

evcoSet

# TOOL MASTER Quadra

PWB tool presetters stand for maximum productivity with ultimate user-friendliness. The tooling quality and timely detection of damaged tools boost productivity and reduce the number of rejects. You will increase your usage time up to 25% while saving maintenance costs.



*the smart way  
of tool presetting!*

**PWB+**

Tool presetting

*The professional and compact solution for your manufacturing*

## YOUR BENEFITS

- ▶ Optimised setup times
- ▶ Reduced machine downtime
- ▶ Increased tool life
- ▶ Online support – directly to the device



Presetting with **PWB+** and electronic identification system



Presetting with **PWB+**



Without presetting

## PROFESSIONAL EQUIPMENT

- ▶ Image processing with EyeRay® software
- ▶ All-in-one PC with 15.6" touchscreen monitor for easy and quick operation
- ▶ Infinite fine adjustment in X- and Z-axis
- ▶ Quick focusing of the tool cutting edge
- ▶ CMOS digital camera with telecentric lens
- ▶ Spindle lock
- ▶ High concentricity due to needle bearing
- ▶ High measuring repeatability
- ▶ Smooth recirculating ball bearing guides
- ▶ Sturdy cast iron base
- ▶ Tool inspection
- ▶ Base
- ▶ Label printer

## OPTIONS

- ▶ Data transfer using post-processor
- ▶ Indexing device for rotary tools
- ▶ Second camera for rotary centre measurement
- ▶ Vacuum clamping
- ▶ Pneumatic spindle brake
- ▶ Tool management
- ▶ Measuring field offset in the X- and Z-axes
- ▶ Tray for tool holders

## TECHNICAL DATA

Type	Pneumatic clamping, practical design and ease of use
Measuring range Standard.(ø mm / l mm) Max.(ø mm / l mm)	400 / 40 .... 400 400 / 40 .... 600
Axis fixation	Pneumatics
Fine adjustment	Handwheel per axis
Tool mounting	Needle bearings or KV spindle with rotation clamp and vacuum feeder
Measuring procedure	Image processing with <b>EyeRay®</b> Hawk or Buzzard <b>TipRay</b> for projector or dial gauge



## SOFTWARE

### EyeRay®

The software for practical application.

All functions of the software can be operated through six basic icons. The operator works in a single screen and handles the system after a short training course safely and quickly using all functions. Favourite fields can be created individually by the customer.

		VERSIONS	
		Hawk	Buzzard
		MEASURING METHODS	
		Maximum method	X
		Presetting method	X
		Total image method	X
		Multi-cutting edge method	X
		Incident light method with single LED	X
		Incident light method with ring light	O
		Fixed-axis method	X
		Centre method	X
		Preset theoretical angle and radius	X
		Point measurement	O
		Centre height measurement with camera CHC	O
		MEASURING FUNCTIONS	
		Basic measuring functions	X
		Advanced measuring functions	–
		User-created measuring functions	–
		Measuring window	X
		Special measuring functions	O
		BASIC SETTINGS	
		Illumination setting	X
		Camera parallelism	X
		Pixel size	X
		Axis parallelism	X
		Absolute zero	X
		Parameters	X



	PRINT	Hawk	Buzzard
	Label print format 1	X	X
	Label print format 2	–	O
	Print tool list	X	X
	Print measuring report	–	O



	DATABASE	Hawk	Buzzard
	Reference point management	X	X
	Basic tool management	–	X
	Full tool management	–	O
	Backup and restore	X	X



	DATA TRANSFER	Hawk	Buzzard
	Save /open tool list	–	X
	Data output to file (post-processor)	O	O
	Data output to a storage medium (e.g. Baluff)	O	O
	Export to Excel	–	O

„X” → Standard „O” → Optional „–” → Not available

### TipRay

This application is specifically designed for dial gauge and projector units and features easy operation.

- ▶ Unlimited reference point management
- ▶ Printing the values
- ▶ Creating a list of measurements (setup sheet)
- ▶ Basic absolute zero setting
- ▶ Parallelism compensation





## DATA TRANSFER / DATA CONNECTION

If the **TOOL MASTER** is connected directly with the machining centre, the tool data can be transferred online to the machine control. This will gain you more machine capacity and safety by excluding incorrect manipulations. The user can concentrate fully on the smooth operation of the CNC machines and is not distracted by complex data input.

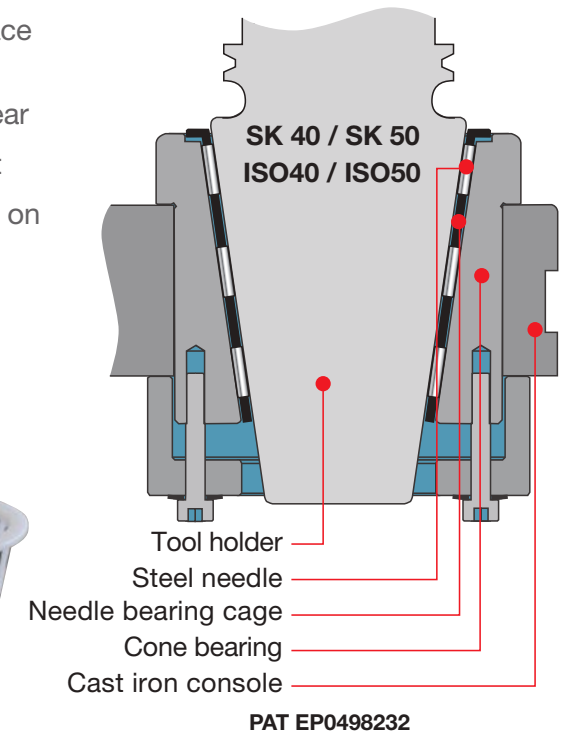
**EyeRay®** is prepared for the management of post-processors and can communicate with data carriers on the tool holders. Use of this option is very easy and ensures error-free and convenient transfer of measurement and tool data.

On data carrier systems, data is written to a chip which is read by the respective systems on the CNC machine and on the **TOOL MASTER** without contact.

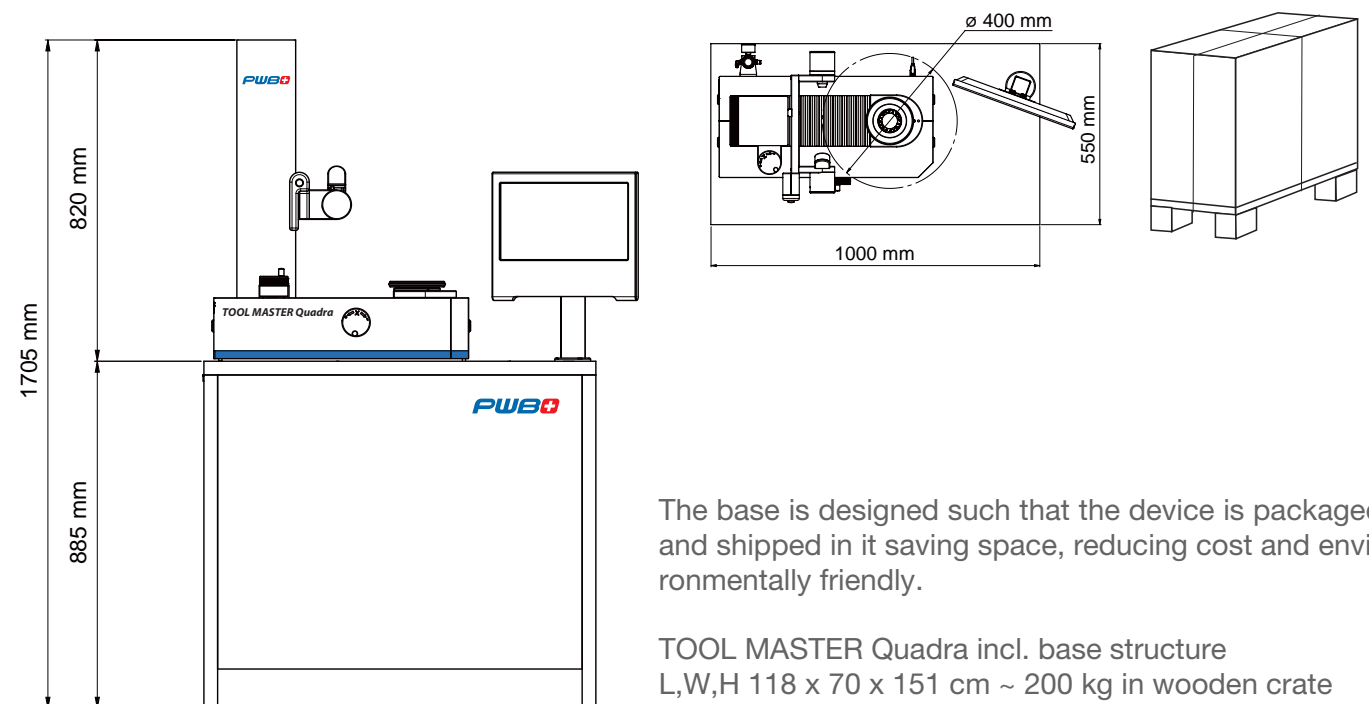


## PWB NEEDLE BEARING FOR HIGHEST REPEATABILITY

- Protection against damage of the ground cone by surface errors of the tool
- Lower surface pressure than ball bearings, thus less wear
- Higher centring forces than when using surface contact
- Oil and dirt remain in the cavities and have no influence on the measuring accuracy
- Integrated edge protection when changing tools
- Easy to clean
- No maintenance costs



## EasyPack

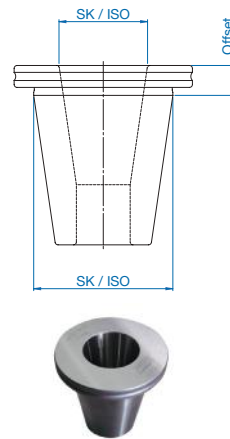


## ACCESSORIES

### 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

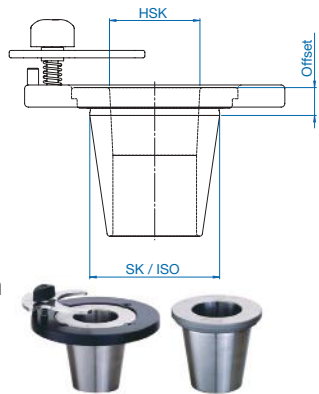


Internal shape	Offset value (Z)		
	External shape		
	SK50 / ISO50	SK40 / ISO40	SK60/ISO60
SK10	30 mm	30 mm	-
SK15	30 mm	30 mm	-
SK20	15 mm	15 mm	-
SK25	15 mm	15 mm	-
SK30	15 mm	15 mm	-
SK35	15 mm	15 mm	-
SK40	15 mm	15 mm	20 mm
SK45	15 mm	15 mm	-
SK50	40 mm	40 mm	20 mm

### 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

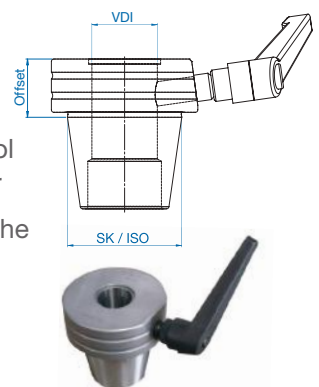


Internal shape	Offset value (Z)	
	External shape	
	SK50 / ISO50	SK40 / ISO40
HSK-A25	15 mm	15 mm
HSK-A32	15 mm	15 mm
HSK-A40	15 mm	15 mm
HSK-A50	15 mm	15 mm
HSK-A63	15 mm	60 mm
HSK-A80	52 mm	-
HSK-A100	70 mm	-

### 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

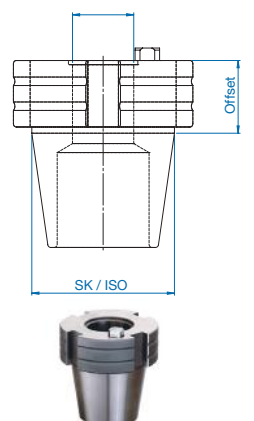


Internal shape	Offset value (Z)	
	External shape	
	SK50 / ISO50	SK40 / ISO40
VDI16	50 mm	50 mm
VDI20	35 mm	35 mm
VDI25	35 mm	35 mm
VDI30	35 mm	35 mm
VDI40	35 mm	70 mm
VDI50	35 mm	90 mm
VDI60	100 mm	-

### VDI with index

► 4x90° indexing on reduction. VDI tool holder is aligned in reduction by means of centring pins

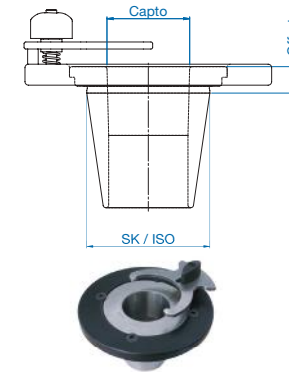
► Clearance provided in reduction for O-ring of the VDI shank



Internal shape	Offset value (Z)	
	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



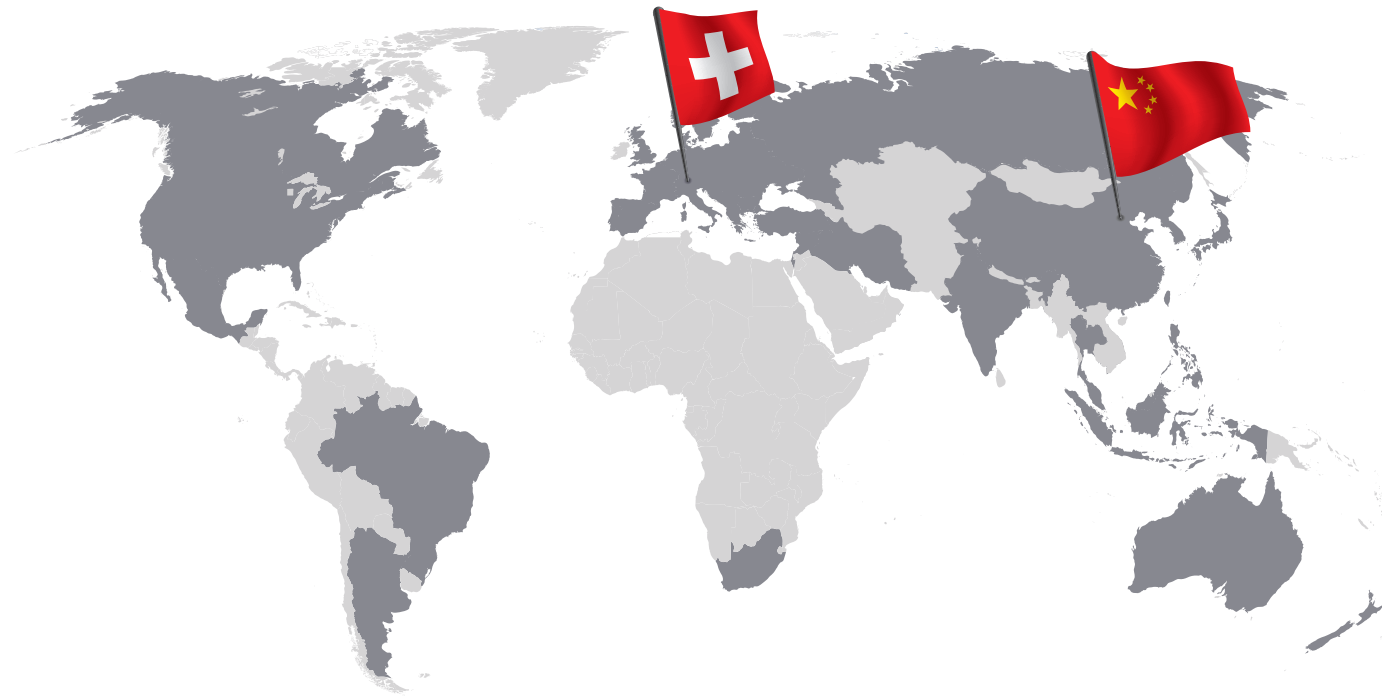
Internal shape	Offset value (Z)	
	External shape	
	SK50 / ISO50	SK40 / ISO40
C3	15 mm	-
C4	15 mm	-
C5	15 mm	-
C6	15 mm	-
C8	52 mm	-
C10	80 mm	-



### Other products



## LOCATIONS AND SALES PARTNERS WORLDWIDE



PWB is the brand name for presetters that are designed and manufactured in Brig at the foot of the world-famous Matterhorn mountain since 1998.

PWB-branded products can be found in production facilities all over the world.

The products focus on optimised implementation of individual customer needs. Part of a strong engineering group, Evoset AG offers intelligent, complementary solutions with a great price-performance ratio. This allows companies with machinery to improve the utilisation of their capital-intensive CNC machines and to increase their productivity on average by 25% per unit. As a production industry partner, Evoset AG continually develops new devices and systems in order to further optimise industrial processes.

In-house developments of measuring units, software, assembly, and an engineering staff ensure required know-how and success for your investments.



## NOTES

[illegible]



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