



PWB TOOL MASTER

The absolutely precise and most efficient solution for professional setting, measuring, testing and management of tools.

TOOL MASTER

The finest high-precision
Swiss-built presetting
systems lead you to success

The PWB TOOL MASTER Modular System provides a professional solution for setting and measuring tools.

The TOOL MASTER is easy, fast, safe, precise, and delivers highly accurate results. With the TOOL MASTER, you can greatly improve the efficiency and profitability of your tool-setting and machinery operations.

We guarantee you higher quality, enhanced safety, increased speed, improved process reliability and less machine downtime.



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TOOL MASTER

CNC | NC

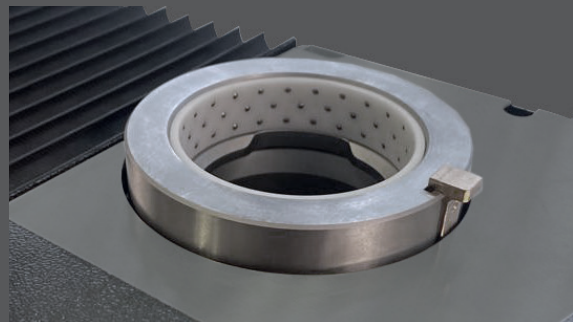
FULL AND SEMI-AUTOMATIC MEASUREMENT

With the TOOL MASTER CNC | NC, tools can be measured at the touch of a button. This makes the measurement results accurate, visual and the measuring process fast and efficient. Absolute precision with simple operation. With brand-name components and our EyeRay® CNC image processing system, we guarantee you highest process reliability and quality.



FEATURES

- CNC control in X | Z and C axes
(Also available with motorized C axis)
- EVOSET high-precision spindle (power clamping)
Quick clamping system PSE
- Joystick for X | Z | C axes with a button for individual axis operation
- EyeRay® CNC image processing
- Digital camera with telecentric lens
- All in One PC 20" with touch screen
- Measuring system with glass scales
- Automatic calibration
- Endless motorized fine adjustment
- Tool inspection in transmitted and reflected light
- Base with adapter tray for tools
- Thermal printer incl. 1 roll of labels
- Safety E-Stop
- Adapter and tool management
- EyeRay® Interface
- Online support interface
- Operator management
- Multi-lingual measuring software EyeRay®
- Connector with adapter EU/CH
- Operating system Windows 10
- Electrical voltage 230 Volt



SPINDLE POWER CLAMPING PSE

- Quick clamping system PSE with pull-in force: HSK=3 kN / SK=1.2 kN
- Quick adapter change in maximum 5 seconds
- Highest concentricity & Measurement repeatability; better than 2 µm
- Integrated calibration edge for exact and fast determination of the spindle zero point
- Motorized spindle brake for locking of the spindle in the desired position over the entire 360°

OPTIONAL

- Data transfer through post-processor, RFID data carrier (Balluff), QR code, customer's specialized solutions

MEASUREMENT RANGE

X=400 Z=365	X=600 Z=365
X=400 Z=565	X=600 Z=565
X=400 Z=665	X=600 Z=665

On request: measuring ranges up to Z=760 mm

TOOL MASTER

QUADRA

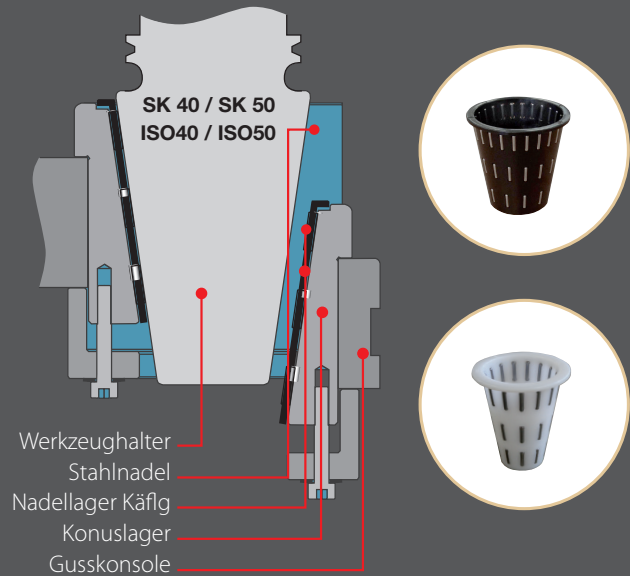
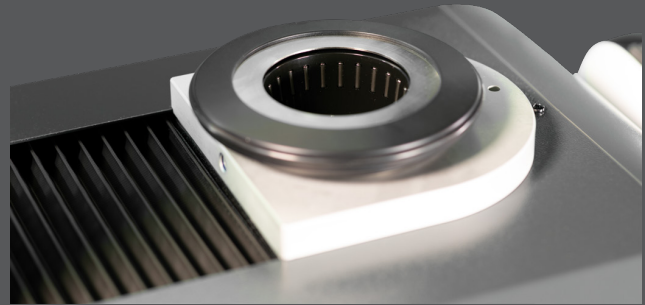
The TOOL MASTER Quadra guarantees: fast, easy and high-precision tool setting & measuring for all production requirements.

The professional and compact solution for higher quality, optimization of production processes and flexibility.



FEATURES

- Manual control in X | Z and C
- EyeRay® Quadra image processing
- CMOS digital camera with telecentric lens
- All in One PC 20" with touch screen
- Measuring system with glass scales
- Endless manual fine adjustment
- Integrated ISO50 or ISO40 tool spindle
- Pneumatic clamping in X and Z
- Spindle clamping
- Tool inspection in transmitted and reflected light
- Base with integrated tool spindle tray for tools
- Thermal printer incl. 1 roll of labels
- Adapter and tool management
- EyeRay® Interface
- Online Support Interface
- Operator management
- Multi-lingual measuring software EyeRay®
- Highest concentricity & highest measuring repeatability thanks to the EVOSET high precision spindle needle bearing
- Plug-in connector with adapter EU/CH
- Operating system Windows 10
- Electrical voltage 230 Volt



OPTIONAL

- Measuring field shift in X and Z axis
- Data transfer through post-processor, RFID data carrier (Balluff), QR code, customer's specialized solutions
- Two-camera systems
- Indexing device for turning tools
- Vacuum clamping with pneumatic Spindle brake
- High precision CNC spindle with quick clamping system PSE
- Pull-in force: HSK=3 kN / SK=1.2 kN

MEASUREMENT RANGE

X=400 Z=400	X=600 Z=400
X=400 Z=600	X=600 Z=600

On request: measuring ranges up to Z=760 mm

TOOL MASTER

BASIC

The unbeatable and efficient entry-level solution for exact measurements of tools.

Equipped with all necessary measurement functions.



FEATURES

- Plug & Play solution
- Manual control in X | Z | C
- EyeRay® Basic image Processing
- CMOS digital camera with telecentric lens
- PWB desktop PC solution with 18.5" monitor
- Integrated ISO50 or ISO40 tool spindle
- Pneumatic clamping in X and Z
- Endless manual fine adjustment
- Fast focusing of the tool cutting edge
- Master mandrel, small
- EyeRay® interface
- Online support interface
- Multi-lingual measuring software EyeRay®
- Highest concentricity & highest measuring repeatability thanks to the EVOSET high precision spindle needle bearing
- Operating system Windows 10
- Electrical voltage 230 Volt

OPTIONAL

- Base with adapter tray for tools
- Thermal printer incl. 1 roll of labels
- Tool inspection in reflected light
- Indexing device for turning tools
- Mechanical spindle brake
- Vacuum clamping with pneumatic spindle brake
- Data transfer through post-processor, RFID data carrier (Balluff), QR code, customer's specialized solutions

MEASUREMENT RANGE

X=400 Z=400	X=400 Z=600
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TOOL MASTER

5



With TOOL MASTER 5, you can measure tools with the highest demands.

We guarantee proven highly accurate measurement results and highly efficient measuring process.

OPTIONAL

- Data transfer through post-processor, RFID data carrier, customer's specialized solutions
- Base
- Indexing equipment for turning tools
- Vacuum clamping with pneumatic spindle brake

MEASUREMENT RANGE

X=400/600/1000 Z=600/900

FEATURES

- Joystick & Touch control in X | Z axes
- EyeRay® TM5 image processing
- CMOS digital camera with telecentric lens
- All in One PC 20" with touch screen
- Measuring system with glass scales
- Endless automatic fine adjustment
- Integrated ISO50 or ISO40 tool spindle
- Spindle clamping
- Tool inspection in transmitted and reflected light
- Thermal printer incl. 1 roll of labels
- Adapter and tool management
- EyeRay® interface
- Online support interface
- Operator management
- Multi-lingual measuring software EyeRay®
- Highest concentricity & highest measuring repeatability thanks to the EVOSET high precision spindle needle bearing
- Plug-in connector with adapter EU/CH
- Operating system Windows 10
- Electrical voltage 230 Volt

TOOL MASTER

WOOD

THE WORLD'S ONLY PRESETTING DEVICE FOR THE WOOD INDUSTRY

- Easy management of tool aggregates with respective parameters
- Communication with the machine control system
- Writing and reading of data carriers on the tool holders
- Upgradable software

FEATURES

- Manual control in X | Z and C axes
- EyeRay® WOOD image processing incl. tool aggregate management
- PWB desktop PC solution with 18.5" monitor
- Endless fine adjustment in X and Z axis
- Pneumatic axis clamping
- Fast focusing of the tool cutting edge
- Digital camera with telecentric lens
- High concentricity thanks to the needle bearing
- Highest measurement repeatability
- Smooth running recirculating needle bearing guides

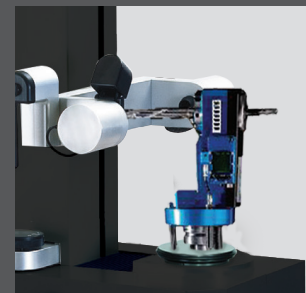
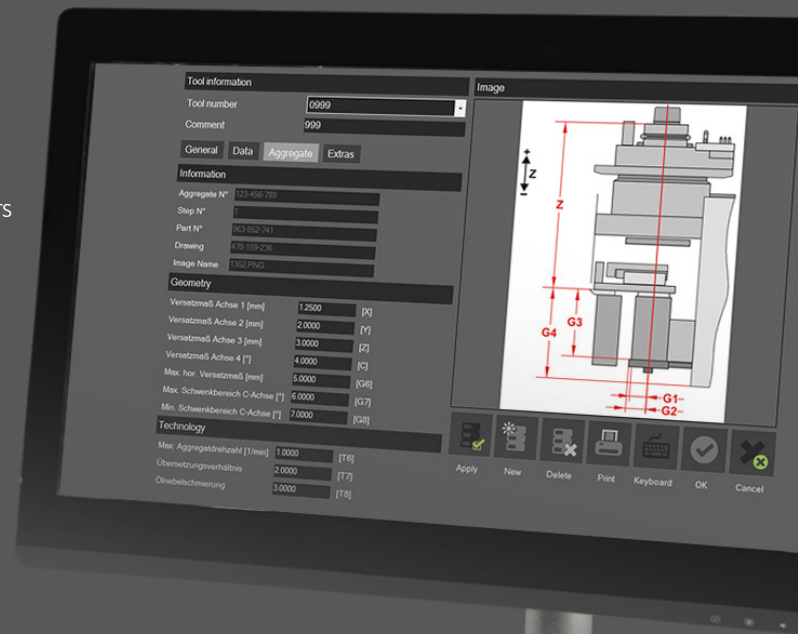
OPTIONAL

- Base with adapter tray for tools
- Thermal printer including 1 roll of labels
- Data transfer

MEASUREMENT RANGE

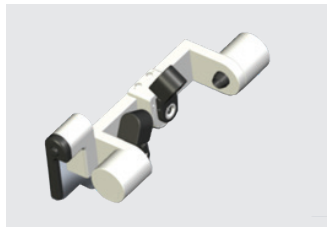
X=400 Z=400

X=400 Z=600

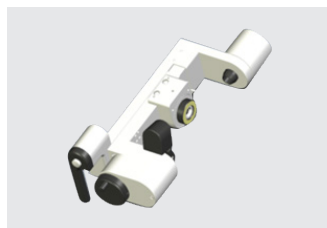


- Reduction HSK-63 Wood for tool aggregates as well as also for tools with the shape HSK-B/D/F63

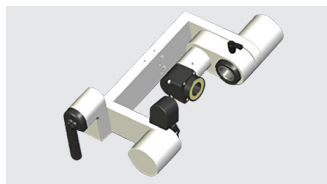
OPTIONS



CHC / Center Height Camera
Height measuring of turning tools



YAC / Y-Axis Camera
Measuring of multi-edge tools with offset Cutting edges.
Measuring range + 20 mm up to - 20 mm



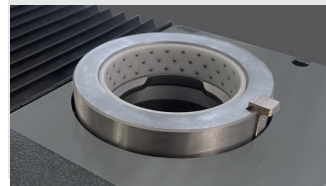
VHC / Vertical -Horizontal Camera
Measuring in horizontal and vertical directions. The camera is horizontally and vertically adjustable with any intermediate angles – this allows measuring of cutting angles and radii



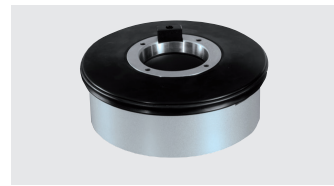
LED ring light



Front light



Power clamping spindle PSE



Vacuum spindle



Indexing equipment for rotary tools



Needle bearing spindle with spindle brake



Tool tray



Master mandrel
• SK 50 : \varnothing 30 x 330
• SK 40 / SK 50 : \varnothing 30 x 90

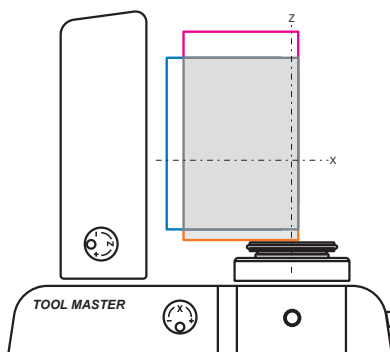






Printer



Base

Measuring field variations

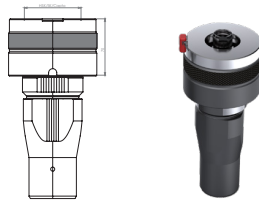


-  X 1
-  X 2
Standard (Z500)
-  ZD 1
Standard (Z750)
-  ZH 1

CNC | NC Clamping Inserts | Reduction | ADAPTER

CNC | NC Clamping Inserts

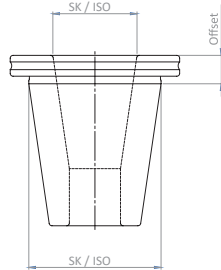
Special adapters on request



SK	30 40 50
HSK	32 40 50 63 80 100
CAPTO	C3 C4 C5 C6 C8

SK

- Reduction SK/ISO to SK/ISO
In-house calibration ensures consistent quality
- Offset value is engraved on the reduction according to the following table

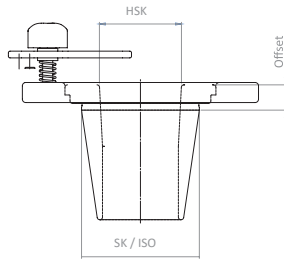


Offset value (Z)

Internal shape	External shape	
	SK50 / ISO50	SK40 / ISO40
SK10	30 mm	30 mm
SK15	30 mm	30 mm
SK20	15 mm	15 mm
SK25	15 mm	15 mm
SK30	15 mm	15 mm
SK35	15 mm	15 mm
SK40	15 mm	-
SK45	15 mm	-

HSK (shapes A to F)

- Reduction SK/ISO to HSK, available with and without clamping attachment
- Offset value is engraved on the reduction according to the following table

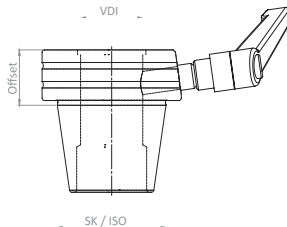


Offset value (Z)

Internal shape	External shape	
	SK50 / ISO50	SK40 / ISO40
HSK-A25	15 mm	15 mm
HSK-A32	15 mm	15 mm
HSK-A40	15 mm	15 mm
HSK-A50	15 mm	15 mm
HSK-A63	15 mm	60 mm
HSK-A80	52 mm	-
HSK-A100	70 mm	-

VDI with clamp lever

- Clamping of the VDI tool holder with clamping lever
- Clearance provided in the reduction for O-ring of the VDI shank

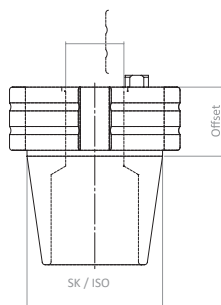


Offset value (Z)

Internal shape	External shape	
	SK50 / ISO50	SK40 / ISO40
VDI16	50 mm	50 mm
VDI20	35 mm	35 mm
VDI25	35 mm	35 mm
VDI30	35 mm	35 mm
VDI40	35 mm	70 mm
VDI50	35 mm	90 mm
VDI60	100 mm	-

VDI with index

- 4x90° indexing on reduction. VDI tool holder is aligned in reduction by means of centring pins
- Clearance provided in reduction for O-ring of the VDI shank

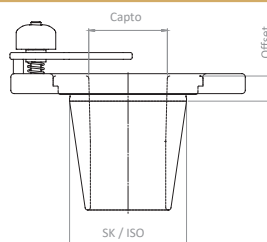


Offset value (Z)

Internal shape	External shape	
	SK50 / ISO50	SK40 / ISO40
VDI16	50 mm	50 mm
VDI20	35 mm	35 mm
VDI25	35 mm	35 mm
VDI30	35 mm	35 mm
VDI40	35 mm	80 mm
VDI50	35 mm	-
VDI60	100 mm	-
VDI80	140 mm	-

Capto ,Easy'

- Capto tool holder is centred using the 3 highest points of the polygon in the reduction, fixed with clamping claw



Offset value (Z)

Internal shape	External shape	
	SK50 / ISO50	SK40 / ISO40
C3	15 mm	-
C4	15 mm	-
C5	15 mm	-
C6	15 mm	-
C8	52 mm	-
C10	80 mm	-

SOFTWARE

With EyeRay® you are ahead worldwide

The EYERAY® software is reliable, easy to operate, modular and expandable – a world leader.

EyeRay® with its collection of software modules is a comprehensive and professional application for tool presetting, measurement and evaluation.

All PWB TOOL MASTER devices are equipped with EyeRay® for simple and complex measuring tasks and guarantees a solution for every requirement.

- Easy to operate with only six basic icons
- Self-explanatory functional keys
- Expandable and upgradeable for any special measurement functions and requirements
- Quick measurements thanks to favorite shortcuts
- Fully automated operation
- Connection interfaces to all possible machine controls and manufacturing processes
- Guaranteed process reliability
- Consistently precise measurement results



DATA TRANSFER



Basis for conventional or modern manufacturing - optimized production processes from tool management, CAD/CAM to setting, measuring and shrinking of tools.

EVOSET offers a range of interfaces to CAM systems as well as to all various machine controls. The data transfer and communication between the various systems is simple, secure and quick.

In modern manufacturing, the tool data is the basis of all production processes - from the CAD/CAM system through setting and measuring to the production of the workpiece.

DATA TRANSFER POSSIBILITIES

- Post-processor
- RFID data carrier (Balluff)
- QR CODE with scanning
- Data Matrix code
- USB stick or serial interface
- Label printing
- Customized connections