

HAIMER®
Quality Wins.

MICROSET TOOL PRESETTERS



100%
**MADE IN
GERMANY**
MADE BY HAIMER

www.haimer.com

PRESETTING TECHNOLOGY



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Quality starts with the product. Service completes it.

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TOP 10 REASONS TO USE HAIMER MICROSET PRESETTING TECHNOLOGY

1

Increased machine utilization

Reducing set-up time by as much as 70% or more translates to more machine “up-time” and productivity.

6

More cost-effective than lasers

Machines make money when they are making chips and not being used as measuring devices. Furthermore, one presetter can manage 10–30 machines, which is more cost-effective than purchasing a laser for each machine.

2

Faster set-ups

Even if set-ups are not being performed offline, using a tool presetter is significantly faster than setting tools in the machine manually or with a laser.

7

Consistency

Confirmation that tools are set properly, within specified tolerances, every time.

3

Reduced scrap

Microset presetters use optical cameras for measurement, which provide higher accuracy versus manual setting methods. Options like automatic focusing and measuring further reduce deviations in measurement, regardless of the operator.

8

Ease of use

Simple software makes the process as easy as possible for all users. No software engineering degrees needed!

4

Longer tool life

Runout that is not often inspected for non-critical assemblies can be measured and accounted for easily with a presetter, thereby extending tool life by preventing inaccurate tools from ever entering the machine.

9

Universal

Easy to preset milling tools, adjustable boring heads, complex multi-inserted face-mills, PCD form tools, step-drills, etc. from all makes and manufacturers.

5

Fewer collisions

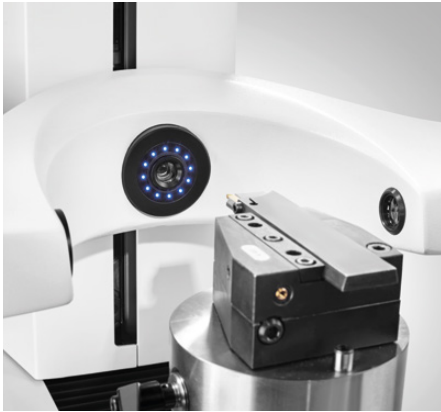
With optional data transmission methods like post-processing or RFID, the manual entry of offsets into the machine can be eliminated. This reduces errors that occur from operators accidentally mistyping offset values.

10

Industry 4.0 success

Industry 4.0 is all about using gathered data to automate changes on the fly that optimize the machining process. The future smart factory will require technologies that can receive and transmit such data. HAIMER Microset tool presetters are able to communicate with a variety of machine controls, CAD/CAM systems and tool management systems.

Precision and productivity in production



Whether presetting, shrinking, balancing or inspecting and measuring – we offer the perfect solution for all tool sizes and work environments. Improve the quality and precision of your work pieces with our know-how and wide range of products.



UNO series – unique high-tech features in entry level tool presetters.

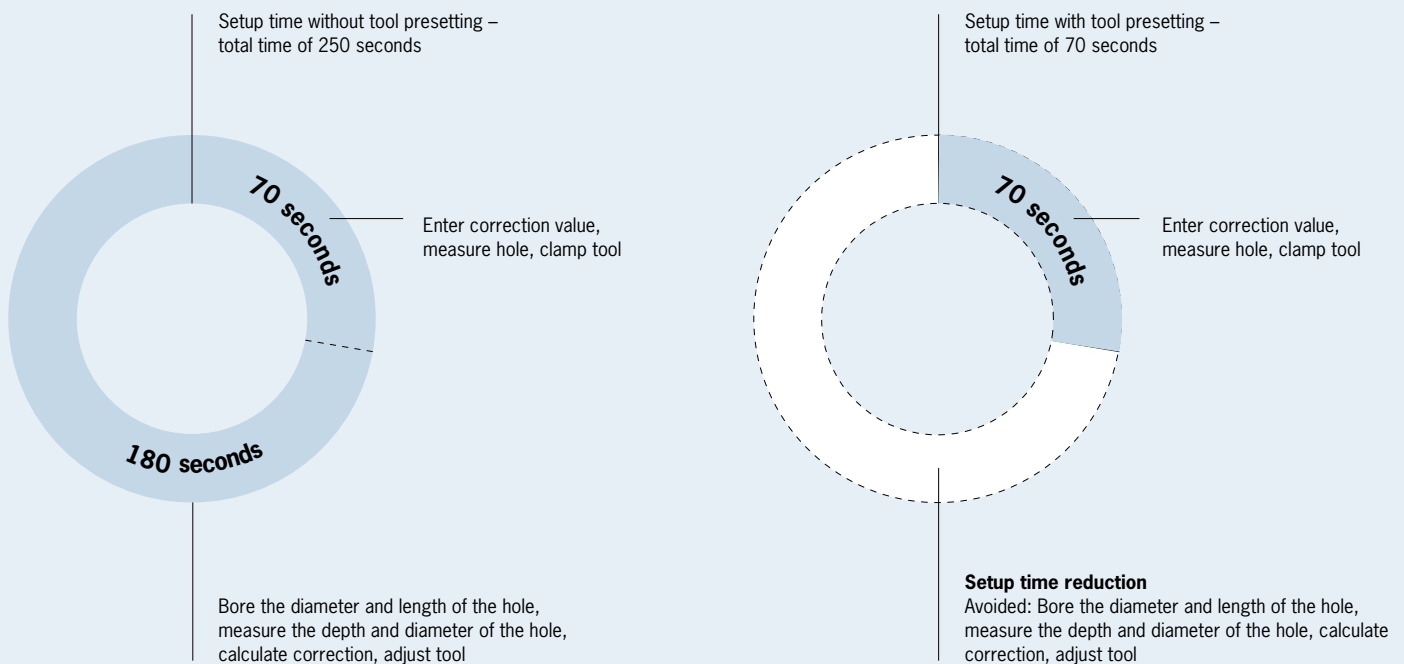
TOOL PRESETTERS — YOUR BENEFITS

Save time and money, improve work piece quality

The efficient tool presetting equipment from HAIMER Microset optimizes your machining processes from the ground up. Improve your tool life, achieve better surface finishes and boost overall process reliability in your production while minimizing the idle time of your machines.

- Minimize the downtime of your machine
- Reduce scrap and tooling costs
- Increase process reliability in your production
- Improve your tool life
- Generate consistent quality in your products

Reduce up to 70 % of your setup time!



UNO SERIES — EQUIPMENT AND FUNCTIONALITY

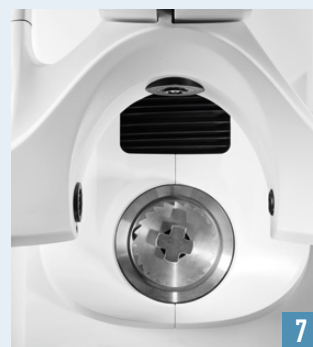
UNO series — entry level tool presetters include high-tech options as standard



In addition to its precision, speed and reliability, the UNO series also includes numerous features in hardware. The new design and improved ergonomics set the standard by using high-quality components from Festo/SMC, Bosch Rexroth/THK, Heidenhain, and IDS.



- 1 Camera system for setting the center of rotation
- 2 Tactile measurement of the center of rotation
- 3 Release-by-touch function, easy to operate without buttons
- 4 Useful system cabinet with 3 drawers, 1 door and internal oil tray.
Also includes 3 maintenance doors (on all sides)
- 5 Keypad and μm-precise adjustment
- 6 150° swivelling adapter storage
- 7+8 Measuring based on the snap gauge principle for diameters up to 100 mm



TOOL PRESETTERS — YOUR BENEFITS

Save time and money, improve work piece quality

The autofocus and automatic drive models of the UNO series provide unique advantages for tool measurement at the highest level. Choose the presetter that meets your needs.

Highlights

Reduce the work load of the operator through the automation of presetting, with fully or partially automated measuring functions. The autofocus and automatic drive models of the UNO series provide unique advantages for tool measurement at the highest level.



autofocus

Automatically focuses on the cutting edge. Motorized spindles with convenient system cabinet and 24", 10 point touchscreen as standard.



automatic drive

Fully automatic tool presetting and measurement independent of the operator (CNC-controlled, 3-axis), with convenient system cabinet and 24" touch display as standard.

VIO linear – maximum ease of use and functionality



Optimize process reliability in your production with fully automatic measurement capabilities. The open device platform allows for the integration of both new and existing production processes.

Maximum stability and precision

The FEM-optimized, thermally stable cast iron construction of the VIO linear series ensures accurate measuring results and equipment longevity. Additionally, highly dynamic, wear-free linear drives ensure accurate long-term quality. The parallel drive and guidance system ensures optimal distribution of forces and guarantees $\pm 2 \mu\text{m}$ measurement repeatability.

Highlights

- Torsionally stiff even under the highest loads
- FEM-optimized and thermally stable cast iron construction
- Maximum tool weight 160 kg
- Fast, silent and highly accurate cutting edge approach via unique linear drive

Worldwide leader in innovation:

- Fully automatic measuring cycles for maximum operating convenience
- High quality components from Heidenhain, Bosch Rexroth/THK
- Maintenance free linear drives for higher speed, low noise and highly accurate positioning
- User-friendly operating panel ensures ultimate ergonomics
- High power software Microvision VIO
- Release-by-touch
- Measure-by-touch (optional)



1



2



3

1 Second camera for measuring the center of rotation (optional)
2 + 3 Fully automatic axis drive via modern linear technology

DATA EXCHANGE AND DATA TRANSFER

Data exchange and transfer to the machine tool

Post-processor/Ethernet/USB

Post-processed data is transferred to the relevant data exchange drive either via USB or Ethernet LAN.

Interfaces

All presetting units can send and receive tool data to nearly all software (tool management, databases, CAD/CAM) via a bidirectional interface – regardless of whether it is a standard or a customized solution. *(Not available for UNO smart)*

Post-processor and interface*

HAIMER Microset tool presetting devices are compatible with machine tools from all manufacturers. *(Not available for UNO smart)*

HQR

Easy data input via HQR USB plug in. Input your data at the machine tool via scan of a code on the label, printed on the presetter before, without manual operation of the operator.

*The measured data is quickly transferred directly to the machine tool. Control systems from Siemens, Heidenhain, FANUC, MAPPS and many others can be connected by USB data storage or Ethernet LAN.

RFID – data carrier system

- Customer-specific data storage
- Measurement processes with integrated data retrieval and storage
- Integration of all popular RFID systems
- The read/write head can be positioned automatically and manually for all popular tool holder systems (e.g. Balluff, Euchner, Mazak, Pepperl & Fuchs, Turck)



Automatic positioning of the read/write head



Manual positioning of the read/write head

HQR-Connect

With HQR-Connect, tool data can be edited and printed as QR Code on the presetter, then read by a scanner at the machine tool and directly sent to the machine control.

The tool presetter creates a QR code which contains all the necessary actual values and other features of the tool. Through HQR-Connect, the data stored in the QR code is automatically transferred into the data fields of the machine tool. The HQR-Connect System is connected to the machine control via USB. At the machine control, the generated QR code is read with a scanner and the data is transmitted.

Your benefits:

- Network connectivity is not necessary
- Up to 45 % time savings compared to manual entry
- Elimination of manual input errors or transposed digits
- Upgrades are possible at any time

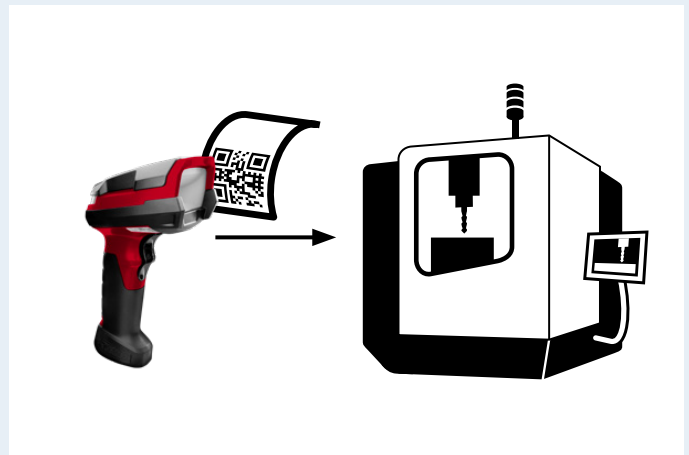
(Not available for UNO smart)

HQR-Connect – Operating principle

- The HQR-system works like an external (USB) keyboard
- The data is automatically sent to the control system, therefore reading or typing errors are eliminated
- The configuration of the HQR-system is done with a Windows based software
- The system consists of electronics and the QR code scanner
- Available for all control units with USB ports that allow data input via an external keyboard



After measuring the tool, a label with the QR code is printed.



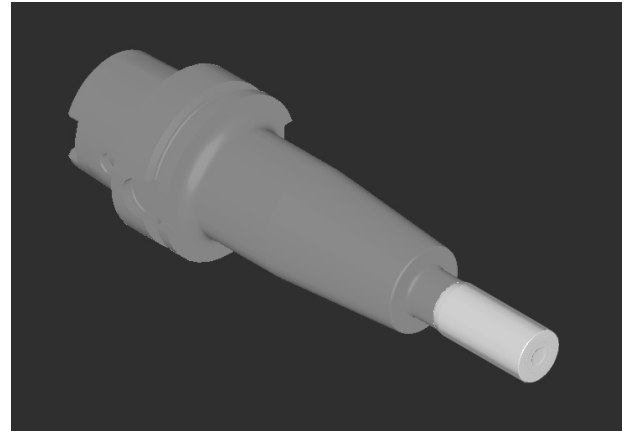
The HQR system is connected to the control system of the machine. It reads the QR code and transmits the tool data directly to the control system.

3D CAPTURE & COMPARISON

H3D-Scan

- Quick and easy creation of 3D models of the complete tools
- Unique cutting area display
(cut/no-cut, cutting area/non-cutting area) in the 3D model
- Automatic actual value output for further processes
- For quick and easy simulation of processing steps in CAM, with realistic digital tool data

(Available for all full-automatic machines)



3D model with simple visual differentiation cut/no-cut

HD-Fit

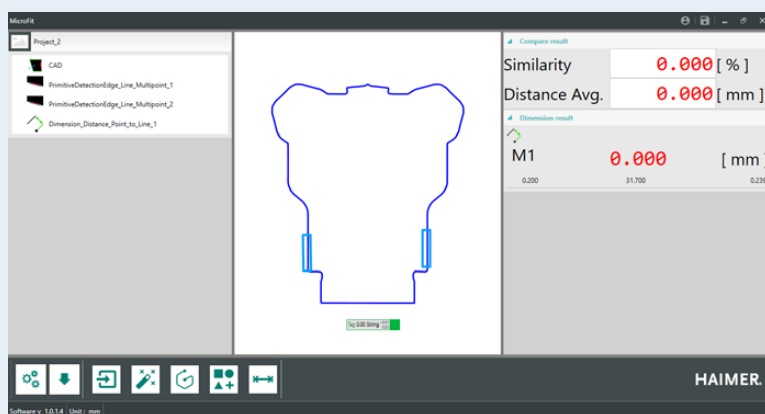
HD-Fit the DXF Analyzer – The revolution in dimensional control

Are you looking for a powerful solution to precisely analyze, measure and compare DXF files or molding tools? Then we present you the HD-Fit DXF Analyzer.

Unique features and benefits:

- Load DXF files, whether created with H3D-Scan or externally, and perform pixel-perfect matching between master DXF and newly created DXF files
- See at a glance where the deviations are

(Available for all full-automatic machines)



Intuitive comparison between target- and actual values

UNO smart

Smart entry into tool presetting



Picture shows UNO smart 20|40 with optional locking indexing

TOOL PRESETTERS – MANUAL

The UNO smart is our entry-level machine featuring a small footprint, user-friendly operation and high precision. It is particularly well suited for measurements right on the shop floor and has all this at an unbeatable price-performance ratio.

Standard equipment

- Microvision SMART image processing system
- SK50 high-precision spindle, manual
- Robust, long-life cast iron construction
- Thermally optimized material combination for improved repeatability
- Manual operation
- Energy-saving mode
- 7" multi-touchscreen
- Memory for 99 zero points
- $\pm 5 \mu\text{m}$ repeatability

Measurement range

- Maximum tool diameter on X-axis 15.75" (400 mm)
- Maximum tool length on Z-axis 15.75/27.56" (400/700 mm)
- Maximum tool weight 44 lbs (20 kg)
- Weight 20|40: 210 lbs (95 kg)
20|70: 231 lbs (105 kg)
- Order No.** 20|40: M-G1111
20|70: M-G1116

Options

- Technology package: Tool inspection light, edgefinder, release-by-touch
- Smart Pro package: tool inspection light, edgefinder, release-by-touch, base cabinet smart incl. adapter tray for 3 tools or adapters
- Indexing $4 \times 90^\circ$ and spindle brake
- Manual fine adjustment
- Label printer
- Alignment and calibration-set
- Sigma function



UNO premium

Our bestseller with high-quality components
that complement your machine tool



TOOL PRESETTERS – MANUAL

UNO premium – The right solution for almost every user. The highest standard of manual tool presetting.

Operator independent measuring results, easy to use with digital data transfer capabilities.

Standard equipment

- Microvision UNO image processing system
- SK50 ultra precision spindle, manual
- Robust, long-life cast iron construction
- Thermally optimized material combination for improved repeatability
- Manual operation
- 4" touchscreen
- Windows 10
- Premium base cabinet incl. storage for six adapters
- Sigma function
- Memory for 1,000 zero points and tools
- USB/LAN data output
- $\pm 2 \mu\text{m}$ repeatability

Measurement range

- | | |
|--|--|
| ■ Maximum tool diameter on X-axis | 15.75" (400 mm) |
| ■ Maximum snap gauge tool diameter on X-axis | 3.93" (100 mm) |
| ■ Maximum tool length on Z-axis | 15.75/27.56" (400/700 mm) |
| ■ Maximum tool weight | 66 lbs (30 kg) |
| ■ Weight | 20 40: 309 lbs (140 kg)
20 70: 342 lbs (155 kg) |
| ■ Order No. | 20 40: M-G1185
20 70: M-G1190 |

Options

- Technology package: Tool inspection light, edgefinder, release-by-touch
- Turning package: 4 × 90° and 3 × 120° indexing, second camera
- Manual fine adjustment
- Label printer
- User management
- Manual RFID system
- Bidirectional interface
- Post-processor
- Manual ISS spindle
- HQR-Connect



UNO autofocus

Ideal for multi-edge tools



TOOL PRESETTERS – SEMI AUTOMATIC

UNO autofocus – The right presetter for demanding measurements.

Take advantage of full-automatic spindle operation with multiple tool measurements on one plane.

Standard equipment

- Microvision UNO image processing system
- SK50 ultra precision spindle, autofocus
- Robust, long-life cast iron construction
- Thermally optimized material combination for improved repeatability
- Motorized fine adjustment of the C-axis
- 24" touchscreen
- 4 × 90° and 3 × 120° motor-driven indexing
- Pneumatic spindle brake
- Vacuum clamping
- Premium base cabinet incl. storage for six adapters
- Sigma function
- Memory for 1,000 zero points, tools and tool lists
- USB/LAN data output
- Release-by-touch
- Edgefinder
- Tool inspection light
- 2 µm spindle runout
- ± 2 µm repeatability
- Label printer
- Windows 10

Measurement range

- | | |
|--|--|
| ■ Maximum tool diameter on X-axis | 15.75" (400 mm) |
| ■ Maximum snap gauge tool diameter on X-axis | 3.93" (100 mm) |
| ■ Maximum tool length on Z-axis | 15.75/27.56" (400/700 mm) |
| ■ Maximum tool weight | 66 lbs (30 kg) |
| ■ Weight | 20 40: 529 lbs (240 kg)
20 70: 562 lbs (255 kg) |
| ■ Order No. | 20 40: M-G1140
20 70: M-G1150 |

Options

- ISS-U universal ultra-high precision spindle with automatic adapter identification
- Manual fine adjustment
- Turning package: Second camera incl. indexing, 4 × 90°, and 3 × 120° motor driven
- Manual RFID system
- Bidirectional interface
- Post-processor
- HQR-Connect



Automatic focus on the cutting edge

UNO autofocus

Fully automatic measuring for unrivaled convenience



TOOL PRESETTERS – FULLY AUTOMATIC

With fully automated measurement capabilities, the UNO automatic drive is the high-end model in the UNO series.

The UNO automatic drive is fully independent of the operator and can be used with minimal user expertise. This guarantees maximum quality and time savings, even with complex tools on multiple planes.

Standard equipment

- Microvision UNO image processing system
- Automatic tool measurement in 3 axes
- SK50 ultra precision spindle, autofocus
- Motorized fine adjustment of all axes
- 24" touch screen
- 4 × 90° and 3 × 120° motor-driven indexing
- Pneumatic spindle brake
- Vacuum clamping
- Premium base cabinet includes storage for 6 adapters
- Sigma function
- Memory for 1,000 zero points, tools and tool lists
- USB/LAN data output
- Release-by-touch
- Edgefinder
- Tool inspection light
- 2 µm spindle runout
- ± 2 µm repeatability
- Label printer

Measurement range

- | | |
|--|--|
| ■ Maximum tool diameter on X-axis | 15.75" (400 mm) |
| ■ Maximum snap gauge tool diameter on X-axis | 3.93" (100 mm) |
| ■ Maximum tool length on Z-axis | 15.75/27.56" (400/700 mm) |
| ■ Maximum tool weight | 66 lbs (30 kg) |
| ■ Weight | 20 40: 529 lbs (240 kg)
20 70: 562 lbs (255 kg) |
| ■ Order No. | 20 40: M-G1160
20 70: M-G1170 |

Options

- ISS-U universal ultra-high precision spindle with automatic adapter identification
- Turning package: Second camera incl. indexing, 4 × 90°, and 3 × 120° motor driven
- Bidirectional interface
- Manual RFID system
- Individual release of X/Z-axis
- Post-processor
- HQR-Connect
- Reamer software module for guided reamers
- Measured value history



Fully automatic tool presetting and measurement – independent of the operator

VIO *linear*

Perfect for rapid measurements,
even on highly complex tools



TOOL PRESETTERS – FULLY AUTOMATIC

VIO linear – The complete solution: for fully automatic high-end tool presetting with individual options.

The modular concept makes it possible to preset tools up to 1,000 mm in length and diameter.

Standard equipment

- Microvision VIO image processing system
- High precision and fast axis-positioning via linear motion
- ISS-U universal ultra precision spindle with automatic adapter identification, mechanical clamping and motorized indexing 4 × 90° and 3 × 120°
- 4 × 90° and 3 × 120° electronic indexing
- Pneumatic spindle brake
- Robust, long-life cast iron construction
- Thermally optimized material combination for improved repeatability
- Motorized fine adjustment of all axes
- 24" multi-touch screen
- System VIO incl. storage for up to 9 adapters
- Sigma function
- Memory for 1,000 zero points
- Unlimited tool memory
- User management
- Swivelling control panel
- Edgefinder
- Tool inspection light
- 2 µm spindle runout
- ± 2 µm repeatability

Measurement range

- | | |
|--|--|
| ■ Maximum tool diameter on X-axis | 15.75/27.56/39.37"
(400/700/1,000 mm) |
| ■ Maximum snap gauge tool diameter on X-axis | 3.93" (100 mm) |
| ■ Maximum tool length on Z-axis | 19.69/27.56/39.37"
(500/700/1,000 mm) |
| ■ Maximum tool weight | 352 lbs (160 kg) |
| ■ Weight | 881 – 1,213 lbs (400 – 550 kg) |
| ■ Order No. | M-G1035* |

Options

- Second camera for measuring the center of rotation
- Bidirectional interface
- Manual or automatic RFID system
- 27" multi-touchscreen
- Post-processor
- VIO Fit/Scan
- Angle head system
- HQR-Connect
- Robot-ready software interface for integration of a robot cell to preset tools without operator
- Length stop system for automatic length adjustment for hydraulic or ER collet chucks
- Direct photo storage for easy integration of tool data
- Gear Skyving System
- Y-axis for measurement of multi-tool turning holders
- Reamer software module for guided reamers



* This order number is for the smallest unit in X and Z, please contact HAIMER for the order numbers of the larger machines

VIO *linear* toolshrink

Shrinking and presetting combined



SHRINKING / PRESETTING

The combination of shrinking and presetting technology with precise length adjustment on the μm scale makes the VIO *linear* top of its class, including the toolshrink variant. The VIO *linear* toolshrink is the ideal choice, especially when using shrink fit holders, duplicate assemblies, or multi-spindle machines.

Standard equipment

- Microvision VIO image processing system
- ISS-U universal ultra precision spindle with automatic adapter identification, mechanical clamping and motorized indexing $4 \times 90^\circ$ and $3 \times 120^\circ$
- Best shrinking results, regardless of the holder brand
- High precision and fast axis-positioning through linear motion
- Fully automatic HAIMER induction unit 13 kW coil
- Automatic monitoring of shrinking parameters
- Automatic length adjustment within $\pm 10 \mu\text{m}$
- Extractor with filter
- HAIMER contact cooling
- 24" touchscreen
- Ideally used with HAIMER shrink fit holders for best results: shrink in on $\pm 5 \mu\text{m}$
- Dynamic shrinking for short process times
- Pre-installed HAIMER data base

Measurement range

- | | |
|--|--|
| ■ Maximum tool diameter on X-axis | 16.54" (420 mm) |
| ■ Maximum snap gauge tool diameter on X-axis | 3.93" (100 mm) |
| ■ Maximum tool length on Z-axis axis | 2.36–25.59" (60–650 mm) |
| ■ Maximum tool length on Z-axis measuring | 19.69 / 27.56 / 39.37"
(500/700/1,000 mm) |
| ■ Maximum tool weight | 352 lbs (160 kg) |
| ■ Weight | 1,587–1,764 lbs (720–800 kg) |
| ■ Order No. | M-G1061* |

Options

- Second camera for measuring the center of rotation
- Bidirectional interface
- Manual or automatic RFID system
- 27" multi-touchscreen
- Post-processor
- VIO Fit/Scan
- Angle head system
- HQR-Connect
- Label printer
- Quick-in/out, shrinking like a Power Clamp i4.0 (no setup)
- Robot-ready software interface for integration of a robot cell to preset tools without operator
- Length stop system for automatic length adjustment for hydraulic or ER collet chucks
- Direct photo storage for easy integration of tool data
- Gear Skyving System
- Y-axis for measurement of multi-tool turning holders
- Reamer software module for guided reamers
- TME cooling system with active temperature monitoring
- Scan function for shrinking parameters



* This order number is for the smallest unit in X and Z, please contact HAIMER for the order numbers of the larger machines

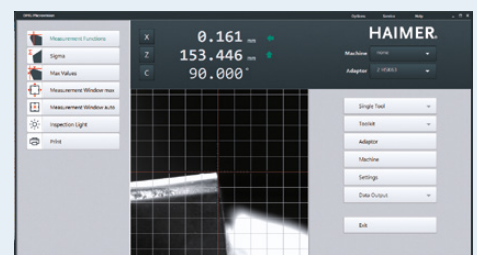
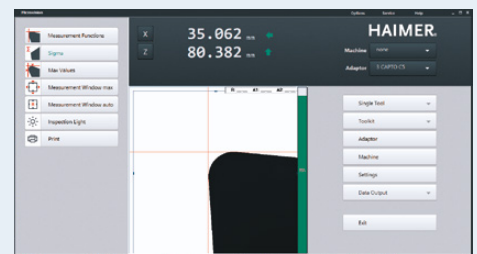
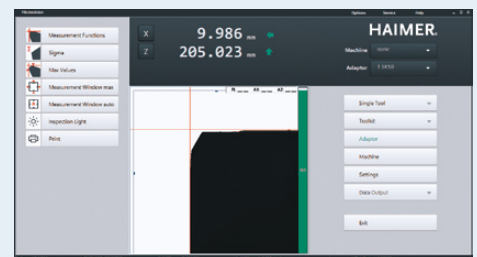
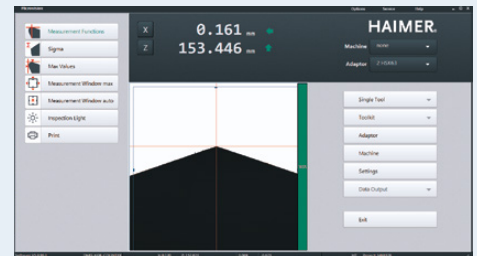
Microvision – easy and intuitive

Microvision software enables fast and easy inspection of complex shapes and features, creating even more time savings potential during setup.

These savings are achieved due to the machine's ability to quickly and precisely measure and set tools, independent from the operator. Modern image processing ensures that the tools are quickly and accurately measured and in turn guarantees the highest quality in your production processes. Complex tools can be measured within an incredibly short period of time with the latest measuring techniques.

Highlights

- Intuitive operation ensures quick and precise measurement results
- Accurate measurement of complex cutters with the precise focus window
- User administration and access privileges
- Display currently in 16:9 format
- Cross hair fixed/floating with automatic measurement lines and automatic contour evaluation
- Identical software design for all Microset models
- Windows based
- Measuring macros for fast creation of automatic measuring sequences
- Creation of customized master measuring cycles possible
- Template module to easily copy measuring cycle of identical tool types, e. g. drill from one size to the next
- History of measured data for security of measuring results and process optimization
- HQRID scanner ready, to scan and ID tools and to find the measuring cycle of that specific tool
- QR code parameter print for easy shrink parameter identification for non-HAIMER holders
- Print Editor for easy adjustment of printouts
- Direct photo storage to easily add pictures to the database, right at the presetter
- Remote access, program your tool from your desk
- Measurement rules that allow calculation of theoretical measurement points



TOOL PRESETTING – ACCESSORIES

Adapters and spindles for all requirements

High-quality, precise adapters and spindles are important elements for precise tool presetting.

We offer an extraordinarily wide range of adapters and spindles so that you can quickly and easily get the results you need. We will gladly provide consultation regarding your individual requirements and applications.

The ISS-U universal ultra-high precision spindle enables incredibly high-precision direct clamping. The ISS-U spindle utilizes the highest clamping forces with runout accuracy < 0.002 mm, all without need for adapters.



1



2



3

We offer solutions for all requirements, from standard tool holders to customer-specific special tool holders. You benefit from our many years of experience in tool design.

SK50 Ultra precision adapter

- 1 HSK 63 adapter with integrated clamping
- 2 VDI 40 adapter with manual clamping
- 3 PSC adapter with integrated manual clamping system

Examples of spindles



1



2



3

Our offer: the Universal clamping system clamps tools precisely and reliably, regardless of the tool holder's geometry. This also applies to the attachment holder (2), which was designed for all common tool holder systems on the market.

Universal clamping system

- 1 ISS-U universal ultra-high precision spindle
- 2 Attachment holder (SK, HSK, PSC, VDI)
- 3 Complete system

TOOL PRESETTING – ADAPTER WITH INTEGRATED CLAMPING



Adapter with integrated clamping

Available in taper sizes:

HSK-ACET 25/BDF 40 – HSK-ACET 100/BDF 125, HSK-F80 Makino,
PSC 32 – PSC 80, KM 32 – KM 80, VDI 16 – VDI 60, VDI 25 with Trifix –
VDI 50 with Trifix, BMT 40 – BMT 75, ER 11–32, WFB 20–12 – 50–32

Reduction sleeves from SK50 to SK/BT/CAT/PSC/KM/VDI/BMT adapter with clamping system

For taper size	Height H	Order No.
■ HSK-ACET 25	50 mm	MR1055
■ HSK-ACET 32/BDF 40	50 mm	MR1034
■ HSK-ACET 40/BDF 50	60 mm	MR1035
■ HSK-ACET 50/BDF 63	70 mm	MR1036
■ HSK-ACET 63/BDF 80	80 mm	MR1037
■ HSK-ACET 80/BDF 100	90 mm	MR1038
■ HSK-ACET 100/BDF 125	110 mm	MR1039
■ HSK-F80 Makino	80 mm	MR4071
■ PSC 32	70 mm	MR1040
■ PSC 40	80 mm	MR1046
■ PSC 50	90 mm	MR1047
■ PSC 63	120 mm	MR1048
■ PSC 80	140 mm	MR1049
■ KM 32	40 mm	MR3200
■ KM 40	40 mm	MR3210
■ KM 50	60 mm	MR3220
■ KM 63	60 mm	MR3230
■ KM 80	80 mm	MR3240
■ VDI 16	70 mm	MR1027
■ VDI 20	70 mm	MR1028
■ VDI 25	70 mm	MR1029
■ VDI 30	80 mm	MR1030
■ VDI 30 – Combi 90° Trifix	45 mm	MR1211
■ VDI 30 – Combi 90°	45 mm	MR1212
■ VDI 40	80 mm	MR1031
■ VDI 50	110 mm	MR1032
■ VDI 60	115 mm	MR1033

For taper size	Height H	Order No.
■ ISO50: Solidfix S1	30 mm	MR1100
■ ISO50: Solidfix S2	35 mm	MR1101
■ ISO50: Solidfix S3	37 mm	MR1102
■ ISO50: Solidfix S4	40 mm	MR1103
■ ISO50: Solidfix S5	52 mm	MR1104
■ ISO50: VDI20	60 mm	MR1093
■ ISO50: VDI25	65 mm	MR1094
■ ISO50: VDI30	70 mm	MR1095
■ ISO50: VDI40	70 mm	MR1096
■ VDI 25 with Trifix	70 mm	MR1200
■ VDI 30 with Trifix	80 mm	MR1210
■ VDI 40 with Trifix	80 mm	MR1220
■ VDI 50 with Trifix	110 mm	MR1230
■ BMT 40	95 mm	MR3100
■ BMT 45	95 mm	MR3104
■ BMT 50	95 mm	MR3107
■ BMT 55	95 mm	MR3103
■ BMT 60	95 mm	MR3101
■ BMT 65	95 mm	MR3105
■ BMT 75	95 mm	MR3106
■ Adapter SK50: ER11		MR5010
■ Adapter SK50: ER16		MR5011
■ Adapter SK50: ER20		MR5012
■ Adapter SK50: ER25		MR5013
■ Adapter SK50: ER32		MR5014
■ Adapter SK50: WFB20–12		MR5210
■ Adapter SK50: WFB24–16		MR5211
■ Adapter SK50: WFB32–20		MR5212
■ Adapter SK50: WFB40–25		MR5213
■ Adapter SK50: WFB50–32		MR5214

TOOL PRESETTING – ADAPTER WITH MANUAL CLAMPING



Adapter without clamping system

Available in taper sizes:

SK/BT/CAT/ANSI 20 – SK/BT/CAT/ANSI 45, HSK-ACET 25
BDF 32 – HSK-ACET 100/BDF 125, PSC 32 – PSC 80,
VDI 16 – VDI 60

Reduction sleeves from SK50 to SK/BT/CAT/BBT*/PSC/KM adapter without clamping system

For taper size	Height H	Order No.
■ SK/BT/CAT/ANSI 20	45 mm	M-R1004
■ SK/BT/CAT/ANSI 25	45 mm	M-R1003
■ SK/BT/CAT/ANSI/BBT*30	25 mm	M-R1001
■ SK/BT/CAT/ANSI/BBT*40	20 mm	M-R1000
■ SK/BT/CAT/ANSI 45	25 mm	M-R1002
■ HSK-ACET 25/32 BDF	50 mm	M-R1070
■ HSK-ACET 32/40 BDF	40 mm	M-R1010
■ HSK-ACET 40/50 BDF	40 mm	M-R1011
■ HSK-ACET 50/63 BDF	40 mm	M-R1012
■ HSK-ACET 63/80 BDF	55 mm	M-R1013
■ HSK-ACET 80/100 BDF	60 mm	M-R1014
■ HSK-ACET 100/125 BDF	90 mm	M-R1015
■ PSC 32	30 mm	M-R1063
■ PSC 40	30 mm	M-R1064
■ PSC 50	30 mm	M-R1065
■ PSC 63	30 mm	M-R1066
■ PSC 80	70 mm	M-R1067
■ VDI 16	60 mm	M-R1020
■ VDI 20	60 mm	M-R1021
■ VDI 25	40 mm	M-R1022
■ VDI 30	40 mm	M-R1023
■ VDI 40	40 mm	M-R1024
■ VDI 50	50 mm	M-R1025
■ VDI 60	130 mm	M-R1026

TOOL PRESETTING – ISS ADAPTER



ISS Adapter with automatic clamping system

- Minimal loss of measuring range (in Z-axis) due to standardized adapter height
- Constant tool clamping regardless of the operator
- High change accuracy of the adapter

ISS Adapter with automatic clamping system

For taper size	Order No.
HSK	
■ HSK-E25	M-R4070
■ HSK-ACET 32/BDF 40	M-R3024
■ HSK-ACET 40/BDF 50	M-R3025
■ HSK-ACET 50/BDF 63	M-R3026
■ HSK-ACET 63/BDF 80	M-R3027
■ HSK-ACET 80/BDF 100	M-R3028
■ HSK-ACET 100/BDF 125	M-R3029
■ HSK 125	M-R4076
■ HSK 160	M-R3056
■ HSK-F80 Makino	M-R3050
PSC	
■ PSC 32	M-R3048
■ PSC 40 – internal cooling supply	M-R3030
■ PSC 50 – internal cooling supply	M-R3031
■ PSC 63 – internal cooling supply	M-R3032
■ PSC 80 – internal cooling supply	M-R3033
■ PSC 100 – internal cooling supply	M-R3010
VDI	
■ VDI 16 mm with manual clamping	M-R3034
■ VDI 20 mm with manual clamping	M-R3035
■ VDI 25 mm with manual clamping	M-R3036
■ VDI 30 mm with manual clamping	M-R3037
■ VDI 40 mm with manual clamping	M-R3038
■ VDI 50 mm with manual clamping	M-R3039
■ VDI 60 mm with manual clamping	M-R3040
SK/BT/ANSI/CAT/BBT	
■ ISO20 (RS20)	M-R4445
■ SK, BT, ANSI, CAT, BBT*30	M-R3044
■ SK, BT, ANSI, CAT, BBT*40	M-R3045
■ SK, BT, ANSI, CAT 45	M-R3022
■ SK, BT, ANSI, CAT, BBT*50	M-R3046
■ SK, BT, ANSI, CAT, BBT*60	M-R3060

TOOL PRESETTING – ISS ADAPTER



ISS Adapter with automatic clamping system

- Minimal loss of measuring range (in Z-axis) due to standardized adapter height
- Constant tool clamping regardless of the operator
- High change accuracy of the adapter

ISS Adapter with automatic clamping system

For taper size	Order No.
KM	
■ KM32	M-R3047
■ KM40	M-R3061
■ KM50	M-R3062
■ KM63	M-R3063
■ KM80	M-R3064
■ KM32 with manual clamping	M-R3091
■ KM40 with manual clamping	M-R3092
■ KM50 with manual clamping	M-R3093
■ KM63 with manual clamping	M-R3094
■ KM80 with manual clamping	M-R3095
BMT	
■ BMT40	M-R3121
■ BMT45	M-R3122
■ BMT55	M-R3124
■ BMT60	M-R3125
■ BMT65	M-R3126
■ BMT75	M-R3127
Nikken	
■ Nikken 3 Lock ISS Adapter 40	M-R4072
■ Nikken 3 Lock ISS Adapter 50	M-R4073

For taper size	Order No.
Toolshrink	
■ HSK-32 A/E toolshrink	M-R1077
■ HSK-40 A/E toolshrink	M-R1075
■ HSK-50 A/E toolshrink	M-R1074
■ HSK-63 A/E toolshrink	M-R1073
■ HSK-80 A/E toolshrink	M-R1088
■ HSK-100 A/E toolshrink	M-R1076
■ PSC 32 – internal cooling supply / toolshrink	M-R1083
■ PSC 40 – internal cooling supply / toolshrink	M-R1080
■ PSC 50 – internal cooling supply / toolshrink	M-R1078
■ PSC 63 – internal cooling supply / toolshrink	M-R1079
■ PSC 80 – internal cooling supply / toolshrink	M-R1082
VDI	
■ VDI 20	M-R3070
■ VDI 25	M-R3071
■ VDI 30	M-R3072
■ VDI 40	M-R3073
■ VDI 25 Trifix	M-R3075
■ VDI 30 Trifix	M-R3076
■ VDI 40 Trifix	M-R3077
■ VDI 50 Trifix	M-R3078

Technical data

Measurement Range

Maximum tool diameter

Max. tool diameter for measuring using the snap gauge principle

Maximum tool length on Z-axis

Maximum tool length shrinking

Operation

Manual

Autofocus

Fully automatic

Shrinking

Base cabinet

System base cabinet smart including storage for 3 adapters

System base cabinet premium including storage for 6 adapters

System VIO^{II} including storage for up to 9 adapters

Spindle

SK50 high precision spindle, manual

SK50 ultra precision spindle, manual

SK50 ultra precision spindle, autofocus

ISS-U universal ultra precision spindle, manual

ISS-U universal ultra precision spindle, autofocus

Automatic adapter identification

Mechanical clamping

Vacuum clamping

Spindle brake

4 × 90° and 3 × 120° indexing

Accuracy

Spindle runout

Repeatability

Turning center measurement

Dial gauge incl. 4 × 90° indexing

Camera incl. 4 × 90° indexing

Miscellaneous

Incident light

Edgefinder

Magnet board

7" touchscreen

24" touchscreen

27" touchscreen

Measure-by-touch

Release-by-touch

Individual release and clamping of X/Z-axis

Joystick

Software

Image processing

Zero points

Tool storage unit

Sigma function

User management

Data output

Label printing

USB

LAN/network

Post-processor

Bidirectional interface

Manual RFID system

Automatic RFID system

HQR-Connect

	UNO smart	UNO premium
mm	400	400
mm	–	100
mm	400/700	400/700
mm	–	–
	•	•
	–	–
	–	–
	–	–
	◦	–
	–	•
	–	–
	•	–
	–	•
	–	–
	–	◦
	–	–
	–	–
	–	–
	◦	•
	◦	•
	◦	◦
μm	3	2
μm	± 5	± 2
	◦	–
	–	◦
	◦	◦
	◦	◦
	–	◦
	•	–
	–	•
	–	–
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	◦	◦
	–	◦
	–	–
	Microvision SMART	Microvision UNO
	99	1,000
	–	1,000
	◦	•
	–	◦
	◦	◦
	–	•
	–	•
	–	◦
	–	◦
	–	◦
	–	–
	–	◦

UNO autofocus	UNO automatic drive	VIO linear	VIO linear toolshrink
400	400	420/700/1,000	420/700/1,000
100	100	100	100
400/700	400/700	500/700/1,000	500/700/1,000
–	–	–	650
•	•	•	•
•	•	•	•
–	•	•	•
–	–	–	•
–	–	•	•
•	•	–	–
–	–	•	•
–	–	–	–
–	–	–	–
•	•	–	–
–	–	–	–
◦	◦	•	•
◦	◦	◦	◦
◦	◦	◦	•
•	•	•	–
•	•	•	•
◦	◦	•	•
2	2	2	2
± 2	± 2	± 2	± 2
–	–	–	–
◦	◦	◦	◦
•	•	•	•
•	•	•	•
•	•	–	–
–	–	–	–
•	•	•	•
–	–	◦	◦
–	–	◦	◦
•	•	•	•
◦	◦	•	•
–	–	•	•
Microvision UNO	Microvision UNO	Microvision VIO	Microvision VIO
1,000	1,000	1,000	1,000
1,000	1,000	unlimited	unlimited
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
◦	◦	◦	◦
◦	◦	◦	◦
◦	◦	◦	◦
–	–	◦	◦
◦	◦	◦	◦

• Standard ◦ Optional – Not available

¹⁾ System base cabinet VIO linear toolshrink including storage for 3 adapters

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