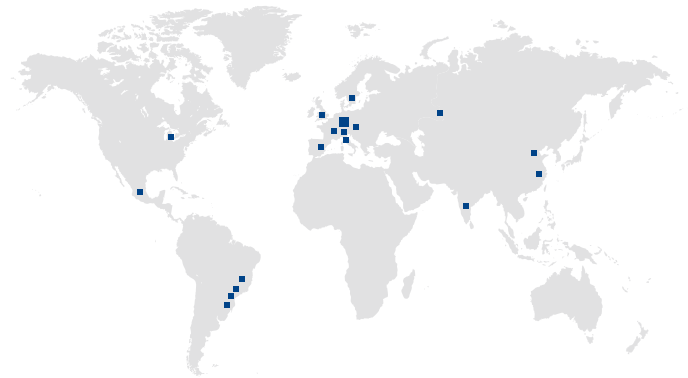
Niederbüren

UNITED KINGDOM

Redditch

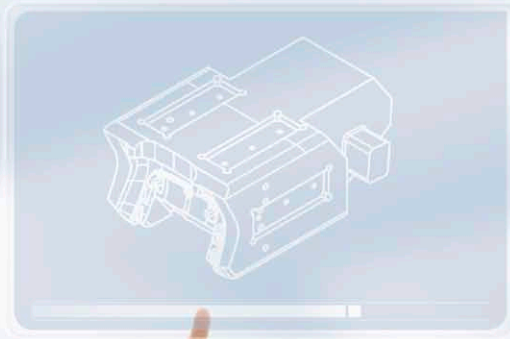
USA

Troy, MI



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HELLER



**Solutions to enhance productivity
and economic efficiency**

**HELLER competence:
Tool and die manufacturing**

HELLER solutions:
Knowing how it's done.



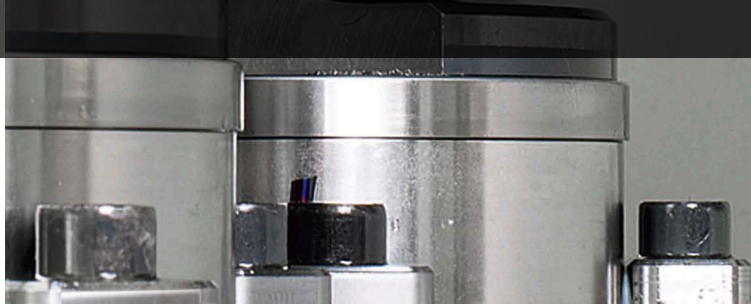
Future objective:
> 100 hours spindle operating time/week

Typical scenario: effective use of the spindle is limited to an average of 75 % of the 35 working hours in a week (21 % of the total hours per week). As a result, spindle operating time is at an alarmingly low rate in most companies, i.e.

- 26 hours/week = 1,300 hours/year

However, the right production equipment and optimised processes can help to achieve a more **realistic goal** in terms of spindle operating time such as:

- 100 hours/week = approx. 5,000 hours/year



CHALLENGE

Increasing international competitiveness. Optimisation of machines, processes and accessories as a chance for higher value creation.



Current market situation in the tool and die manufacturing industry.

Apart from the constant increase in international competition, this industry's market is characterised by three developments:

- Constantly growing time and cost pressure
- Hourly rates customary in this market vary between EUR 60.00 and 140.00, currently stabilising at a mean rate of approx. EUR 100.00.
- Finding qualified specialist staff has become increasingly difficult.

As a result of these developments, one particular demand has been gaining importance: increasing the added value of the individual machine.

Industry trends that could become factors for success.

In order to fulfil the demand for a higher added value per machine, more and more companies follow the trends that have become the industry's success factors today:

- Use of versatile machines allowing considerably higher annual operating times.
- Extension of production to 4-shift-operation (including weekends).
- Focus on the refinement of strategies and processes to increase production efficiency.
- Optimised interaction between all factors involved – from the machine via NC programme, tooling and workpiece clamping through to precise part measuring.
- Qualified and motivated staff able to carry out a wide range of different tasks.

Important demands on machine, process and accessories.

- A consistently high level of quality
- Optimised CAM programming
- Powerful tools
- Fast tool provisioning
- Reliable clamping fixtures
- Flexible and user-friendly controls
- Machines tailored to the specific needs.

SOLUTION

HELLER products and services. Precision, quality and performance to cater for almost any requirement. Effectively complemented by a range of customised modular services.



Where do prospective buyers find solutions enabling them to **optimise their production processes for maximum value creation**? The answer is quite simple: at HELLER. No matter if you are looking for a standard machining centre or complete solutions for work-piece-specific tasks – “Made by HELLER” is always synonymous with **precision, quality and performance**. This promise does not only apply to all our machines but also to the complete process engineering, project management and to our comprehensive range of after-sales services.

The solutions provided by **HELLER Services** have been designed to guarantee the availability and sustained performance of each machine and system. The **modular range of services** provides customers with

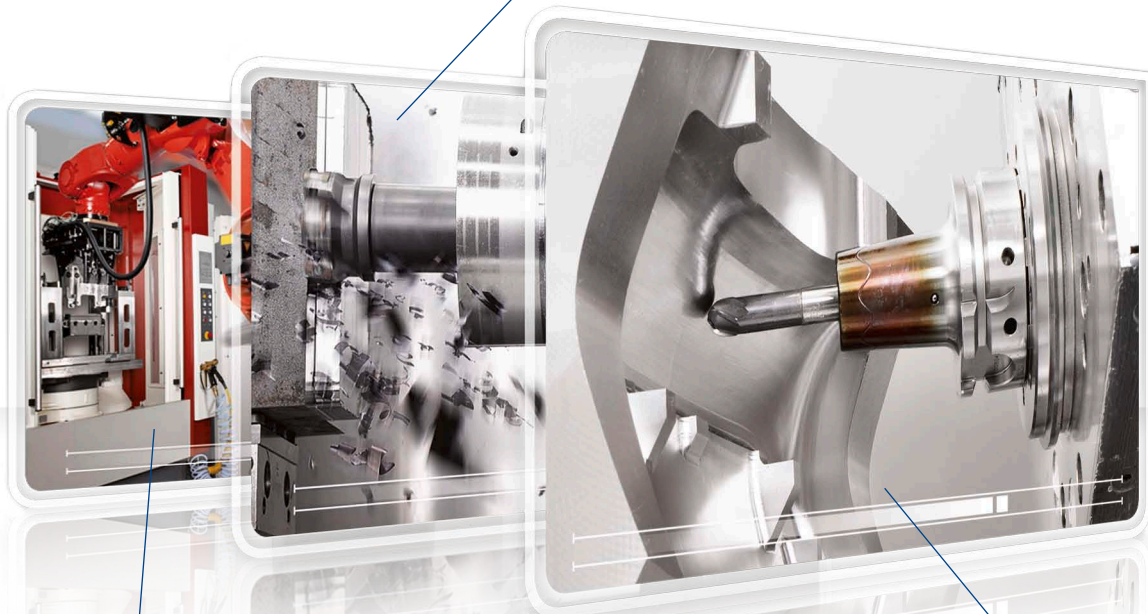
tailored solutions throughout the complete lifecycle of a machine or production system.

Performance packages do not only include commissioning but also reliable supply of economically priced spare parts as well as remote diagnostics, customised servicing and maintenance agreements, training of operating and service staff plus machine relocations and overhauls. Short response times and extensive personal support on site are guaranteed through **HELLER's global network of service bases**.

Versatile:

HELLER 4-axis machining centres.

HELLER's horizontal machining centres always provide the ideal solution for the wide spectrum of requirements in the metal-cutting industry. Our H and MCH series offer everything from entry models, modular configurable machines through to high performance production machines. They all share the proven availability of our machines.



For a plus in efficiency:

HELLER automation.

In addition to the right machine, HELLER also offers tailor-made pallet automation and robot-based automation solutions. These complex system solutions provide additional cost advantages and a competitive edge thanks to significantly increased efficiency and productivity.

Tailor-made:

HELLER 5-axis machining centres.

With the 5-axis machining centres from the F and MCH-C series, HELLER covers the full range of solutions from complete machining through to simultaneous 5-axis machining. All machines with table loading for machining of individual workpieces or small batch sizes are characterised by optimum accessibility and high user-friendliness, whereas all high-performance production machines with automation provide high efficiency at extremely high chip removal rates.

COMPETENCE

Solutions catering to all our customers' needs and wishes. From machining centre to HELLER productivity centre – thanks to highest availability, maximum flexibility and superior precision.

There is good reason why HELLER machining centres are now called productivity centres: they offer highest precision and efficiency, provide extreme reliability, even under constant load, and can

be flexibly adapted to new tasks. Today, HELLER is one of the leading manufacturers of machine tools specifically designed to reduce cycle times. Our magic formula: combining high-quality and precise

machines with innovative tooling solutions, customised machining processes and intelligent automation to suit our customers' specific requirements.

1

Our customers' first priority: **highest availability.**

HELLER machines come with a guarantee of functionality. For many years, all of HELLER's productivity centres have been known for their extremely high reliability – whilst providing a consistently high machining quality at low maintenance and repair requirements. Result: maximum planning reliability in terms of processes as well as service and spare part costs.

2

Our customers' second priority: **maximum flexibility.**

That is why HELLER is offering customers a wide range of tool and workpiece management systems helping companies to be optimally prepared for any new challenges. Just two examples: with pallet magazines and robot-based automation solutions HELLER machining centres can be converted into flexible manufacturing cells without any problem. Integration of state-of-the-art tool magazines allows to expand tool storage capacity to up to 590 tools.

3

Our customers' third priority: **outstanding precision.**

Machining accuracy is among the most important decision criteria when opting for machining centres made by HELLER – especially for workpieces with high demands on quality. The requirements for achieving high machining accuracy are:

Benefit to all HELLER customers:

Solutions from HELLER have been achieving top ratings in all of these areas for many years.

1. Stiffness

2. Positioning accuracy of axes

3. Dynamic path accuracy of axes

4. Positioning accuracy of the rotary table

5. True running of the spindle

6. Thermal stability

7. Temperature compensation

REFERENCE

Successful HELLER applications for production. With state-of-the-art machines and processes for achieving decisive quality and time advantages.



Example: Mould and die design in the automotive industry.

Task	Solution	Technical realisation	Result
<p>Production of a mould for a plastic cover used in the centre console of the Audi Q5.</p>	<p>High-performance machining of the die plate (die steel 1.2312) on HELLER H 6000, roughing and finishing on HELLER FT 4000 (die steel 1.2343).</p>	<p>Two steps. Step 1: heavy-duty machining in the upper performance range with highest precision on H 6000 with sub-sequent drilling of a start bore and roughing of pockets using high feed-rate cutters and edge milling cutters. Step 2: finish-machining on FT 4000, roughing of the raw part on all 5 sides (including inclines) and subsequent 5-axis finishing in a single set-up.</p>	<p>Time savings of approx. 50 % in high-performance cutting, additional time and quality advantages due to further machining in a single set-up.</p>