



heimatec®

High-tech from heimatec
Tools and systems
for productive turning
and milling

MADE IN GERMANY



It all started with an innovation...

Because no system that could perform automatic changes of inserts for automatic lathes was available on the market, Martin Krieger, a master tool- and die maker and managing partner of heimatec GmbH, simply developed his own tool and also applied for utility model protection. This was in 1987 and so the company heimatec was born.

Only a year later, the business activity shifted to live tools, soon followed by the initial design of a special-angle milling head. The tools have been manufactured in-house since 1996 – heimatec has a virtual production depth of 100%.

1998 marked a decisive milestone in the corporate history, because heimatec was the first company in the world to develop a quick-change system for live tools. This innovation accelerated the company's growth immensely and the company relocated to a new site in Renchen in 2005 as a result.

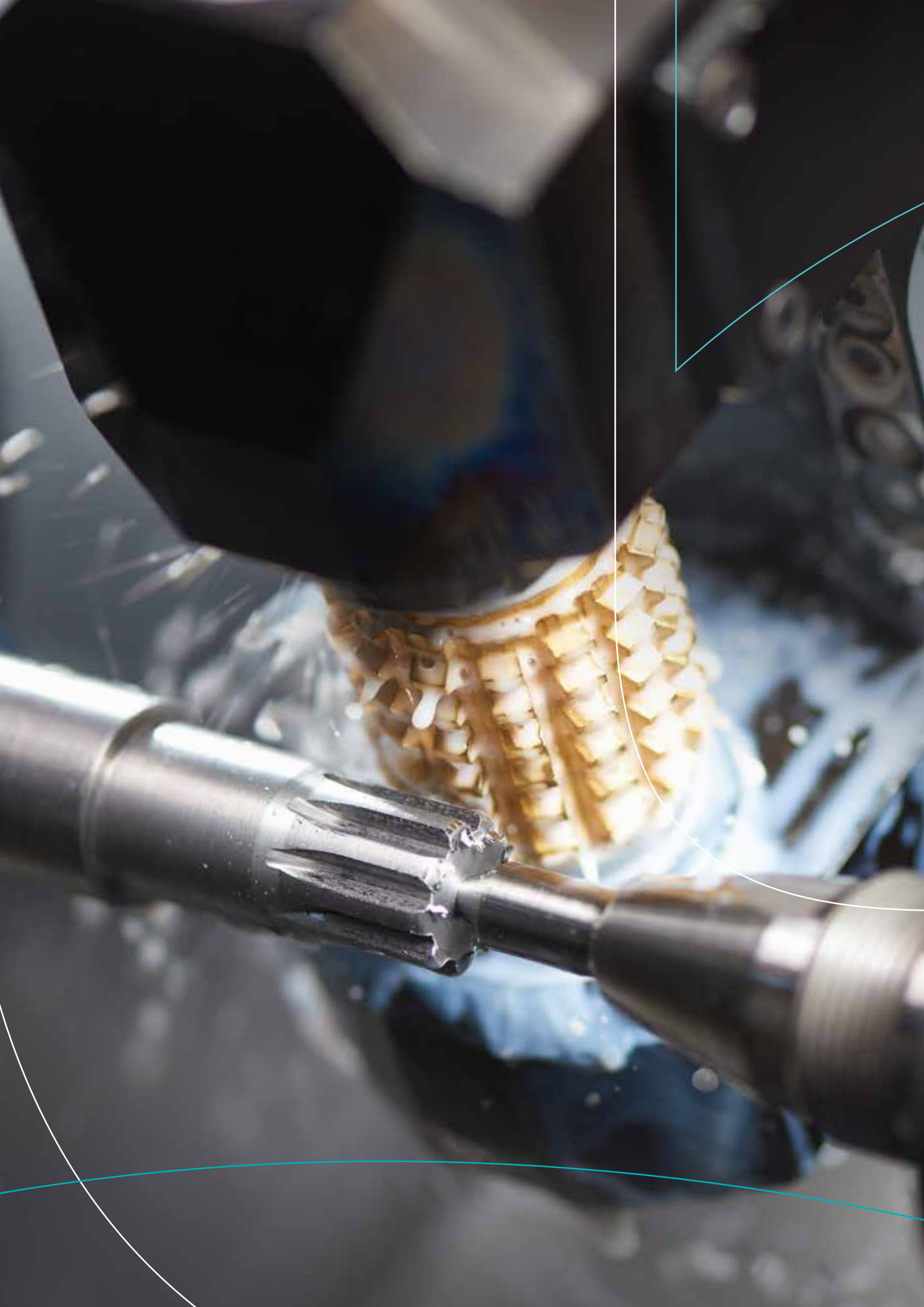
A year earlier it had already founded its own sales office in Moscow, Russia, followed by the subsidiary heimatec Inc. in Chicago, USA, in 2010. In 2012, a branch was opened in Singapore, a subsidiary was established in Taiwan two years later and a sales office was opened in Pune, India in 2016. heimatec now also has a site in China.

Today heimatec is one of the international leaders when it comes to the technology and quality of precision tools. The products range from static BMT and VDI tool holders and live tools for turning and machining centers to highly complex, customer-oriented individual solutions. By now the entire tool palette includes more than 30,000 products.

Innovative power and the passion for precision tool manufacturing will continue to be synonymous with the name heimatec in the future, because the second generation for the successful continuation of the company will be assured through successor Kay Benedikt Krieger.

"Our customers are at the center of our work.

*Their wishes and requirements are our daily challenges –
we care is the guiding principle of our company culture."*



The right tool for every job

Live tools

As one of the pioneers of precision tool technology, heimatec offers a broad range of live tools for virtually any task.

Standard program of live tools

The standard program of our live tools includes axial, swivel and angle heads. The heimatec range also offers live tools with speed increase/reduction and an external and internal coolant supply in the conventional drive versions. 6

heimatec.u-tec® changing system

heimatec generally delivers the live tools with its own changing system heimatec.u-tec®. 8

heimatec.easy-quick quick-change system

The live tools from heimatec are also available with the easy-quick HT quick-change system. 10

heimatec.Capto™ quick-change system

heimatec.Capto™ provides another modular quick-change tool system that significantly increases the efficiency during set-up and changeover periods. 12

Static tools

Our extensive range of static tool holders comprises VDI and BMT mounts as well as machine-related tool holders. 14

Tools for automatic lathes

heimatec.SwissTooling is heimatec's specialized tool range for the production of precise and economical turned parts for automatic lathes. 16

Individual program

Multi-spindle and high-speed tools

heimatec's multi-spindle and high-speed tools with a speed increase of 1:4 contribute to high-productivity for large quantity respectively mass production. 18

Gear production

The production of gears is an increasingly important application area of machining technology. heimatec offers special tools for power skiving, gear hobbing or fly cutting. 20

Tools for machining centers

The angle-head tool range from heimatec enables complete processing on machining centers. 22

Digital tool management

Process optimization is made possible with heimatec.Sensoric by means of digitization when live tools are used. 24

Quality assurance

Whether you need individual part inspection during each production step or the functional test of complete assemblies – quality management enjoys the highest priority at heimatec 26

Services

heimatec's range of services is highly diversified and includes maintenance and repair, user training and a comprehensive range of accessories. 28

Overview of product groups

With heimatec's part number system, you can quickly and reliably find the right tool for your machining task. 30

Maximum productivity and performance

from standard to custom solutions

For 30 years, heimatec has gained vast experience in the development and manufacturing of live tools and offers the widest range of products in the industry. Equipped with superior bearing technology, heimatec's live tools are distinguished by outstanding performance coupled with extreme durability. Our tools can be used in CNC lathes, machining centers as well as turn/mill machines of all renowned manufacturers.

As part of our standard program, we offer a broad range of axial and angled tool units and swivel units that are available in different versions. heimatec also offers custom solutions for special applications (page 18-21).

heimatec's live tools can be used with all conventional tool holders. The tools from heimatec are equipped with various drives and coordinated with the respective machine, for example bevel gear, splined shaft profile according to DIN 5480 and DIN 5482, TOEM, flat-drive DIN 1809, special couplings and other drive types.



different
drives



live tool unit,
axial



live tool unit,
swivelling



live tool unit,
off-axis



live tool unit,
angled



Fast, flexible and economical

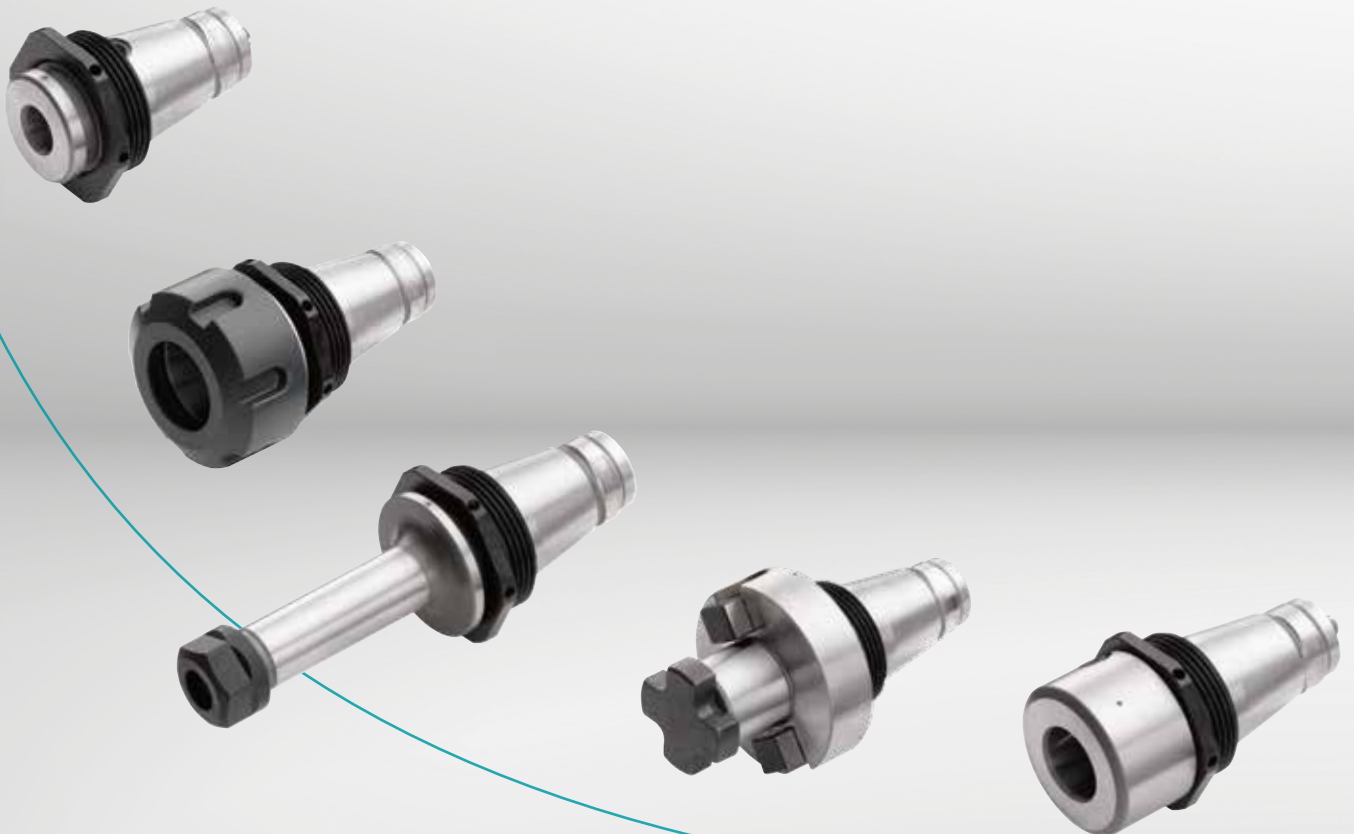
tool change with heimatec.u-tec®

The live standard tools from heimatec are generally delivered with the u-tec® changing system with a collet chuck according to DIN 6499, which makes it possible to use the live tools even without additional tool adapters.

The flexible tool changing system heimatec.u-tec® comes with a cylindrical polygon integrated into the tool spindle located behind the collet cone. This unique

feature guarantees a solid torque transmission during the machining process while additionally increasing strength and rigidity of the entire tool.

Users of precision-boring heads can also benefit from heimatec's comprehensive adaptation solution. heimatec.CKB adapters are available for all conventional precision-boring tool sizes, which can be used for highly precise processing on turning and machining centers in combination with the universal changing system heimatec.u-tec®.



KEY FEATURES OF THE U-TEC® CHANGING SYSTEM

- Cost reduction through minimal setup times
- Highest change accuracy
- Very short and compact design
- Extreme power transmission
- Flexible through the use of various u-tec® interchangeable inserts





Change tools in seconds

with easy-quick HT

heimatec has developed the easy-quick HT series particularly for the quick change of static and live tools. The system enables the presetting of various interchangeable inserts with conventional tool holders outside of the machine tool. The machine operator can then insert these easily, safely and quickly with one hand whenever needed. The machine's non-productive times are greatly reduced by easy-quick HT.

Every easy-quick HT quick-change insert has a positioning pin that prevents improper handling of the interchangeable inserts. The structural system design ensures high rigidity with the highest possible power transmission and top precision.

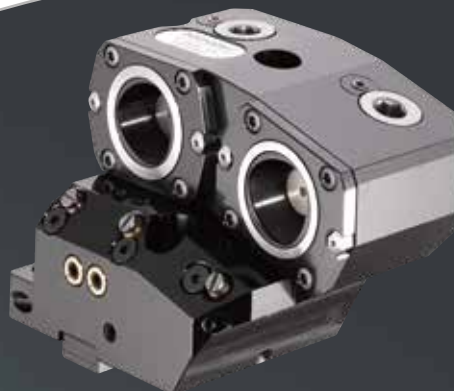
The multiple and flexible applicability of the basic easy-quick tools also reduces the total tool costs. Special inserts with individual tool holders are also possible at low cost.

KEY FEATURES OF EASY-QUICK HT

- One-handed operation resulting in lower risk of injury
- Interchangeable inserts adapters can be changed by loosening a single screw. Reduction in setup times due to minimal change-over times.
- Simple presetting outside of the machine
- Interchangeable inserts can be used for live and static tools
- Minimal costs by reducing the number of tool units and tool holders
- Highest repeat and rotation accuracy

Minimal setup and change times with heimatec.Capto™





heimatec.Capto™ is an additional modular quick-change tool system that greatly increases the efficiency of set-up and change times. heimatec.Capto™ is extremely flexible and offers wide-ranging modularity for static and live tools along with a high availability of the interchangeable inserts for turning machines and processing centers.

The heimatec.Capto™ program offers not just a wide range of standard tools but also numerous specific tool holders that are designed for machine optimization.

The modular quick-change system heimatec.Capto™ is distinguished by a compact design with a short projection length, which makes it possible to achieve high cutting speeds while also reaching the best surface qualities. heimatec uses exclusively original Capto™ components from Sandvik.



Static tools

for economical turning



As one of the leading manufacturers of precision tools, heimatec offers an enormous selection of static tool holders for turning centers. The range includes boring bar holders, turning tool holders, bar pullers and cut-off holders with standard VDI and BMT interfaces.

heimatec also offers a versatile range of machine-related solutions for virtually all well-known manufacturers.

In addition to standard holders, heimatec also has a wide range of special tools and accessory parts for economical turning processes.





heimatec.SwissTooling

the complete tool range
for automatic lathes



Wherever large series have to be manufactured with the highest precision and efficiency, automatic lathes are used.

heimatec has developed a wide range of static and live tools specifically coordinated for automatic lathes, which stands out with its long service life and highest quality of workmanship.

heimatec relies on optimal spindle-bearing technology and ground gear components here. The housing and spindles also have the highest possible rigidity.

As a supplement to the standard tool program of heimatec.SwissTooling, the company continuously develops parts- and customer-specific solutions while integrating user experiences. heimatec also offers a substantial range of accessories.





For high performance and high volumes

multi-spindle and high-speed tools from heimatec

Today, multi-spindle tools are indispensable for highly productive processing on turning centers, because they make it possible to work with multiple tools in one machine as well as to perform numerous different operations on one workpiece.

heimatec offers a wide range of multi-spindle tools that are available with standard and customer-specific configurations and with an internal and external coolant supply.

High-speed spindles are used when the maximum machine spindle speed is too low to reach optimum cutting speed. High-speed tools from heimatec can be supplied with a speed ratio of up to 1:4 which reaches up to 24,000 rpm. Additionally, should a torque increase be required, a speed-reduction is also available from heimatec.

heimatec's range of individual special tools is even more extensive and also includes:

- Tools with minimum lubrication
- Tools that can be connected to the machine's central lubrication
- Tools that have an air purge seal
- Tool units for grinding



Innovative solutions

for efficient gear production



Possible types of
manufacturable gears

As the range of production possibilities is growing, even components with complex interlocking can be produced on turning and machining centers. The complete machining process starts with milling and then the production of the teeth.

For cutting gear production, heimatec has developed special tool units and offers suitable solutions for power skiving, gear hobbing and fly cutting.

Power skiving

Internal gears in particular can be manufactured extremely productively with our tool units for power skiving.

Gear hobbing

Whether bevel gears, inclined or helical teeth, the tools from heimatec enable high precision as well as numerous tooth widths and inclination angles.

Fly cutting

Conical and straight external teeth can be manufactured economically with heimatec's fly-cutting tools.



Part No. 8 039 58 040
Serial No. 10551 / 15.02
i = 1:1
Q_{max} = 4000 min⁻¹
P_{max} = bar / EK
T_{max} = 50 Nm
n₁ = n₂
center distance 91 mm

Top performance

when milling, drilling and thread-cutting
on machining centers

Conceived for the toughest manufacturing tasks, heimatec offers an extensive range of standard and customer-specific precision tools for machining centers. The heimatec angle heads are available in a standard 90° version, recessed and slim design as well as in dual-spindle and +/-90° adjustable versions.

heimatec's precision tools are suitable for all conventional machining tasks in milling, for simple as well as the highest requirements.

All of our angle heads are predominantly equipped with the heimatec u-tec® tool change system, can be rotated by 360° and are compatible with the customary machining centers. All our tools can be handled by automatic tool changers in following machine adaptations i.e. SK, HSK, BT and CAT.





HIGH-PERFORMANCE SLIM SERIES

In addition to an extensive range of standard angle heads, heimtec offers a compact high-performance slim series that was developed especially for difficult contours and is ideal for small immersion diameters and high immersion depths:

- smallest immersion diameter Ø 12.0 mm
- available with and without splash guard
- extensive standard program in long and short versions as well as customer-specific component solutions
- high-performance high-speed tools with a rotational speed of up to 20,000 rpm



Process control

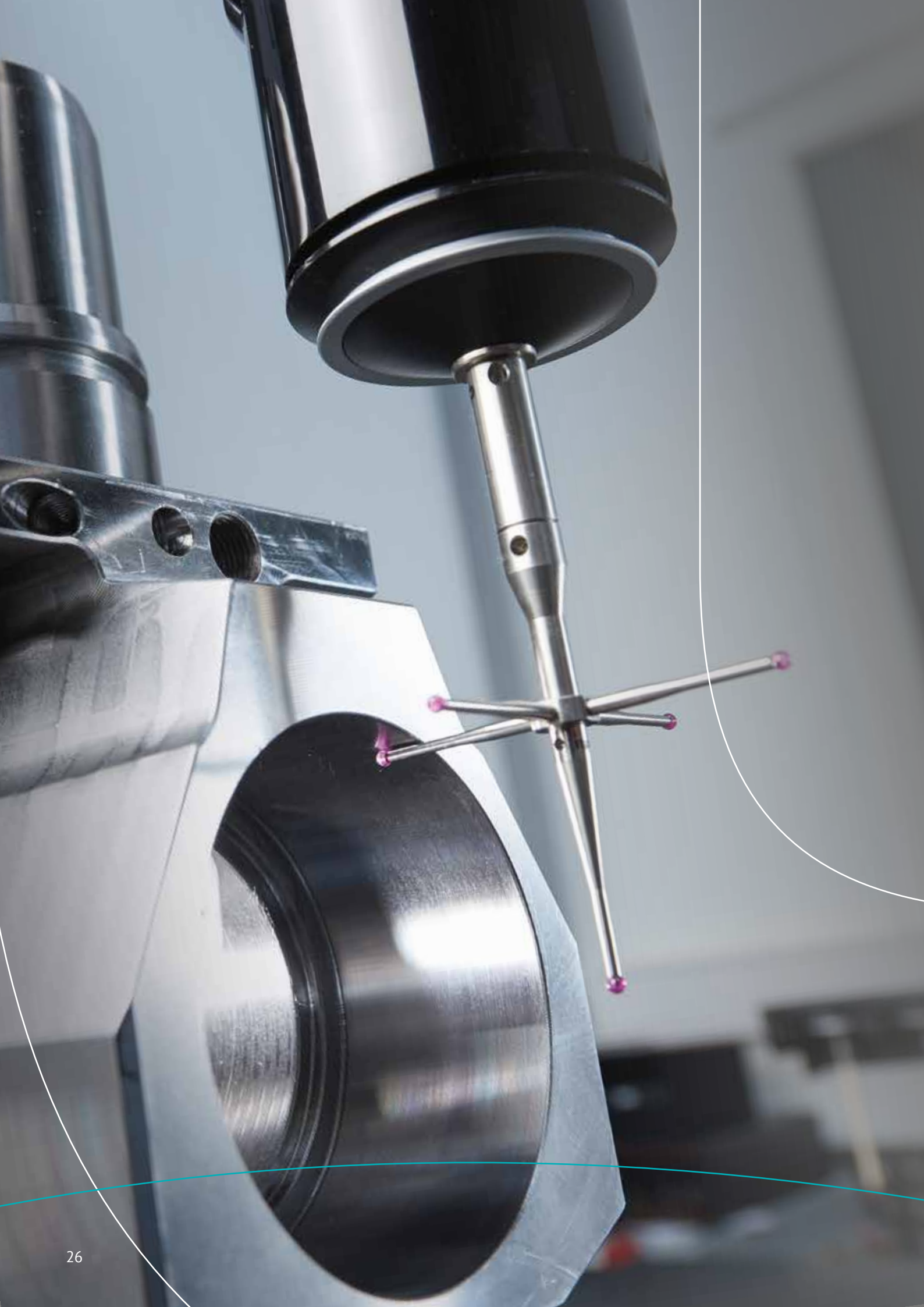
with the digital tool program
from heimatec

To achieve greater productivity in the machining process, critical tool parameters must be controlled and managed. Digitization now also enables process optimization for live tools.

With heimatec.Sensoric, tool parameters such as rpm, temperature and moisture of tool are being recorded and transmitted to a control unit. Digital tool management includes checking when the next servicing is needed and which measures must be taken then.

heimatec.Sensoric is the first building block in a digital concept with a comprehensive approach. Other solutions are already being developed and will supplement our digital tool management concept step by step.





Own production with multi-level quality management

The precision tools from heimatec are used all over the world – but they are developed and produced exclusively at the headquarters in Renchen, Germany. The vertical integration of our production is nearly 100% and thanks to all of our employees' uncompromising quality standards, we can guarantee the highest precision, functional reliability and dimensional accuracy in all our products and services.

heimatec's quality assurance system has a multi-level structure: Each production step is accompanied by an inspection of individual parts and at the end of the manufacturing process, the entire assembly is subject to a detailed functional review.

Large service offer

for comprehensive care

Repair of our own and third-party products

Precision tools are valuable work materials – this is why it has always been our principle to not just sell new products but also perform repairs. In the course of this service, we perform a thorough incoming inspection on the tools submitted to us and then repair them professionally. We repair our own tools as well as third-party products.

Training and instruction for optimal tool use

To ensure that our customers can use the heimatec precision tools for a long time to their fullest extent, we offer training and instruction at our headquarters in Renchen. Our practical training and instruction includes the assembly of bearings and gears, maintenance of internal tool cooling or the adjustment of couplings.

Wide range of spare parts and accessories

As much as possible from one competent source – we strive to satisfy this high standard with our wide range of spare parts and accessories.

For that reason, users of precision tools can also buy reducing bushing, collets, collet chucks, sealing washers, clamping nuts and many other accessories and components from heimatec.



Optimal tool selection

with the part number system from heimatec

Precision tools for machining centers



axial speed
increasers/gear
reducers
7 013 ...



right angle
drilling and
milling head,
360° rotatable
7 030 .../7 039 ...



right angle
milling head,
360° rotatable
7 031 ...



right angle
tapping head,
360° rotatable
7 032 ...



angle disk
milling head,
360° rotatable
7 037 ...



adjustable angle,
360° rotatable
7 040 ...



multi spindle
drilling head
7 050 ...

Precision tools for turning centers



axial drilling
and milling head
8 010 ...



axial milling head
8 011 ...



axial tapping head
8 012 ...



axial drilling and
milling head, offset
8 019 ...



radial drilling
and milling head
8 030 ...



radial milling head
8 031 ...



radial tapping head
8 032 ...



radial tapping head,
offset
8 035 ...



radial drilling
and milling head,
offset
8 033 ...



radial drilling
and milling head,
double spindle
8 039 ...



radial drilling
and milling head,
special
8 039 ...



axial drilling
and milling head,
y-axis adjustable
8 018 ...



radial drilling
and milling head,
y-axis adjustable
8 038 ...



universal head
8 040 ...



universal head,
offset
8 043 ...



woodruff keycutter
8 037 ...



radial disc
milling head
8 037 ...



radial disc milling
head, turnable
8 037 ...



multi spindle
drilling head
8 050 ...



multi spindle
radial head
8 053 ...



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