

heimatec®

Precision Tools

World leader in live tools, angle heads,
and multi-spindle drill heads



heimatec GmbH headquarters-Germany



Heimatec is an international manufacturing company headquartered in Renchen, Germany. Heimatec's 40,000 square foot facility, on 7.5 acres, is home to over 100 employees including office and manufacturing staff. Our experienced and innovative staff is dedicated to providing our customers with the latest and best technology available. Our U.S. Headquarters, which is located in the Chicagoland area, services North America.



heimatec Inc. USA headquarters

The Way to Success

- 1987 Heimatec Automations was founded
- 1988 Started designing, assembling, and marketing Live Tools.
- 1997 Started "in house" manufacturing of components
- 2001 Invested in 12 "state of the art" 3D-Workstations for the design department
Founded heimatec GmbH Präzisionswerkzeuge (Precision Tools)
- 2003 Opened 1st international sales office in Moscow
Purchased Multi Spindle manufacturing company to supply large Transfer Lines and System Builders with special purpose tools
- 2006 Set up new research and development department
- 2007 Purchased several new CNC Lathes and Machining Centers to increase production
- 2008 Moved into new facility and expanded manufacturing capacity
Optimized packing and shipping department
- 2010 Opens new U.S. Headquarters

The Standard of Precision

Heimatec uses the best possible materials to manufacture our Tools for the highest possible quality. We guarantee top quality Tools by adhering to strict and frequent inspections in our manufacturing process. The surface of the Tool bodies are black oxidized for maximum resistance.

Output Systems

ER Collet
Weldon
Arbors
Sandvik-Coromant-Capto
Komet ABS system
HSK
CAT/SK/BT
easy-quick HT

Coolant supply

External Coolant Supply
Internal Coolant Supply up to 375 psi
High Pressure Internal Coolant Supply up to 2,000 psi

Gear ratios

3:1 reducer
1:7 multiplier

Bearing Systems

All bearing seats are precision manufactured for greater output and alignment accuracy. Bearings are standard high precision spindle bearings, ABEC 7(P4), with optional Timken bearings with ABEC 5(P5), or custom bearing systems to assure the highest possible spindle concentricity. Special applications can be accommodated through the use of special stronger bearing systems. For example – Timken bearings or a combination of bearings can be used to provide extreme stability and rigidity specially in milling applications.

Gear Systems

Only bevel gears with inclined teeth, made from special high resistance gear steel, specially hardened, ground and lapped in sets, are used to provide a smooth transmission output and minimal run out. Spur gears with straight or inclined teeth, made from special high resistance gear steel, specially hardened, ground and lapped in sets, are used to provide smooth transmission output and minimal run out.

Spindles and Accuracy

Each tool spindle is precision ground for the highest possible concentricity at the collet. All spindles have a splash ring at the front to cover the seals from damage and splash coolant. Run out is measured in the taper of the collet output. The majority of Tools have a 0.006mm (0.0002") maximum run out. The maximum allowable run out is 0.01mm (0.00039"). Specially designed seals are used against coolant contamination for units using internal coolant supply.

Quality and Lubrication

We have 100% control and documentation of all components, dimensional data and tolerances. All Tool Holders have a lifetime lubrication using a special Teflon based grease. No additional lubrication is necessary. Our standard spindle speeds are 4,000 – 6,000 rpm, and our speed increasers have up to a 15,000 – 18,000 rpm capability. The serial number on the tool makes identification quick and easy.

heimatec has the solution for all your application needs!

Live Tools for CNC Lathes



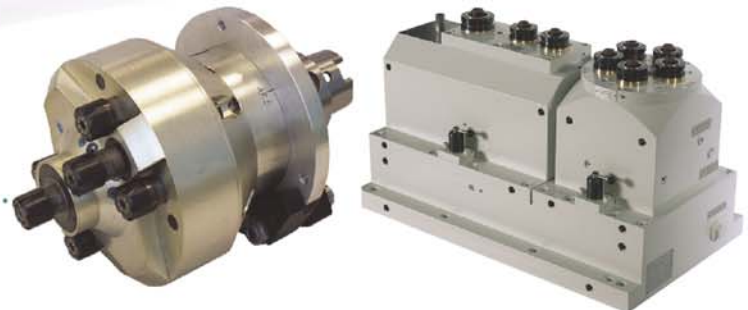
Angle Heads for CNC Machining Centers

Static Tools



Custom Tools

Multi Spindle Tools



Static Tools

High Quality Static Tool Holders

Our Tools are all manufactured to meet today's DIN standards. This complements the high quality manufacturing systems in the market place and helps to produce the highest precision work pieces. "Quality tools produce quality parts!"

Custom made Static Tools

Let our Design Department solve your special application and manufacturing needs by customizing a Tool to suit your requirements. We can provide custom made Tools for all CNC Lathes. These Tools have the same superior quality as our standard Tools.

Optimal Connection Between Machine and Cutting Tool

Heimatec's Tools offer high efficiency and long Tool life due to its characteristics of complimenting the precision of the machine tool. This enables our customers to enjoy problem-free manufacturing and time saving operations.



Live Tools for CNC Lathes

Our product line includes Tools for all common CNC Lathes

Coolant Systems

External Coolant Supply
Internal Coolant Supply up to 375 psi
High Pressure Internal Coolant supply up to 2,000 psi

High Torque Tools

These Tools allow for heavy and difficult applications.

Unique and Easy Method to Align Tools

Adjustable aligning system for Live and Static Tools for use on Turrets with or without setup pin

Gear Ratios

3:1 reducer
1:7 multiplier

Spindle Speeds

Standard spindle speeds are 4,000 – 6,000 rpm, and our speed increasers have up to a 15,000 – 18,000 rpm capability.



Bearing Systems

All bearing seats are precision manufactured for greater output and alignment accuracy. Bearings are standard high precision spindle bearings, ABEC 7(P4), with optional Timken bearings with ABEC 5(P5), or custom bearing systems to assure the highest possible spindle concentricity. Special applications can be accommodated through the use of special stronger bearing systems. For example – Timken bearings or a combination of bearings can be used to provide extreme stability and rigidity specially in milling applications.

Gear Systems

Only bevel gears with inclined teeth, made from special high resistance gear steel, specially hardened, ground and lapped in sets, are used to provide a smooth transmission output and minimal run out. Spur gears with straight or inclined teeth, made from special high resistance gear steel, specially hardened, ground and lapped in sets, are used to provide smooth transmission output and minimal run out.

Specials

The knowledge and experience of our research and development engineers allow us to solve special application requirements.



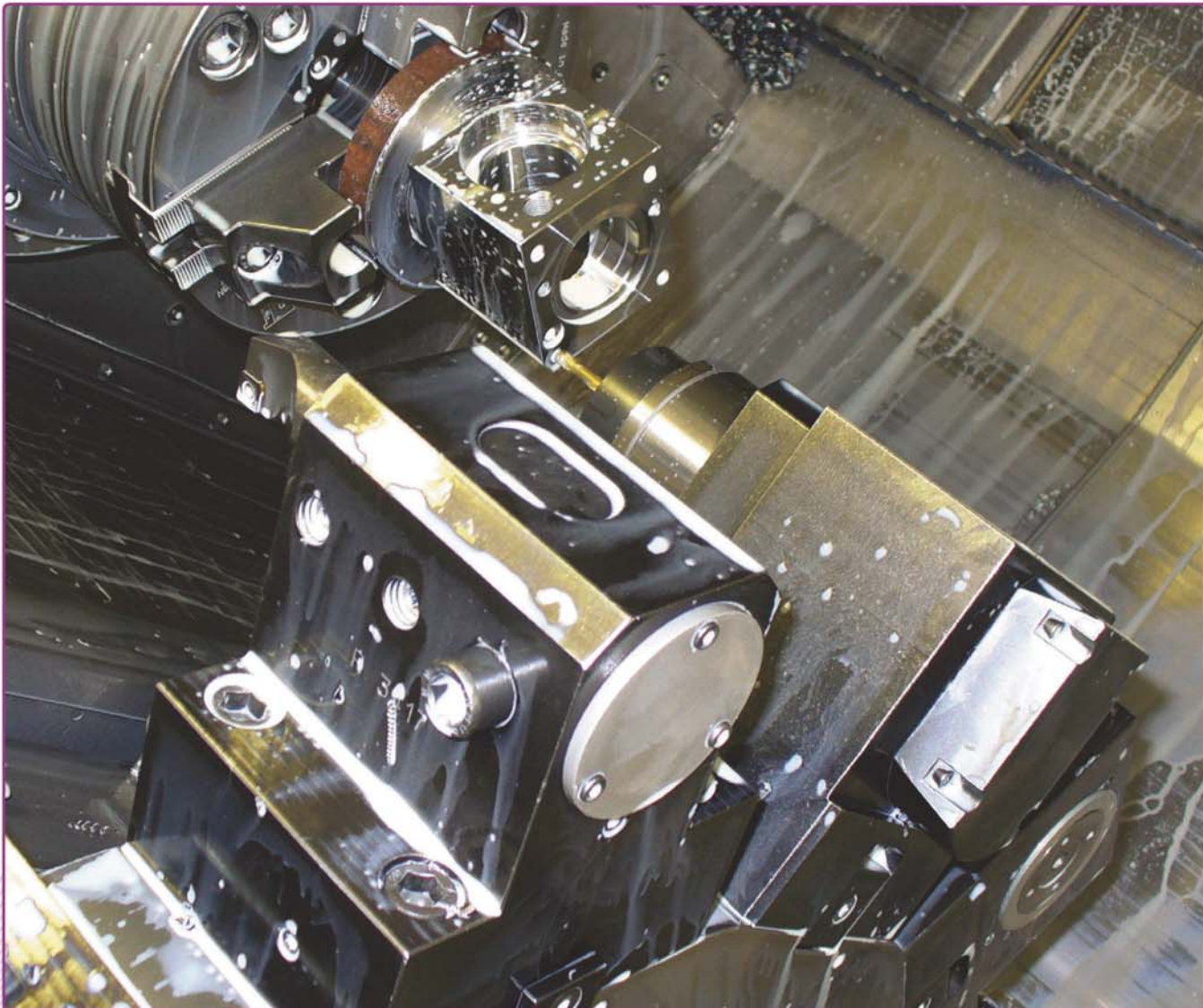
Live Tools for CNC Lathes

Heimatec Tools are used daily in the following Industries:

- Aerospace
- Energy
- Automotive
- Medical
- Woodworking
- Plastic
- Mold Making

Materials

Any materials can be cut with our Tools including high tensile steel, titanium, inconel, plastic, and wood.



Multiple Applications for all Lathes



Output Systems

- ER Collet
- Weldon
- Arbors
- Sandvik-Coromant-Capto
- Komet ABS system
- HSK
- CAT/SK/BT
- *easy-quick* HT

Drive Systems:

- Spline
- Bevel Gear
- Special Couplings
- TOEM
- Tang...and more



Angle Heads

All Angle Heads are manufactured using the same quality standards and technical features as our Live Tools



Heimatec Angle Heads are manufactured from special high tensile aluminum and all surfaces are sand-blasted and anodized blue. We only use high precision spindle bearings, ABEC 7(P4), Timken bearings, or custom bearing systems to assure the highest possible spindle concentricity.

Our Angle Heads are excellent for heavy milling operations due to the support by twin or double twin set of matched angular contact bearings, and a rear radial support bearing.

- Interchangeable torque arms
- Spindle speeds up to 15,000 rpm
- Torque rating up to 150 Nm
- Powerful, accurate, and rigid
- Applications include milling, drilling, and tapping
- 360° body rotation
- Compatible with most Automatic Tool Changers
- 1:1 standard gear ratio
- Torque arm alignment ring
- Wrenches included



easy-quick HT

The Quick Change System of heimatec saves time and money!

Time Saving:

- Through use of our special clamping screw, our *easy-quick* HT system offers comfortable handling. All adapters can be changed within seconds with the highest available precision.
- The adapters can be changed by unclamping just one single bolt minimizing downtime.
- The Tool remains in the machine eliminating time consuming adjustments.

Cost Saving:

- Lower initial investments
- Minimized Tooling time
- Reduction of Tool quantity
- Lower inventory costs



u-tec

The NEW quick change system, which makes EVERYTHING possible!

Forget everything you knew

about quick change systems. Now there is **u-tec** - the new dimension in machining!
With **u-tec** a new era is dawning.

Our engineers have successfully created a quick change system that is so universal and economical, it's hard to believe.

Do not try to compare **u-tec** with any known systems. You will fail!
Instead, just enjoy the benefits of this unrivalled ingenious system:

- Extremely high power transmission by polygonal drive
- Use of **u-tec** with collet nuts, with internal and external threads
- Enormous saving potential for tooling, because with all standard heimatec holders standard collets or **u-tec** adapters can be used
- All **u-tec** adapters can be clamped with standard collet nuts
- Very high cost savings during operation by a minimum set up time



economical powerful highest precision highest accuracy increased torque transmission

Therefore as usual:

- Very short and compact tool length
- Extremely high bearing rigidity
- Internal coolant up to 120 bar (1800 PSI)
- One standard heimatec tool
- many interchangeable adapters
- boring
- sinking
- threading
- milling
- turning
- And much more...

Multi Spindle Heads

heimatec produces large Multi Spindle Machining Heads. These Tools compliment our other existing high quality products.

Applications:

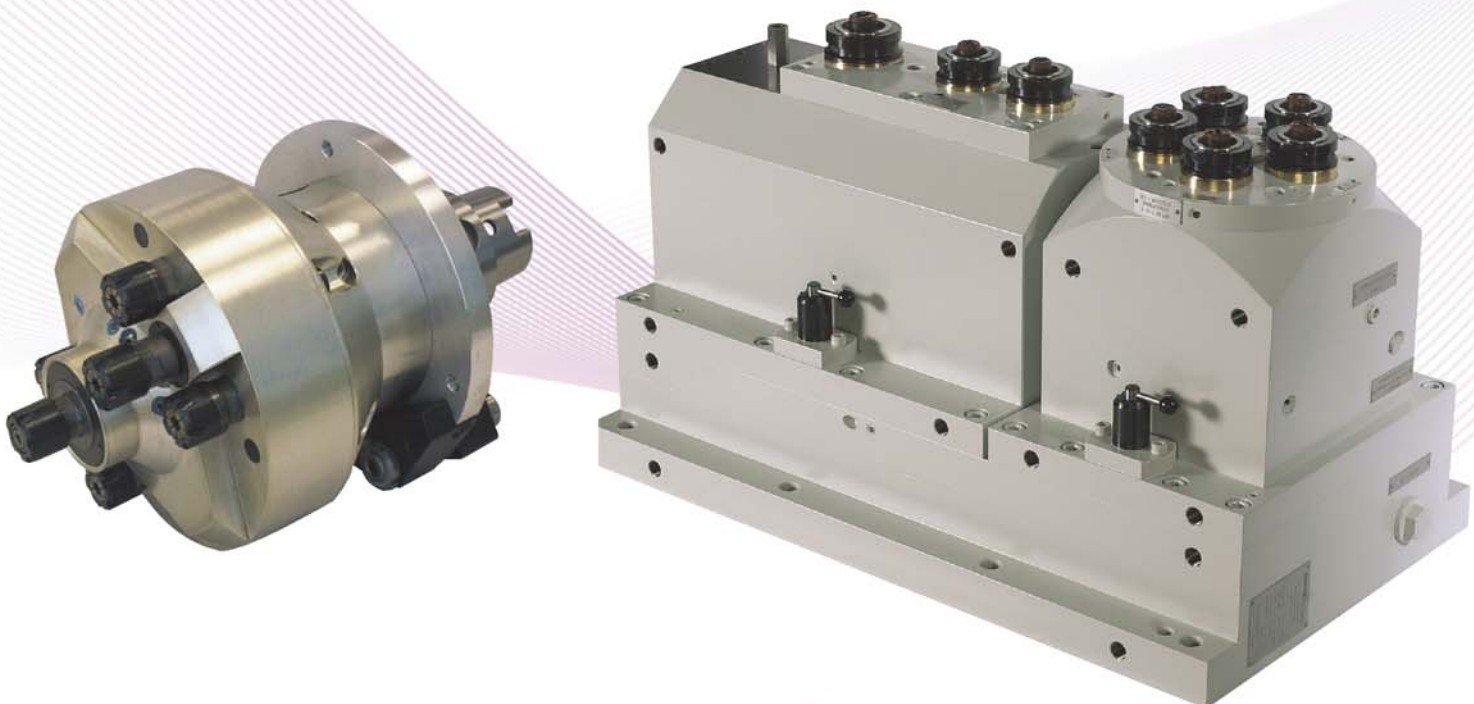
Our Multi Spindle Machining Heads are mainly used in special purpose machines such as Transfer Lines, Rotary Machines, and Drill Head Changers. These machines are used in various industries such as automotive and aerospace and are suitable to produce individual holes, as well as complete drill patterns. These patterns can consist of several holes with the same or different diameters. One Tool can perform several different operations simultaneously. All Heads are available with internal coolant or a minimal lubrication system.

Application Examples:

- Drilling
- Boring
- Countersink
- Reaming
- Facing
- Turning
- Milling
- Tapping

heimatec Multi Spindle Heads fulfill all DIN 69002 specifications for:

- Run out
- Spindle speeds
- Tight bore tolerances
- Inside accuracy
- High coolant pressure capabilities
- High coolant flow capabilities
- Reliability
- Product security
- Safety regulations followed



Quality and Service:

All Spindles are balanced and lubricated with a special long life grease. Non contact sealing takes place from the front and in the rear, supported in front by an air purge system. For maintenance and repair the Spindles are easily replaceable as a compact unit. The Spindle Drive incorporates a "backlash free" clutch mechanism between the transmission and spindle housing. This feature helps to relieve and minimize start up stresses from the drive motor. The accuracy and maximum allowable stress of each Multi Spindle Drilling Head is examined and documented by our specialists before shipping. All Heads are tested at the maximum possible load requirements. We specialize in producing Heads which require high spindle loads, extremely high speeds, big coolant quantities, or tight spindle distances.

Facts:

- Clamping Systems are manufactured to customer's specifications. HSK or other face contact outputs are used for high precision applications.
- Optimal rigidity and high speeds are achieved through the use of high precision angular contact bearings and pressure angled spindles.
- All transmission parts run in an oil bath.
- Gears have inclined teeth and are hardened and lapped.
- All heimatec Multi Spindle Heads can be equipped with an oil-cooled systems, like special heat exchangers or refrigeration systems.





16 East Piper Lane

Suite 121

Prospect Heights, IL 60070

Phone: 847-749-0633 Fax: 847-749-2445

www.heimatecinc.com

www.heimatec.de

