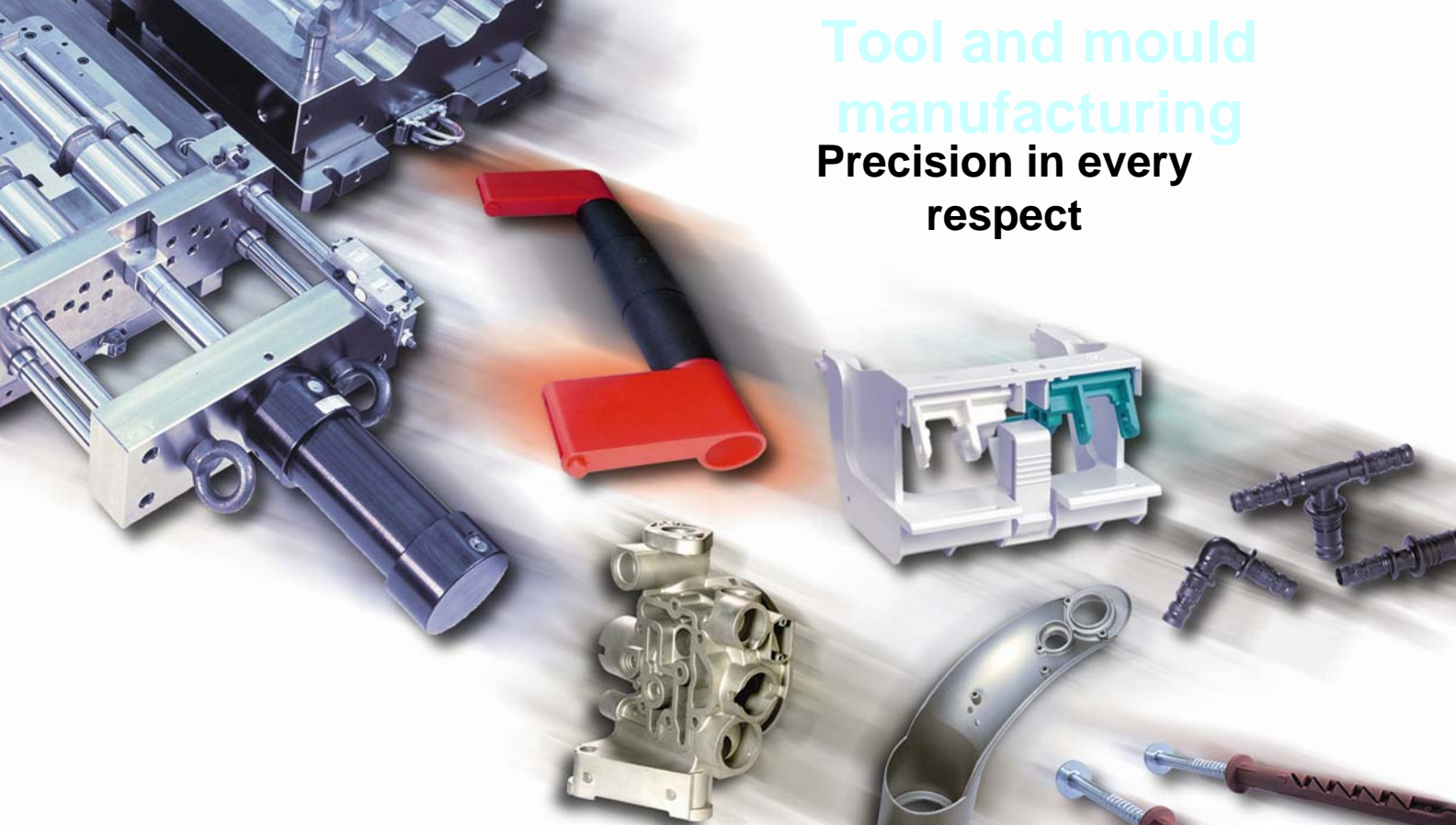


Tool and mould manufacturing

Precision in every
respect



Tool and mould manufacturing

- tool manufacturing
- injection moulds
- die casting moulds
- jig manufacturing

Precision manufacturing for

- complete insert/replacement sets
- specific machine components

Modern manufacturing procedures:

- electrode production in graphite + copper
- HSC milling
- K grinding
- laser cusing
- die sinking and wire-cut EDM



Service and revisions

- service technicians
- tool and mould service
- revisions of external moulds



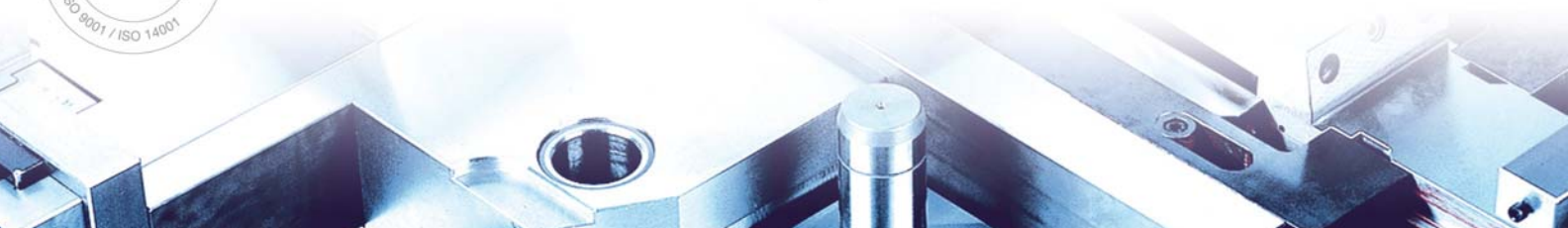
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SWISS  MADE



Tool and mould manufacturing

Quality, competence
and experience

Our company data:

Founded	1966
Company of Geberit	1991
Employees	48
CNC	1977
CAM	1979
CAD	1986
3D	1991
MBO	2008



Andreas Scherrer
owner/managing
director

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Jörg Gabriel
business administration
manager

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For further information please see
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or call us.



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Tool and mould manufacturing

Tool manufacturing

Skills, expert knowledge:

- development and construction of tools and moulds
- development of 3D models
- development of innovative concepts with corresponding advantages for customers
- customer advice and support
- initial sampling on site as well as initial sample testing
- product development
- data conversion, modifications and data filing

Application experience:

- thermoplastic injection moulds
- multi-cavity injection moulds
- one and multi-component injection moulds
- aluminium and magnesium die casting moulds
- MIM injection moulds
- laser cusing technology

Interfaces:

Export:

ELT, PFM, SAT, IGES, STEP, VDA, Catia 4, Catia 5, Parasolid, DXF, DWG, STL, VRML, Quick, Fikus

Import:

ELT, PFM, SAT, IGES, STEP, VDA, Inventor, PRO/E, Catia 4, Catia 5, Unigraphics, Solid Works, Parasolid, DXF, DWG, STL



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SWISS  MADE



Tool and mould manufacturing Injection moulds

From the CAD design to the finished mould - a way that is determined by absolute precision. Modern CNC controlled machines and our well-qualified employees are a further guarantee of high quality.

We offer customised solutions for:

- testing moulds
- high-performance moulds in single or multiple design
- multi-stage moulds
- 2-component moulds

Our strengths:

- fixing technology
- packaging
- sanitary engineering
- complex technical parts

 **Büchler Werkzeugbau AG**

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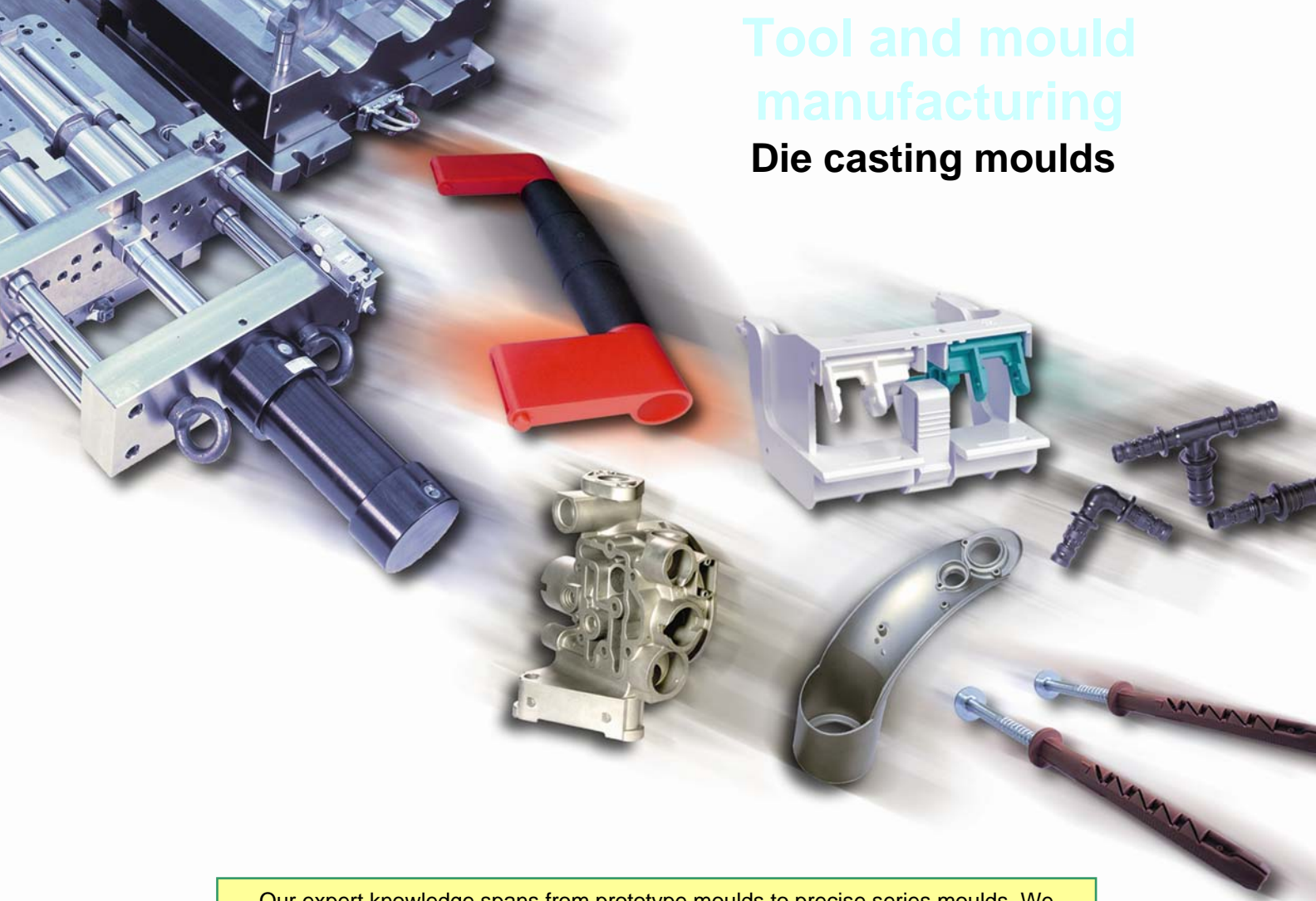
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SWISS  MADE



Tool and mould manufacturing

Die casting moulds



Our expert knowledge spans from prototype moulds to precise series moulds. We have been manufacturing high-quality die casting moulds made of aluminium, zinc and magnesium.

In order to ensure longer service life for the die casting moulds, we consequently polish deep fins and contours for better demoulding.

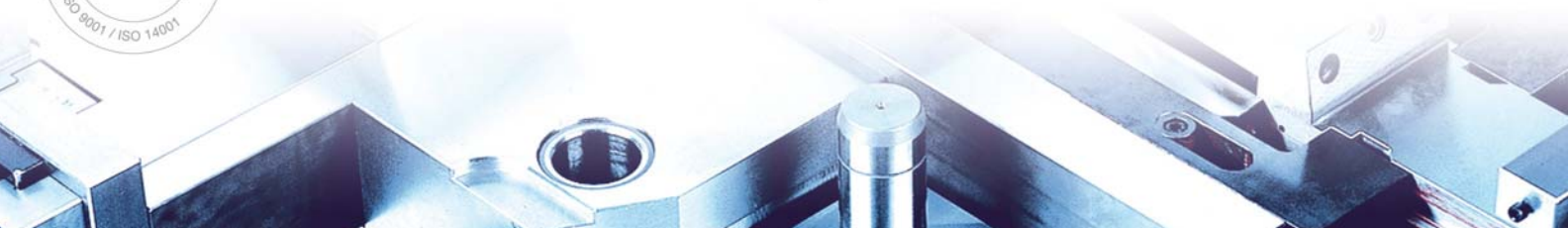
Our strength lies in the field of thin-walled, pore-free parts.

 **Büchler Werkzeugbau AG**

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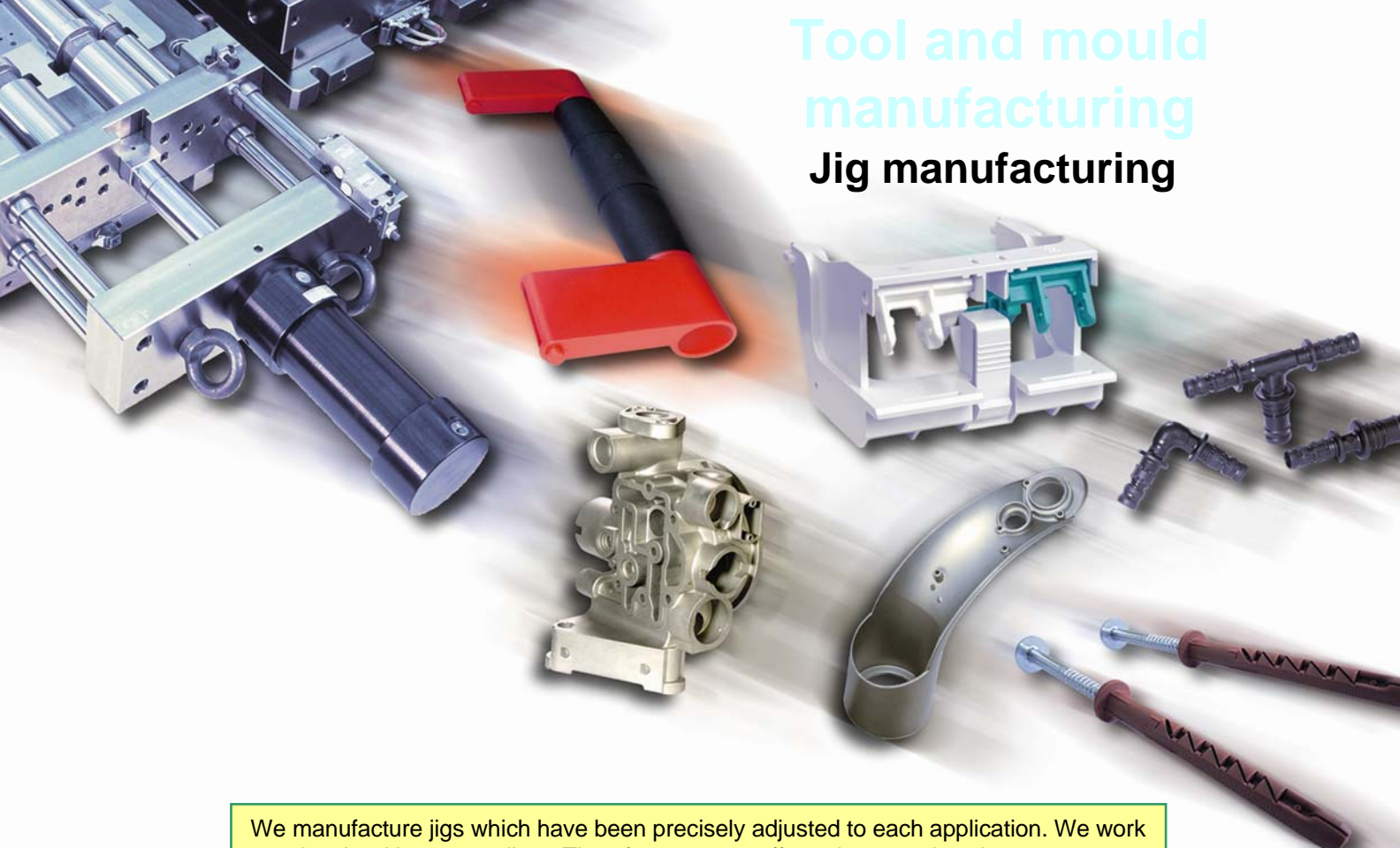
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Tool and mould manufacturing

Jig manufacturing



We manufacture jigs which have been precisely adjusted to each application. We work closely with our suppliers. Therefore, we can offer unique services in respect to feasibility.

Manufacturing of:

Individual jugs according to customer requirements:

- measuring gauges
- assembly jigs
- production auxiliaries
- control equipment
- prototypes

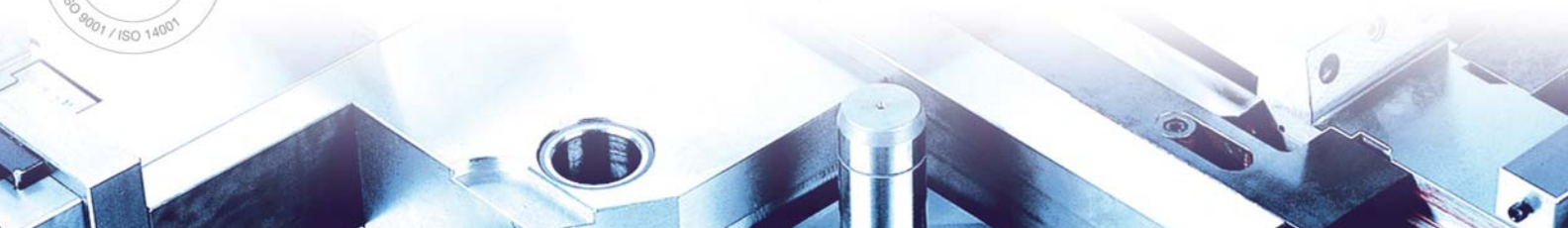


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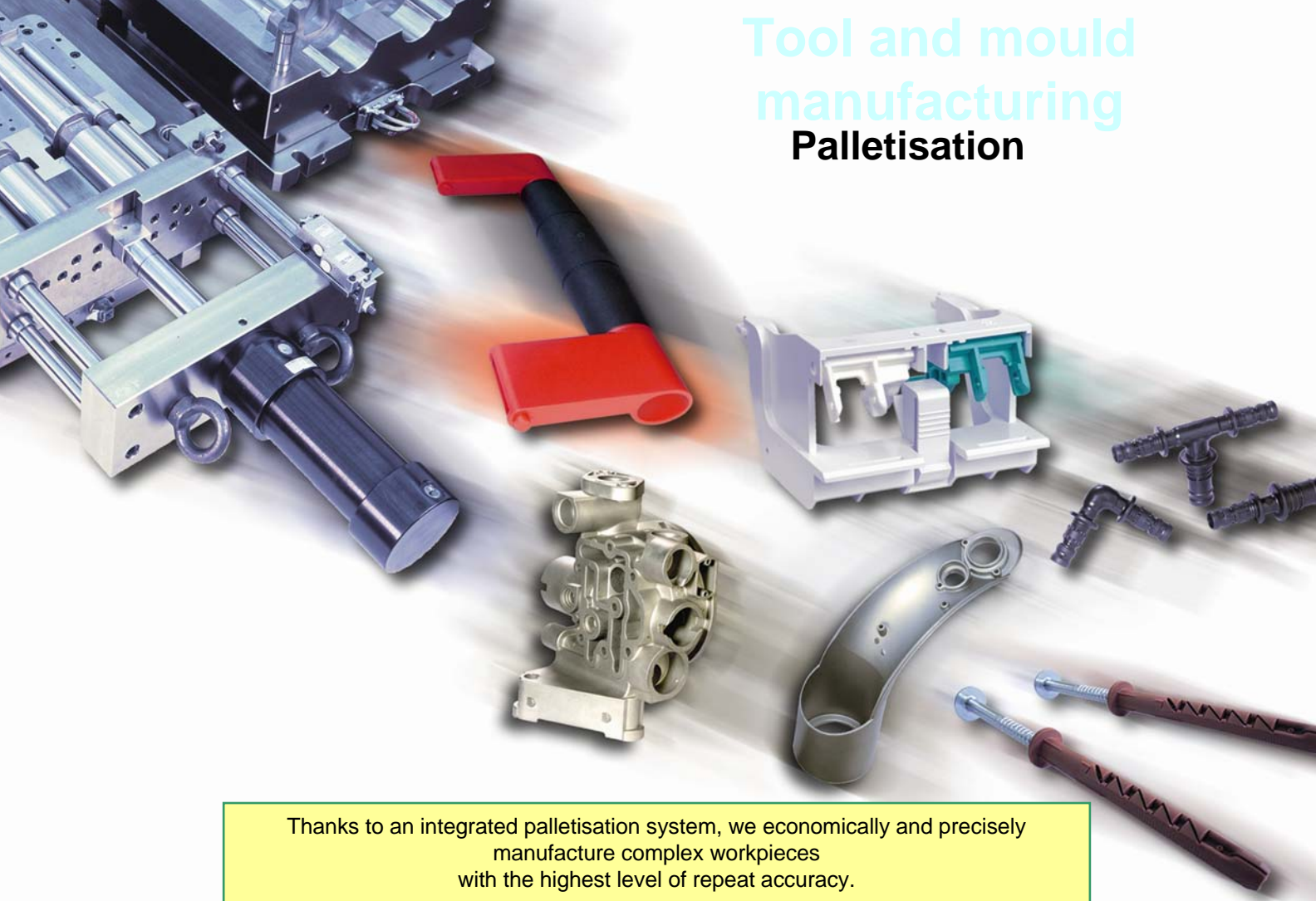
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SWISS  MADE



Tool and mould manufacturing Palletisation



Thanks to an integrated palletisation system, we economically and precisely manufacture complex workpieces with the highest level of repeat accuracy.

Identical workpiece zero point for all operations.
In-process pre-setting/set-up reduces unproductive downtimes.

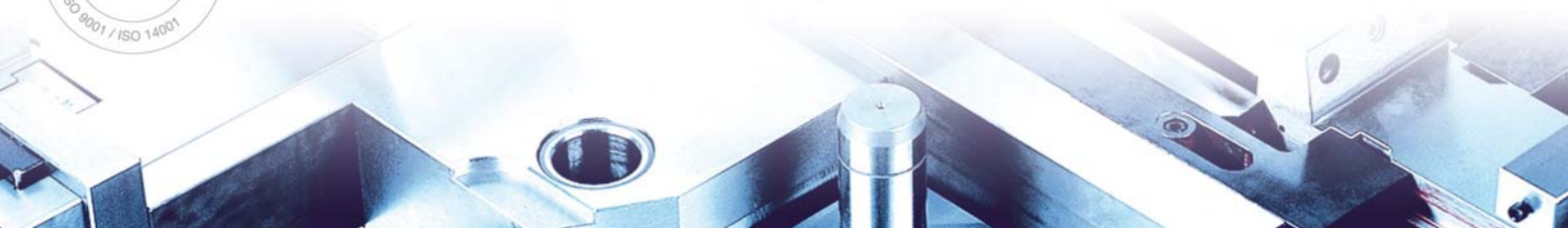


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Tool and mould manufacturing

Venting block

The venting block designed by us allows for optimum venting of your die casting mould. The gases contained in the mould cavity are effectively discharged, thus improving the quality of the parts.

- The venting blocks can internally and externally be mounted without any need for post-treatment .
- Even old moulds can easily be retrofitted.
- The wavelike design guarantees easy demoulding.
- By means of one block, a maximum of three locations can be cut.
- The hardened and cooled design guarantees a long service life.



dimensions	56 x 110 x 72
price (hardened, ready to mount) for purchases of:	
1 pair	CHF 1,800/pair
5 pair	CHF 1,700/pair



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Tool and mould manufacturing Training

At Büchler Werkzeugbau AG,

polytechnicians type E;
design engineers type E
merchants type E

are trained.



The most important training objectives are:

- training of professionals (ensuring technical and social training)
- showing business and corporate activities
- preparing for future professional life.



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SWISS  MADE



Electrode production in graphite + copper

At the beginning of electrical discharge machining are the electrodes
—
without them, nothing would work.

electrodes made of copper and graphite
with the corresponding documentation –
Technical competence is what we deliver!



copper electrodes



graphite electrodes

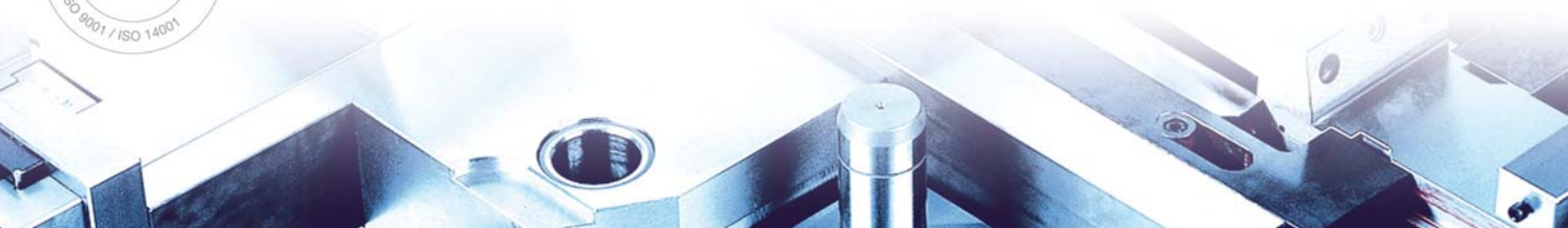


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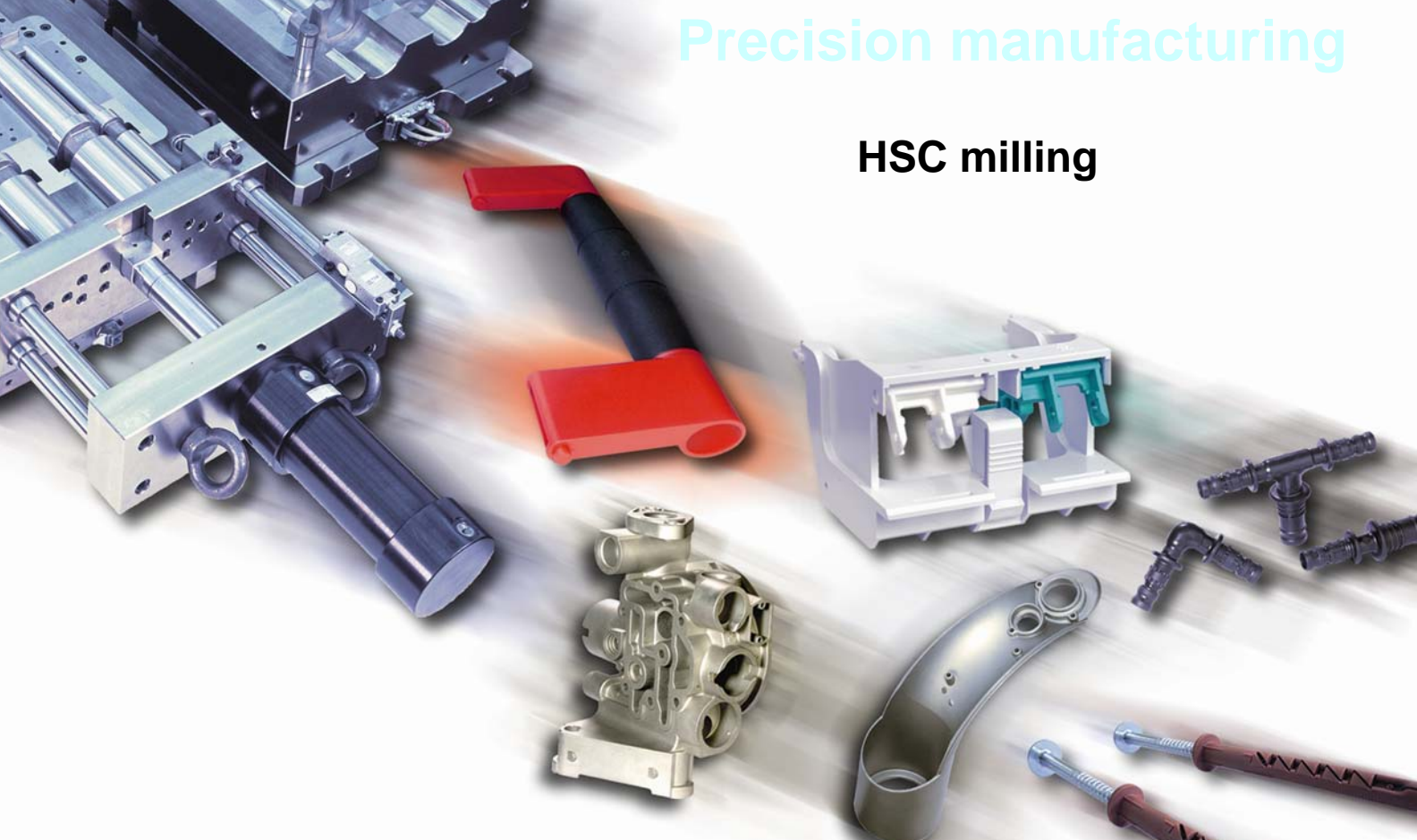
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HSC milling



Reducing the overall lead time - from the product idea to the finished component - has been a key issue in tool and mould manufacturing for quite a long time.

Five-axis milling and the introduction of high-performance CAD/CAM systems, have marked the developments in tool and mould manufacturing. The high-speed milling machines offer a high rationalisation potential in the field of finishing machining procedures. Smaller line widths allow for a better surface quality.

In contrast to the traditional milling process, the infeed and cutting speed of HSC milling machines are increased by a factor 5 to 10. In doing so, a significant reduction of the primary processing time is achieved during cutting-intensive manufacturing processes. In addition, very high surface qualities can be achieved.

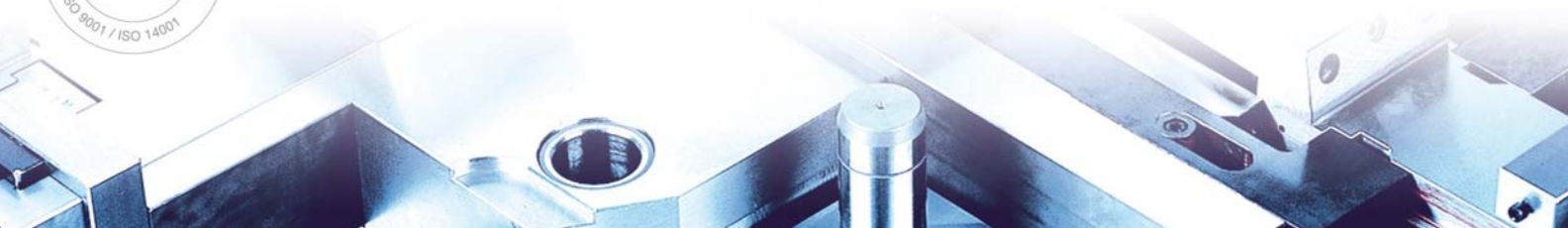


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K grinding

Our services:

- very accurate positioning (+/- 0.005)
- very high dimensional accuracy (+/- 0.002)
- very high surface quality (N6 to N4)
- almost all materials can be machined
- measuring record included in scope of services

Manufacturing environment:

- 3 CNC jig grinding machines "Hauser"
- 3 traditional jig grinding machines "Hauser"
- full range of testing and measuring tools
- fully air-conditioned manufacturing facilities

Technical possibilities:

- | | |
|--------------------------------|---------------------------------------|
| - min. grinding diameter | 0.8 mm |
| - max. grinding depth (Z axis) | 140 mm |
| - max. workpiece size | 700 mm x 1000 mm |
| - work range | X = 900 mm / Y = 660 mm |
| - max. workpiece height | 600 mm |
| - max. workpiece weight | 800 kg |
| - grinding engines | from 3,500 rev/min to 160,000 rev/min |
| - equipment | swivelling and rotary tables |



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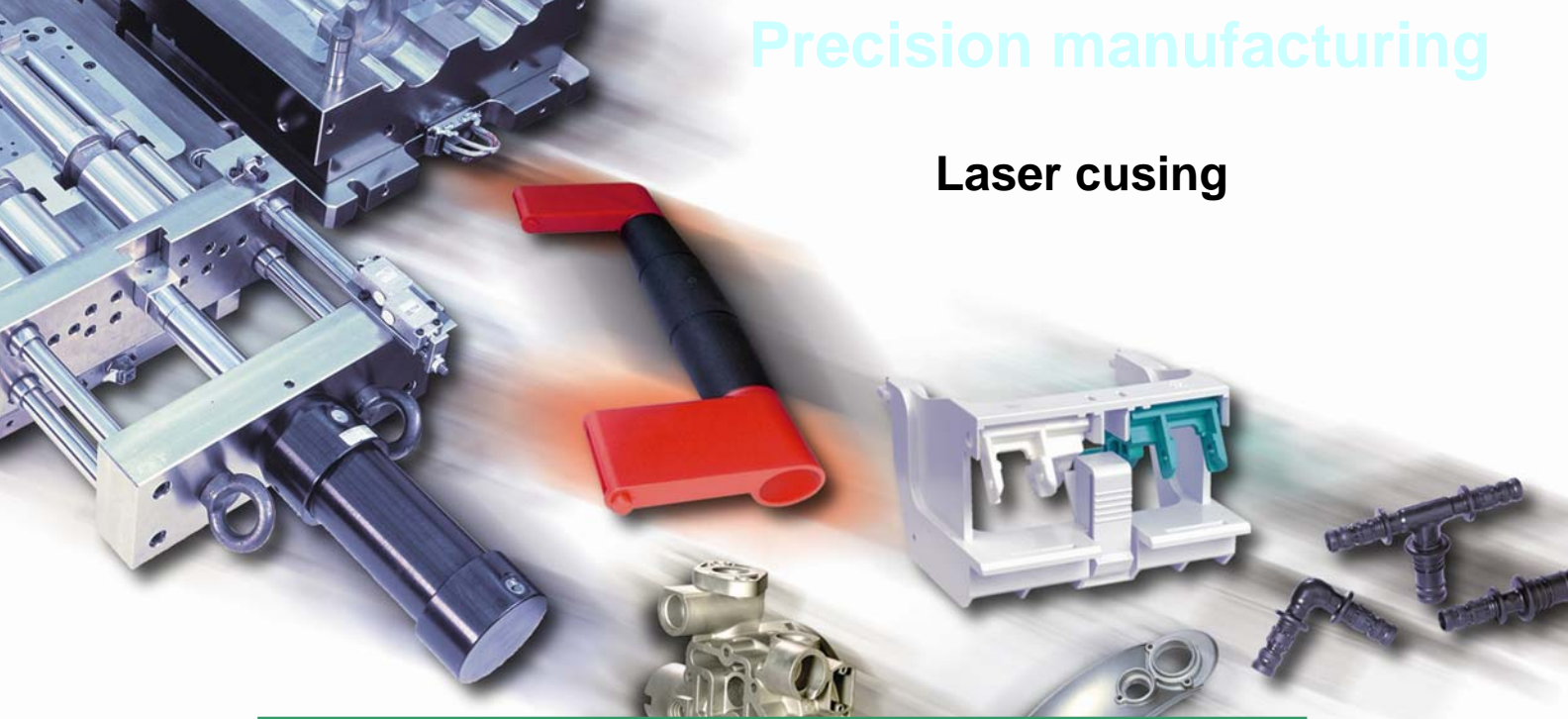
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Laser cusing



Effective contour-approximating cooling:
This reduces the cycle time in the mould, increases dimensional quality and process safety.

Thanks to the laser cusing procedure, we were able to reduce your production and manufacturing costs. Early cooperation with Büchler brings many advantages right from the design phase.

Workpieces:

hot work tool steel for plastic injection moulding CL 50WS (1.2709)

hot work tool steel for light metal die casting CL 60DG (1.2709)

In short, this results in concrete calculative and qualitative advantages:

- by means of a contour-approximating cooling, productivity of the tool is increased (by up to 30% reduced cycle time)
- cooling effect on the surface
- targeted local temperature differences possible
- distortion on the injection part is drastically reduced by optimum cooling (better product quality)
- rough-finished mould contour of the tool inserts
- new process application can be achieved



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Die sinking/wire-cut EDM



die sinking up to 1500 x 1000 x 650

We offer first-class customer service and support. Thanks to the good infrastructure, we can perform die sinking EDM with copper and graphite electrodes within a very short time.



wire-cut EDM up to 700 x 400 x 406

We erode parts for die cutting, injection moulding, die casting tools as well as components for jigs and machine engineering.

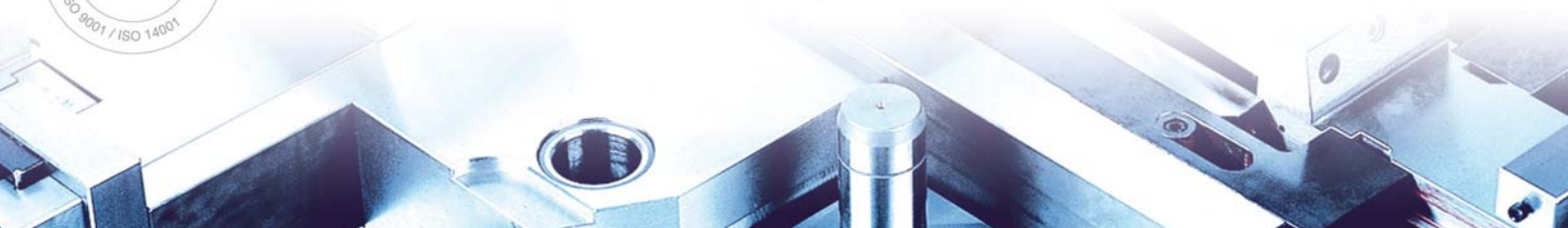


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Service and revisions

Tool and mould service Revision of external moulds



We offer:

- assessment on site
- replacement/repair of components
- manufacture of complete replacement sets
- item modifications
- improvement of functionality

For moulds which have been manufactured/reviewed (including external moulds) by Büchler a service record will be prepared and guidance in initial sampling will be provided.

We plan...



We discuss...



We perform...



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