

# ANGLE HEADS

**heimatec**<sup>®</sup>  
Precision Tools



PRECISION

# THE STANDARD OF PRECISION



## 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 Sales and Service U.S. Headquarters

[Heimatec 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. In addition, we are also servicing our U.S. customers from our sales and service facility located in the Chicagoland area.



## Why is Heimatec 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  
heimatec easy-quick HT quick change system

### 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. Only high precision spindle bearings, Timken bearings or special bearing systems used for heavy milling operations, are rated ABEC 7 (P4) or better to assure the highest possible spindle concentricity. All Timken Bearings are rated ABEC 5 (P5) which is the highest available quality. 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 a 100% control and documentation of all built in components, listing dimensions, and tolerances. All we need is the serial number of Tool to identify it. 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.

# ANGLE HEADS

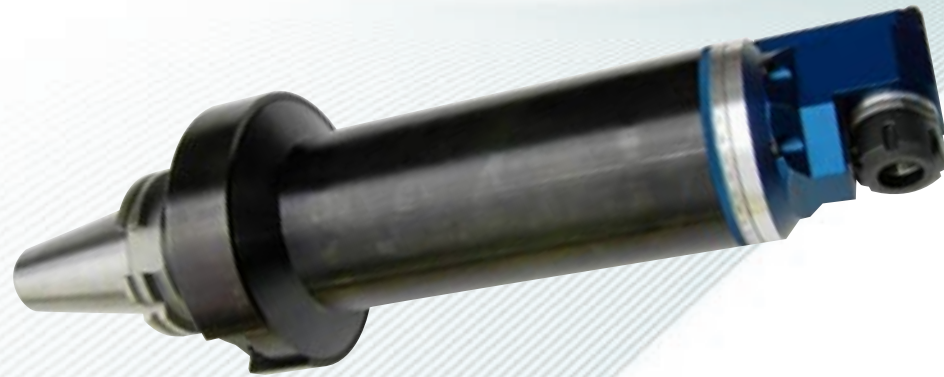
## Angle Head features and specifications

Heimatec 's standard and custom Angle Heads are designed and manufactured to handle the most difficult manufacturing processes. They are ideal for heavy milling operations because they are supported by twin or double twin sets of matched angular contact bearings plus a rear radial support bearing.

All gears used in our Angle Heads have inclined teeth, are made from high resistance gear steel, and are specially hardened, ground and lapped in sets to provide the smoothest transmission output available.

Heimatec Angle Heads are made from special high tensile aluminum and all surfaces are sandblasted 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.

### Special custom tools available



- Rigid, accurate and powerful
- Ideal for milling, drilling and tapping applications
- Full 360o body rotation with positive compression locking
- 90o incremental repositioning without indicating
- Spindle rotation is reversed
- Accommodated by most ATCs
- Universal ring primary alignment with main spindle's drive keys
- Maximum torque: 150 Nm
- Gear ratio: 1:1 standard (Higher or lower ratios available)
- Spindle speeds up to 15,000 rpm
- Interchangeable torque arms

## STANDARD

CAT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 030 46 000	ER 32	1 : 1	37	6000	17	65
7 030 47 004	HT 5	1 : 1	37	6000	17	65

BT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 030 46 004	ER 32	1 : 1	37	6000	17	65
7 030 47 005	HT 5	1 : 1	37	6000	17	65

HSK 63A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 030 56 002	ER 32	1 : 1	37	6000	17	65
7 030 57 000	HT 5	1 : 1	37	6000	17	65

CAT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 030 67 004	ER 40	1 : 1	37	6000	26	110
7 030 67 014	HT 5	1 : 1	37	6000	26	110

BT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 030 67 007	ER 40	1 : 1	37	6000	26	110
7 030 67 016	HT 5	1 : 1	37	6000	26	110

HSK 100A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 030 77 000	ER 40	1 : 1	37	6000	26	110
7 030 77 001	HT 5	1 : 1	37	6000	26	110



All Tools come with Stop Block, Wrenches and Instruction Manual. Also available with other outputs. Also available with other "center" dimensions.

Warranty: 1 year on parts and labor. All items are subject to technical changes.

# ANGLE HEADS

## OFFSET



CAT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 45 031	ER 25	1 : 1	18	8000	12	65
7 039 46 030	HT 4	1 : 1	18	8000	12	65
BT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 45 030	ER 25	1 : 1	18	8000	12	65
7 039 46 029	HT 4	1 : 1	18	8000	12	65
HSK 63A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 55 009	ER 25	1 : 1	18	8000	12	65
7 039 56 006	HT 4	1 : 1	18	8000	12	65
CAT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 66 042	ER 32	1 : 1	37	8000	26	110
7 039 67 030	HT 5	1 : 1	37	8000	26	110
BT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 66 041	ER 32	1 : 1	37	8000	26	110
7 039 67 029	HT 5	1 : 1	37	8000	26	110
HSK 100A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 76 007	ER 32	1 : 1	37	8000	26	110
7 039 77 006	HT 5	1 : 1	37	8000	26	110

## SLIM



CAT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 033 44 000	ER 20	1 : 1	12	6000	13	65
BT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 033 44 004	ER 20	1 : 1	12	6000	13	65
HSK 63A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 033 54 000	ER 20	1 : 1	12	6000	13	65
CAT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 033 66 007	ER 32	1 : 1	37	6000	25	110
BT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 033 66 010	ER 32	1 : 1	37	6000	25	110
HSK 100A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 033 76 000	ER 32	1 : 1	37	6000	25	110

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# ANGLE HEADS

## DUAL



CAT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 46 004	ER 32	1 : 1	37	6000	18	65
BT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 46 023	ER 32	1 : 1	37	6000	18	65
HSK 63A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 56 005	ER 32	1 : 1	37	6000	18	65
CAT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 67 004	ER 40	1 : 1	37	6000	28	110
BT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 67 027	ER 40	1 : 1	37	6000	28	110
HSK 100A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 039 77 005	ER 40	1 : 1	37	6000	28	110

## ADJUSTABLE

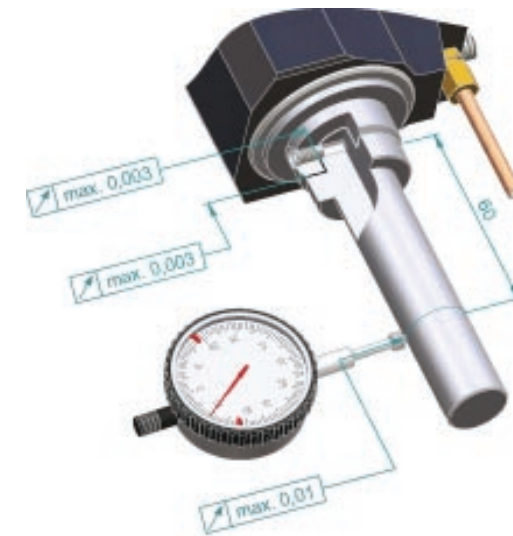
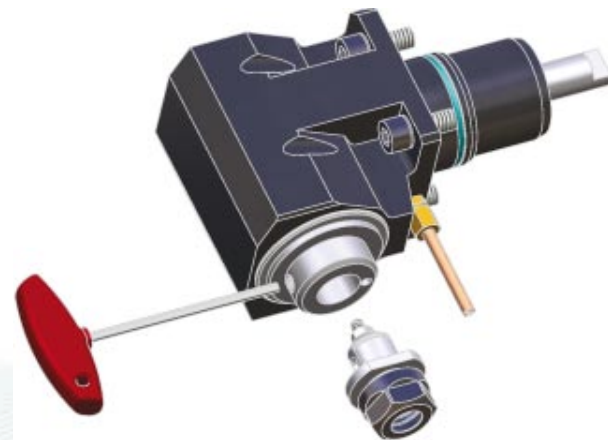


CAT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 049 45 009	ER 20	1 : 1	18	8000	12	65
BT 40						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 049 55 008	ER 25	1 : 1	18	8000	12	65
HSK 63A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 049 55 002	ER 25	1 : 1	18	8000	12	65
CAT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 049 66 006	ER 32	1 : 1	18	8000	35	110
BT 50						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 049 66 008	ER 32	1 : 1	18	8000	35	110
HSK 100A						
Part No.	Output	Ratio	Torque (Ft/lb)	RPM	Weight (lb)	Center Distance (mm)
7 049 76 001	ER 32	1 : 1	18	8000	35	110

All Tools come with Stop Block, Wrenches and Instruction Manual  
Also available with other outputs.  
Also available with other "center" dimensions

Warranty: 1 year on parts and labor  
All items are subject to technical changes.

# easy-quick HT - THE QUICK CHANGE SYSTEM OF HEIMATEC



SIZE HT 2	
8 779 42 003	Adapter HT 2 - ER 8 M
8 779 43 002	Adapter HT 2 - ER 11
8 779 42 005	Adapter HT 2 - ER 8 M - long
8 779 42 001	Adapter HT 2 - arbor 10
8 779 43 001	Adapter HT 2 - arbor 13
8 208 44 000	Adapter HT 2 - gauge 15x80
8 779 49 000	Adapter HT 2 - plug
8 779 49 001	Adapter HT 2 - blank

SIZE HT 3	
8 779 53 005	Adapter HT 3 - ER 11
8 779 54 000	Adapter HT 3 - ER 16
8 779 52 004	Adapter HT 3 - ER 8 M - long
8 779 53 007	Adapter HT 3 - ER 11- long
8 779 52 005	Adapter HT 3 - arbor 10
8 779 53 001	Adapter HT 3 - arbor 13
8 779 54 001	Adapter HT 3 - arbor 16
8 208 56 000	Adapter HT 3 - gauge 20x100
8 779 59 000	Adapter HT 3 - plug
8 779 59 001	Adapter HT 3 - blank

SIZE HT 4	
8 779 64 000	Adapter HT 4 - ER 16
8 779 64 001	Adapter HT 4 - ER 20
8 779 65 001	Adapter HT 4 - ER 25
8 779 64 027	Adapter HT 4 - Softtap ER 16
8 779 63 009	Adapter HT 4 - ER 11 - long
8 779 64 012	Adapter HT 4 - ER 20 - long
8 779 64 016	Adapter HT 4 - ER 16 - long
8 779 65 004	Adapter HT 4 - ER 25 - long
8 779 62 005	Adapter HT 4 - arbor 10
8 779 63 007	Adapter HT 4 - arbor 13
8 779 64 005	Adapter HT 4 - arbor 16
8 779 65 002	Adapter HT 4 - arbor 22
8 208 67 000	Adapter HT 4 - gauge 25x120
8 779 69 000	Adapter HT 4 - plug
8 779 69 002	Adapter HT 4 - blank

SIZE HT 5	
8 779 74 002	Adapter HT 5 - ER 20
8 779 75 001	Adapter HT 5 - ER 25
8 779 76 002	Adapter HT 5 - ER 32
8 779 74 021	Adapter HT 5 - Softtap ER 16
8 779 74 006	Adapter HT 5 - ER 16 long
8 779 74 018	Adapter HT 5 - ER 20 - long
8 779 75 010	Adapter HT 5 - ER 25 - long
8 779 74 003	Adapter HT 5 - arbor 16
8 779 75 003	Adapter HT 5 - arbor 22
8 779 76 005	Adapter HT 5 - arbor 27
8 208 77 000	Adapter HT 5 - gauge 30x150
8 779 79 002	Adapter HT 5 - plug
8 779 79 003	Adapter HT 5 - blank

SIZE HT 6	
8 779 84 000	Adapter HT 6 - ER 20
8 779 85 000	Adapter HT 6 - ER 25
8 779 86 000	Adapter HT 6 - ER 32
8 779 87 001	Adapter HT 6 - ER 40
8 779 84 014	Adapter HT 6 - Softtap ER 16
8 779 84 010	Adapter HT 6 - ER 16 - long
8 779 84 011	Adapter HT 6 - ER 20 - long
8 779 85 008	Adapter HT 6 - ER 25 - long
8 779 86 005	Adapter HT 6 - ER 32 - long
8 779 84 005	Adapter HT 6 - arbor 16
8 779 85 002	Adapter HT 6 - arbor 22
8 779 86 003	Adapter HT 6 - arbor 27
8 779 87 002	Adapter HT 6 - arbor 32
8 208 89 000	Adapter HT 6 - gauge 40x200
8 779 89 000	Adapter HT 6 - plug
8 779 89 001	Adapter HT 6 - blank

SIZE HT 7	
8 779 95 001	Adapter HT 7 - ER 25
8 779 96 002	Adapter HT 7 - ER 32
8 779 97 002	Adapter HT 7 - ER 40 CL
8 779 94 006	Adapter HT 7 - ER 20 - long
8 779 95 004	Adapter HT 7 - ER 25 - long
8 779 96 005	Adapter HT 7 - ER 32 - long
8 779 95 002	Adapter HT 7 - arbor 22
8 779 96 001	Adapter HT 7 - arbor 27
8 779 97 001	Adapter HT 7 - arbor 32
8 779 98 002	Adapter HT 7 - arbor 40
8 208 99 000	Adapter HT 7 - gauge 40 x 200
8 779 99 000	Adapter HT 7 - plug
8 779 99 001	Adapter HT 7 - blank

# LIVE TOOLS FOR CNC LATHES

Our product line includes Tools for all common CNC Lathes  
We have the solution for all your application needs!

## 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.

## Gear Ratios

3:1 reducer  
1:7 multiplier

## Spindle Speeds

Our 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

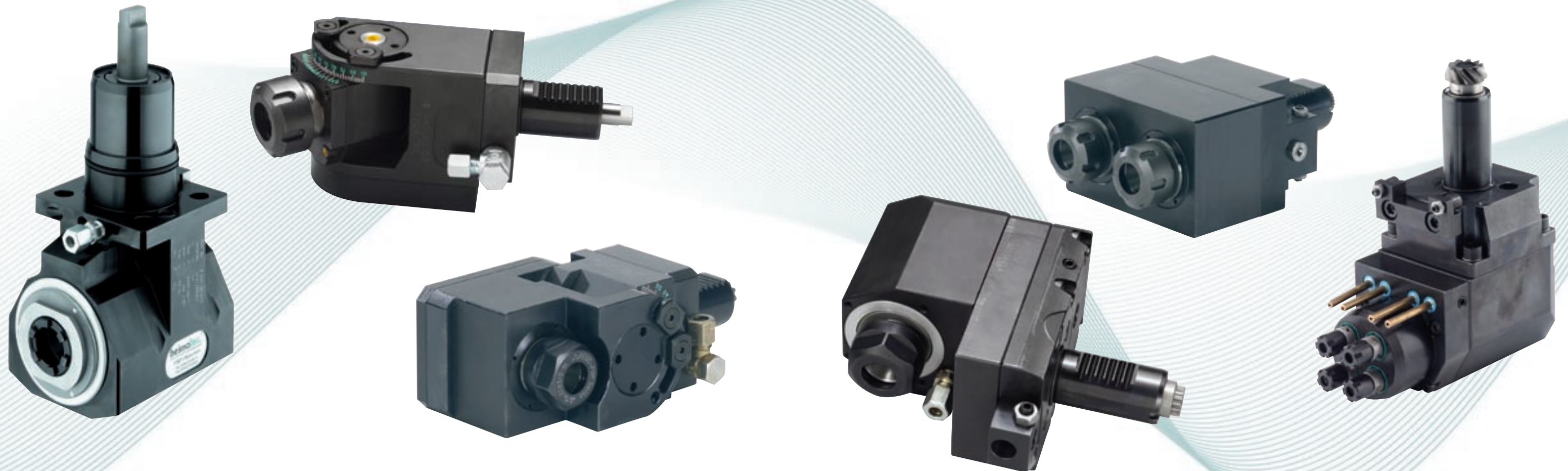
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## Gear Systems

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 flexibility of our research and development engineers allow us to solve special application requirements.



# 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.

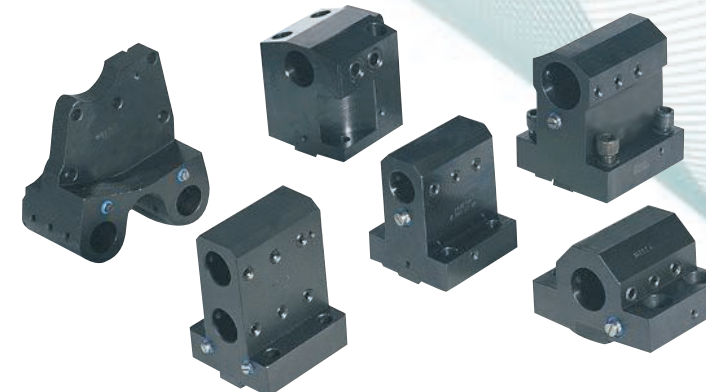
Live Tooling for CNC Lathes



Right Angle Heads, Multi Spindle Heads for CNC Machining Centers



Special Tooling





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PRECISION