EZset®
tool setup made easy

It‘s Easy.
It‘s EZset!

EZset Tool Presetting Devices

measurably easy
measurably precise
measurably economical

www.EZset.info

Presetting — The Key to Success

With EZset tool presetting devices, you can save time and money, and get a crucial jump on your competition. Your tools are preset and measured while your machine works — with no downtime.

Preparing your tools correctly pays off. Precisely measured tools and optimized machine and tool lives mean at least a 15% increase in productivity in your manufacturing processes. EZset tool presetting devices amortize quickly. They are easy to operate, small on costs, and big on performance.

Simple!

- The EZset concept: The user comes first, and the machine allows for efficient work, day in and day out
- Modern image processing makes presetting tools child's play
- Quick start-up thanks to intuitive EZset operating concept

Precise!

- Image processing system with dynamic crosshairs for touchless and precise tool measurements, independent of the operator
- Brand name quality, such as Bosch pneumatics, THK guides, and Heidenhain glass scales ensure precision and a long, maintenance-free service life
- SK50 tool mounting spindle with high repeat precision and integrated calibration edges

Economical!

- Three in one: measuring, presetting, and inspecting tools
- Delivered as a complete package with base table, adapter, utensil tray, and label printer
- “Made in Germany” quality at an unbeatable price-performance ratio
- Worldwide service

15%

Your Benefits:

- Precisely measured tools
- Increase your manufacturing quality
- Optimized machine service lives
- Efficient tooling processes
- No scrap
- Longer tool lives
- Can be implemented directly in manufacturing

Increase Productivity with the Right Settings

	Scratching	Height gauge	Laser	Projector	EZset
Investment	☺	☺	😐	😐	☺
Machine Service Lives	😐	☺	😐	☺	☺
Repeatable Precision	😐	😐	☺	😐	☺
Measurable Parameters	😐	😐	😐	😐	☺
Process Security	😐	😐	☺	😐	☺
Work for Measuring Result	😐	😐	☺	😐	☺
Document Measurement Report	😐	😐	😐	😐	☺
Tool Inspection	😐	😐	😐	😐	☺
Conclusion	Not economical, high risk of damaging tools	Inexpensive to purchase, but not suitable for tool presetting and measuring	High acquisition costs, since a laser is required at every machine	Outdated technology, a presetting device with image processing should be purchased when a new machine is acquired	Better economic efficiency thanks to reliable manufacturing quality, longer machine service lives, optimized tool lives, and reduced scrap

Proven in Practice:

Before the company I-S-M in Brilon purchased the EZset tool presetting device with ImageController 2, it scratched tools in its machines. Stefan Brüne reports: “We achieved about a 15 % increase in productivity with EZset. With approx. 20 – 25 tool exchanges per day, the IC2 amortized within 8 months. We decided to go with an EZset tool presetting device because it stood out for its “Made in Germany” quality, fast service, and well-thought-out technology.”

EZset Tool Presetting Devices in Detail

Image: EZset420 with IC3

EZset tool presetting devices are available with a variety of measurement ranges, and with the four image processing variations ICbasic, IC1, IC2, and IC3.

EZset Variations	Measurement range Z	Measurement range X	Snap Gauge
EZset350	350 mm	320 mm	0 mm
EZset420	420 mm	420 mm	100 mm
EZset600	600 mm	420 mm	100 mm
EZset600/ 570	600 mm	570 mm	0 mm

EZclick: ImageControllerbasic

Operate ICbasic image processing using the EZclick knob / push button. With EZclick, you control the menus on the 7” monitor, select functions, and confirm them with the push of a button. Graphic symbols support you in using the tool presetting device.

EZpush: ImageController1

Easily operate IC1 image processing through the EZpush 13.3” touch screen monitor. You can control all the functions of the tool presetting device quickly, and easily select and confirm options.

EZtouch: ImageController2

Conveniently and intuitively operation with IC2 image processing through the EZtouch 13.3” touch screen monitor. Graphical self explanatory function buttons allow you to easily and quickly complete standard measurement processes.
Optional: 24“-Touch-Screen

EZslide: ImageController3

Modern, user-friendly, and personally customizable IC3 image processing through EZslide 17” touch screen operation: The innovative user interface can be adjusted to each user's needs through touch and slide functions.

EZset Takes You to the Image at Lightning Speed

The EZset tool presetting device with image processing system measures the cutting edges of your tools in seconds, then saves and documents the measurement results.

EZgo with ImageControllerbasic

Your Benefits:

- Easy operation and quick start-up with minimal training
- Quickly measure, preset, and inspect tools (length and diameter)
- Large number of measurement programs, for instance to measure the concentricity and axial run-out of the cutting edge
- Quickly and conveniently print out measurement results
- Easily adjust tool contours with the EZmax software function

Image:
EZset350 with ICbasic on base table (optional)

EZset with ICbasic	Measurement Range Z	Measurement Range X	Snap Gauge
EZset350	350 mm	320 mm	0 mm
EZset420	420 mm	420 mm	100 mm
EZset600	600 mm	420 mm	100 mm

EZset with ImageController 1

Additional Benefits Over ICbasic:

- Quickly measure, preset, and inspect tools (length, diameter, radius, two cutting angles)
- 20x zoom on the cutting edge in incident light for quality control
- Easily position the camera to measure target values for tools, using the EZnavigator compass needle
- Power-operated tool clamping (optional)

Image:
EZset420 with IC1

EZset with IC1	Measurement Range Z	Measurement Range X	Snap Gauge
EZset350	350 mm	320 mm	0 mm
EZset420	420 mm	420 mm	100 mm
EZset600	600 mm	420 mm	100 mm
EZset600/570	600 mm	570 mm	0 mm

Fast and Simple
Time-wasting fine adjustments are a thing of the past.
The dynamic cross-hairs move to the tool cutting edges, and automatically measures the entire camera image.

Reliably Precise Results
With projector technology, measurement results are user-independent. Not so with EZset! Results are precise no matter the user, as well as repeatable and reliable.

Efficient and Economical
Three in one! Quickly measure, preset, and inspect tools – directly beside your CNC machines.

EZset with ImageController 2

Additional Benefits Over IC1:

- Easily measure and save tools, with µm precision
- Integrated tool management, for saving target values and tolerances
- Measurement results output on a label, list or directly to the CNC machine
- Rotary center measurements with monochrome camera
- 20x/38x zoom on the cutting edge in incident light for quality control

Image:
EZset420 with IC2

EZset with IC2	Measurement Range Z	Measurement Range X	Snap Gauge
EZset350	350 mm	320 mm	0 mm
EZset420	420 mm	420 mm	100 mm
EZset600	600 mm	420 mm	100 mm
EZset600/570	600 mm	570 mm	0 mm

EZset with ImageController 3

Additional Benefits Over IC2:

- Integrated tool management: for saving target values and tolerances and generating tool setup sheets
- 28x zoom on the cutting edge in incident light for quality control
- Optional autofocus (automatically focuses on the cutting tool edge)

Image:
EZset600 with IC3

EZset with IC3	Measurement Range Z	Measurement Range X	Snap Gauge
EZset350	350 mm	320 mm	0 mm
EZset420	420 mm	420 mm	100 mm
EZset600	600 mm	420 mm	100 mm
EZset600/570	600 mm	570 mm	0 mm

Small on Budget, Big on Performance

With EZset tool presetting devices, we're setting the yardstick pretty high.

Brand name components, such as **Bosch pneumatic components, THK guides, or Heidenhain glass scales** (in X and Z with 1 µm resolution) ensure a long, maintenance-free lifetime. Equipped with **image processing** based on the newest technology available, **precise tool mounting spindle**, numerous measurement functions, and all the accessories you need, EZset re-defines economical work. The brand name product EZset offers first-class quality at an unbeatable price / performance ratio.

Simple, precise, and secure operation for the user. **EZset tool presetting devices offer a clear advantage in both quality and technology!**

EZset Hardware

Long service life thanks to brand name products like Bosch/Festo pneumatic components, five THK guides, CCD camera, and Heidenhain glass scales — ensuring the highest quality and precision

Long-lasting LED Cold Light Source for cutting edge inspection is standard on EZset tool presetting devices.

Integrated Guideway Assemblies on the carriage guides guarantee quiet, smooth operation of optic carrier for repeatable measurement results.

Label Printing: You will receive five measurement results precisely and reliably in seconds, with length, diameter, radius, and angle 1 and 2 for the tool cutting edge.

EZset One Hand Control Handle to easily position the measurement slide at the tool blade and for ergonomic operation.

SK50 Tool Holder Spindle with high concentricity and integrated calibration edge.

Membrane Keypad to pneumatically operate 4 x 90° indexing and brakes on the SK50 tool holder spindle. Optionally available with vacuum clamping.

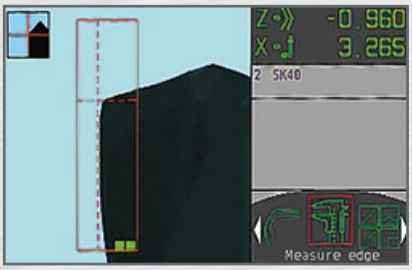
Adapter and Utensil Tray for secure and professional storage.

Robust Base Table Ready for the shop floor to set up directly beside your CNC machine. Ergonomic and space-saving.

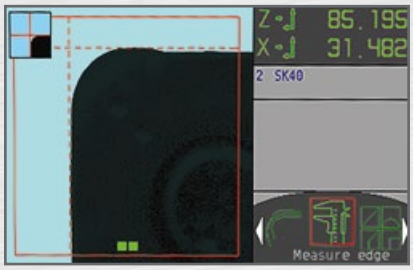
Label Printer to printing measuring results.

Software ImageControllerbasic

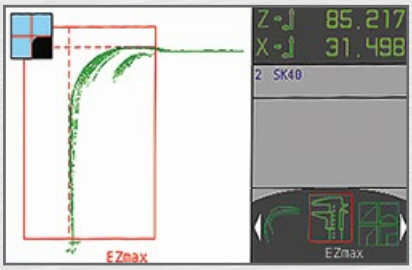
7” Screen



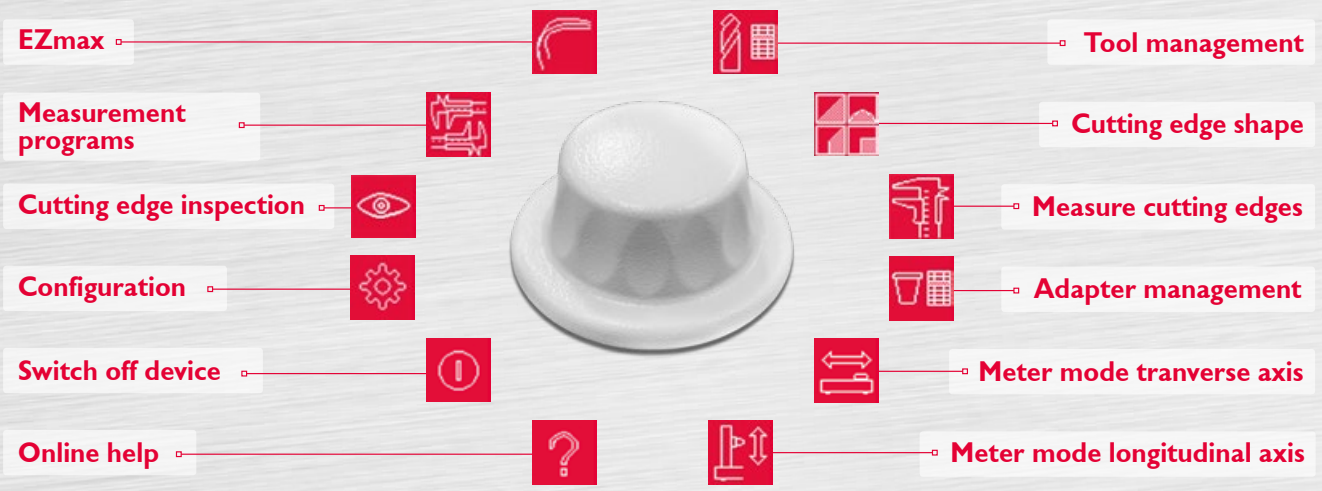
- By switching the meter, for instance, to absolute measurement, differential measurement, or incremental measurement, distances are measured easily and precisely, down to the µm.
- Software function to determine oversized radii, angles, concentricity, and much more
- Quickly and easily print out measurement results on labels



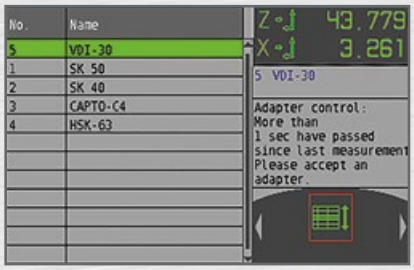
- User-independent measurements with dynamic cross hairs and automatic cutting edge shape recognition
- Up to five measurement results: Length, diameter, radius, and two angles
- Defined target value input
- 104 cutting edge shapes



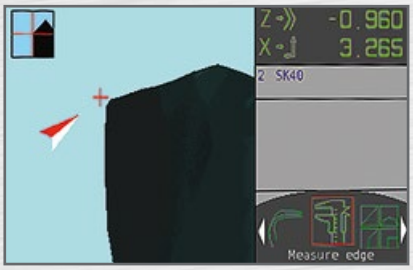
- EZmax software function to determine and measure the maximum contour of the tool



- Tool cutting edges in incident light with 12x zoom to inspect cutting edges for wear and tool breakage
- Brightness adjustment using 12 long-lasting power LEDs



- EZset zero point monitoring for 100% precise measurements after every adapter exchange



- Compass needle – easily position the camera to measure target values on the tool

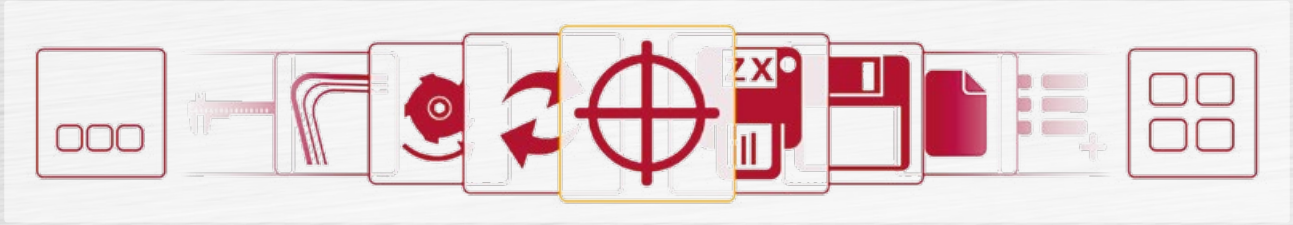
IC1

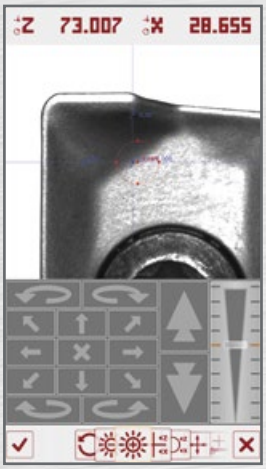
Software ImageController1

13.3” Screen

- By switching the meter, for instance, to absolute measurement, differential measurement, or incremental measurement, distances are measured easily and precisely, down to the µm
- Software function to determine oversized radii, angles, concentricity, and much more
- Quickly and easily print out measurement results on labels
- EZmax software function to determine and measure the maximum contour of the tool

- User-independent measurements with dynamic cross hairs and automatic cutting edge shape recognition
- Up to five measurement results: Length, diameter, radius, and two angles
- Defined target value input
- Number of cutting edge shapes: 113

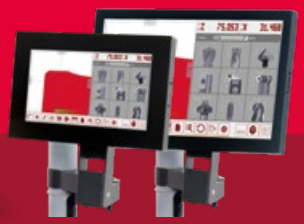




- Tool cutting edges in incident light with 20x zoom to inspect cutting edges for wear and tool breakage
- Brightness adjustment using 12 long-lasting power LEDs

- Quickly and easily measure with EZstart
- Graphical menu for selecting tool type
- After selecting the tool type, the tool-specific measurement is completed automatically, and the machine outputs the desired result

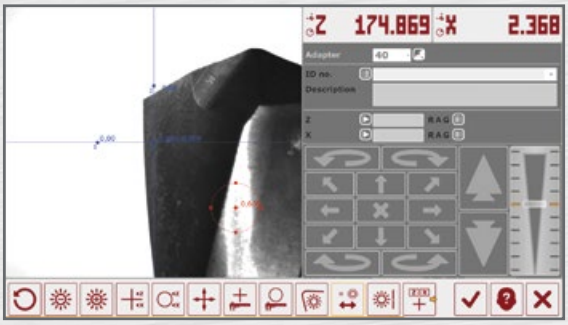
IC2



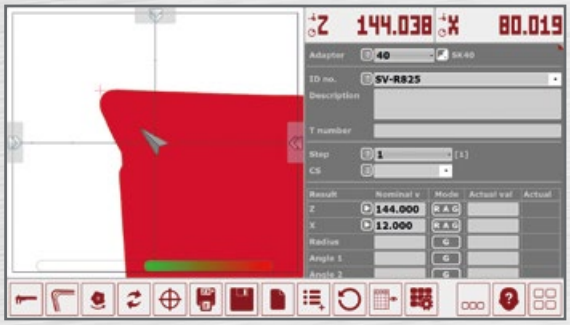
Software ImageController2

13,3”-Screen or 24”-Screen

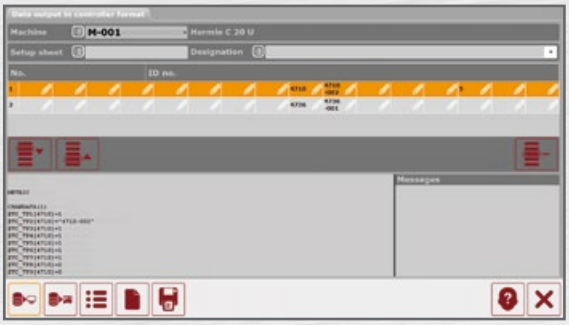
- User-independent measurements with dynamic cross hairs and automatic cutting edge shape recognition
- Up to five measurement results: Length, diameter, radius, and two angles on the tool cutting edge
- Target values and tolerances can be defined
- Number of cutting edge shapes: 113



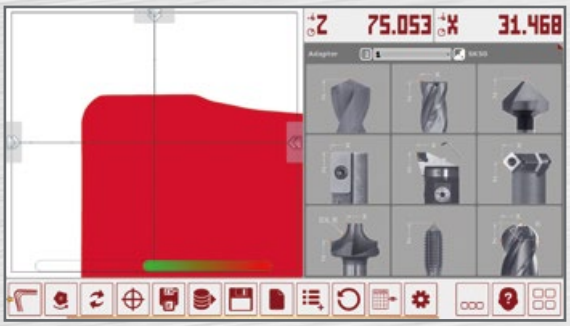
- Tool cutting edges in incident light with 20x zoom to inspect for wear and tool breakage
- Brightness adjustment using 12 long-lasting power LEDs
- Switch over to a cross-hair pointer which can be positioned manually



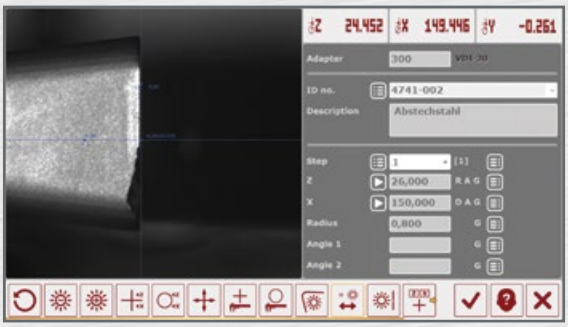
- The EZnavigator compass needle guides the operator to the target position where the measurement should be completed (for example on multi-stage tools)
- The tool cutting edge and its measurement parameters are assigned to one of the tools stored in tool management



- Data output in a format appropriate for the tooling machine controller (DOP), including format generator to generate post-processors / output formats (over 100 output formats are included in the EZset DOP library)



- Standard programs for specialized measurement tasks with clear presentation of tool parameters and input fields
- Measurement programs to determine oversized radii and angles, concentricity, the largest and smallest blade, and much more
- Operator guidance for required entries

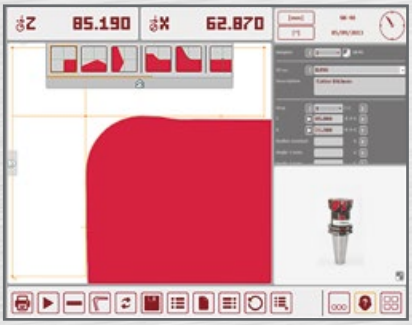


- EZturn rotary center measurement device (optional) to determine the rotary centers and center heights of tools
- 20x/38x zoom of the tool cutting edge

IC3

Software ImageController3

17” Screen

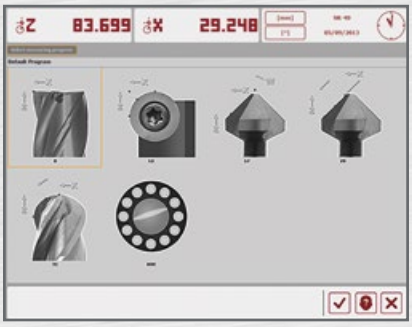


- User-independent measurements with dynamic cross hairs and automatic cutting edge shape recognition
- Up to five measurement results: Length, diameter, radius, and two angles on the tool cutting edge
- Target values and tolerances can be defined
- Number of cutting edge shapes: 113

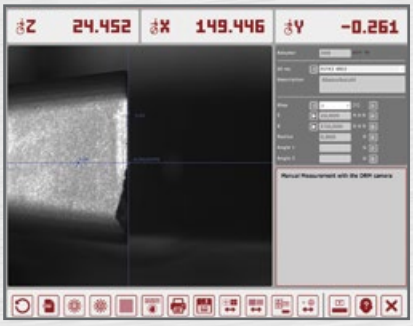
- Tool cutting edges in incident light with 28x zoom to inspect for wear and tool breakage
- Brightness adjustment using 12 long-lasting power LEDs
- Switch over to a cross-hair pointer which can be positioned manually

- Graphics management: The operator can assign the tool or tooling machine a graphic from the integrated standard library
- Safe operation and fast tool exchanges possible
- Common graphics formats like jpg, bmp, dxf, and dwg can be loaded
- Tool management for complete tools, including measurement processes, target values, tolerancs, and multiple images

- Data output in a format appropriate for the tooling machine controller (DOP), including format generator to generate post-processors / output formats (over 100 output formats are included in the EZset DOP library)



- Standard programs for specialized measurement tasks with clear presentation of tool parameters and input fields

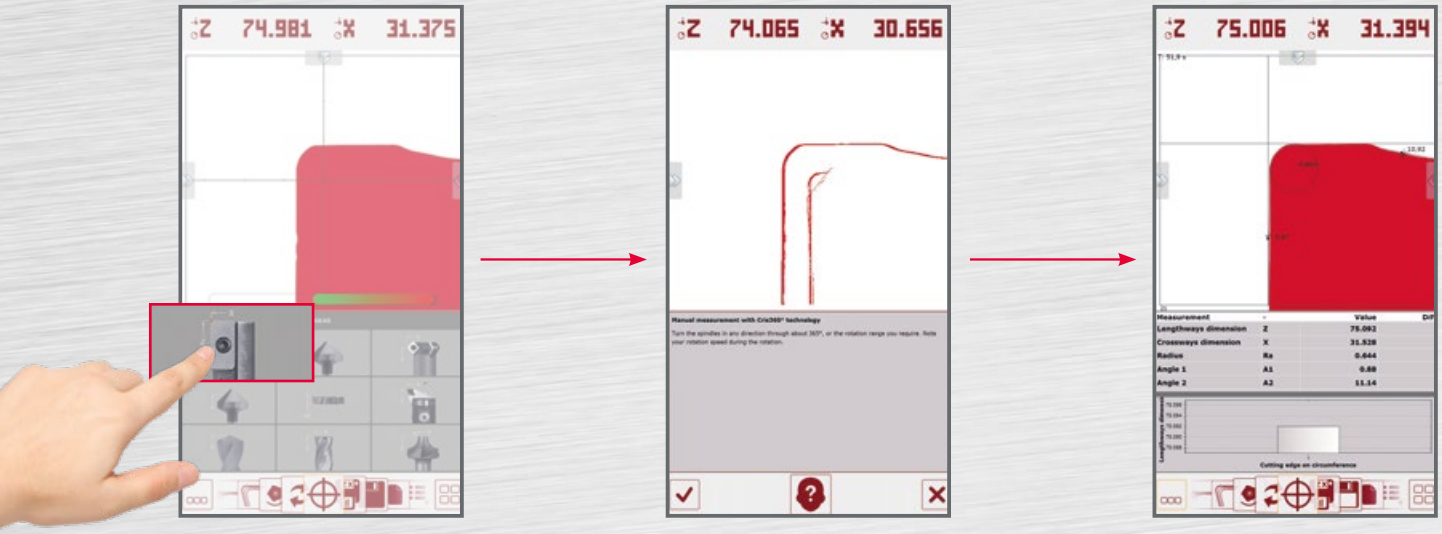


- EZturn rotary center measurement device (optional) to determine the rotary centers and center heights of tools
- 28x zoom of the tool cutting edge

EZstart
Easier than Ever Before

EZstart makes measuring tools easier than ever before – simply select the right tool from the menu and follow the measurement tasks stored for that specific tool. With EZstart, you can complete user-independent measurements of standard tools easily and quickly. EZstart is available standard above ImageController1.

1 Insert tools into the tool presetting device.



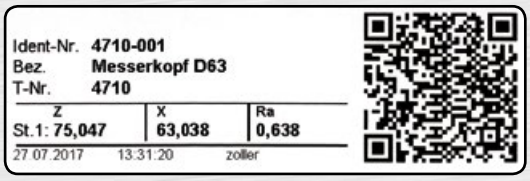
1 Select the right tool type

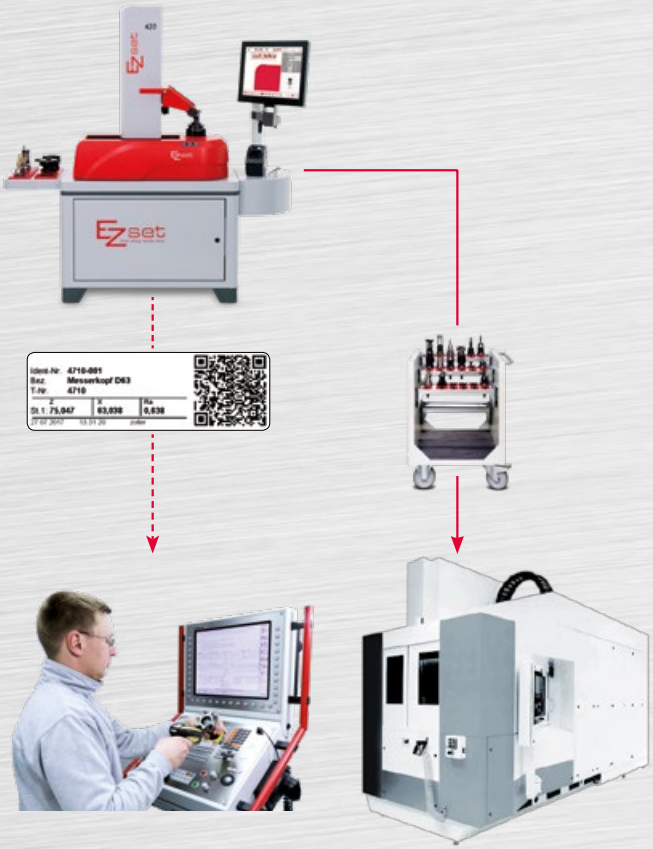
2 Tool-specific measurement process launches

3 Up to 5 measurement results can be determined with EZstart (Z, X, radius, angle 1, angle 2)

»zidCode«
EZset Identification Code

Simple, fast, and secure: »zidCode«. This new and efficient solution for tool identification and data transmission doesn't need a network connection. Instead, it transmits complete tool data simply via a QR code, without requiring installation software on the machine controller. »zidCode« is available for image processing system IC3.





1 Set and measure tools on the tool presetting device.

2 Print out tool data on the label, including QR code.

3 Scan »zidCode« label with QR code into the CNC machine; actual tool data is automatically entered into the appropriate data fields in the controller of the CNC machine.

With the EZset identification code »zidCode«, you save up to 45 % more time in comparison to manually entering actual tool data into the machine controller. Input errors are also avoided entirely – time-consuming reworking is eliminated, and process security is increased.

EZset Options
& Accessories

SK / HSK / VDI Adapter
Standard adapter with calibration edges (spherical calibration fixtures), additional calibration gages are not generally necessary with EZset.

SK50 Vacuum Tool Mounting Spindle
Vacuum clamping in addition to the 360° spindle brake and 4 x 90° spindle indexing — pneumatic activation via keyboard.

Adapter for Power-operated Tool Clamping
Universal, power-operated tool clamping for steep tapers DIN 69872-1 and HSK DIN 69893 — tool clamping is activated through the keyboard.

Universal Spindle for Power-operated Tool Clamping
Power-operated tool clamping with direct, universal adapter mounting in the mounting spindle — direct adapter mounting and power-operated clamping of tool holder for high precision.

Autofocus for IC2 and IC3
Automatic focus on the tool cutting edge.

EZturn for IC1, IC2 and IC3
To achieve optimal tooling results and longer tool lives, rotary tools must be set to their maximum height. EZset offers an optional additional monochrome camera for this purpose — to set the rotary center of tool cutting blades. The camera's cross hairs can be rotated and moved.

Data Transfer Direct to the CNC Machine with IC2 and IC3
With IC2 and IC3, you can transfer all tool data directly from the tool presetting device to the CNC machine in a format appropriate for its controller (optional).

Maintenance Unit
For easily preparing compressed air supplies directly to the tool presetting device.

EZprotection
The cover on the EZset tool presetting device protects from dust and dirt.

Overview

Function	Description	ICbasic	IC1	IC2	IC3
Operation / Features					
EZclick	Control the menu using a rotary / push button	✓	–	–	–
EZtouch	Control the menu using a touchscreen	–	✓	✓	✓
EZslide	Slide the window area using a touchscreen	–	–	–	✓
Monitor	TFT color monitor size	7.0“	13.3“	13.3“ (optional 24“)	17.0“
Operating System	Operating system to control measurement device	Linux	Windows 10	Windows 10	Windows 10
Device Design					
Spindle	SK50 tool holder spindle	✓	✓	✓	✓
Pneum. Spindle Functions	4 x 90° indexing, 360° spindle brake	■	✓	✓	✓
Base Table	Base table in sturdy industrial design	■	✓	✓	✓
Label Printer	Thermal label printer	■	✓	✓	✓
Adapter Tray	For storing adapters	■	✓	✓	✓
Options					
Spindle Vacuum	SK50 tool holder spindle vacuum clamp	■	■	■	■
Universal Spindle for Power-Activated Tool Clamp	Power-activated universal tool holder spindle	–	■	■	■
Adapter	Standard selection, further adapters available on request	■	■	■	■
Adapter	Additional adapter trays on request	■	■	■	■
EZprotection / EZspindle-protection	Cover to protect from dust and dirt	■	■	■	■
EZmaintain	Maintenance unit for preparing compressed air for device supply	■	■	■	■
EZturn	Center height measuring with monochrome camera	–	■	■	■
Auto Focus	Automatic focus on the tool cutting edge	–	–	■	■
Software Functions					
Dynamic Cross-hair Pointer	Dynamic cross-hair pointer for automatic measurements	✓	✓	✓	✓
Cutting Edge Form Recognition	Automatic cutting edge form recognition	✓	✓	✓	✓
Cutting Edge Inspection	Zoom on the cutting edge in incident light for quality control	■ 12x	✓ 20x	✓ 20x/38x	✓ 28x
Multi-insert Cutter	Software function measuring concentricity and axial runout for multi blade tools	✓	✓	✓	✓
EZmax	Software function to determine and measure the tool contour	✓	✓	✓	✓
Zero Point Monitoring	Safety inquiry for adapter zero point to prevent machine crashes	✓	✓	✓	✓
EZstart	Software function for quickly measuring standard tools	–	✓	✓	✓
Adapter Management	Save and manage adapter data like zero points	✓ 99	✓ 99	✓ 99	✓ 999
Tool Management	Save tool data	■	✓ 3000	✓ 3000	✓ 15000
Online Help	Integrated help texts	✓	✓	✓	✓
EZnavigator	Compass needle – easily position the camera to measure target values on the tool	■	✓	✓	✓
Graphics Library	Graphical representations of tools	–	–	–	✓
Tooling Sheets	Create and save tool lists	–	–	–	■
Projector Function	Switch over to projector function with cross-hair pointer	■	✓ adjustable	✓ adjustable	✓ adjustable
Data output					
Label Printer	Print out thermal labels	■	✓	✓	✓
List Printing	Print out DIN A4 reports and more	–	✓	✓	✓
USB	USB 2.0 interface, data output via USB	✓ 1 pieces	✓ 4 pieces	✓ 4 pieces	✓ 4 pieces
LAN / Network	Data output through network connection	–	–	■	■
COM / Serial	Data output through RS232 interface	✓	✓	✓	✓
to the CNC machine controller	Measured values and tool data output from IC2 / IC3 tool management to the CNC machine	–	–	■	■
and to controller through the Network	Software for tool management and measured value transmission to customer's separate PC through the network	■	■	■	■
»zidCode«	Tool identification and data output without network connection	–	–	■	■

✓ **standard** ■ **optional** – **not available**

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EZset®
tool setup made easy

Quality made in Germany

BREZSET.02–EN. 01/2018. We reserve the right to make technical changes. We reserve the right to change included equipment.

Precisely Preset Tools

Optimized Machine Service Lives

No Scrap

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