



TSCHORN®

Probes & Tools Technology

New products



3D Digital

3D Digital

Revolutionary: Digital & Analogue on one display!

Analogue display
Rough scale

Analogue display
Fine scale 0,01 mm
from -0,250

Digitale Anzeige
Auflösung 0,005 mm

Probing status LED
Off = Rough scale
Green = Fine scale
Red = Warning range



Revolutionary! The new **3D Tester Digital** combines the best of two worlds, as the 3D Tester Digital is digital and analogue at the same time: The digital display with numbers allows you to accurately read digitally. Tracking a rapidly changing digital display with your eyes is nearly certainty, the additional analog display of the 3D Tester Digital gives you security when reading. Because a moving pointer can be followed visually much better and more reliably. Additionally, a built-in LED shows the status of your probing with the help of different colours and protects you from overpassing and a possible resulting defect. With the 3D Tester Digital, you quickly and easily determine workpiece zero points and lengths in all axial directions (X/Y/Z) and you can adjust you workpiece or vice to the machine axis.

How to work with the 3D Tester Digital:

Clamp the 3D Tester into your tool holder, adjust the run-out and there you go:



Rough scale (1.5 till 0,25 mm)
Fast approach and safe probing thanks to the analogue rough display. The eye can easily follow the progress as the black bar decreases clockwise.



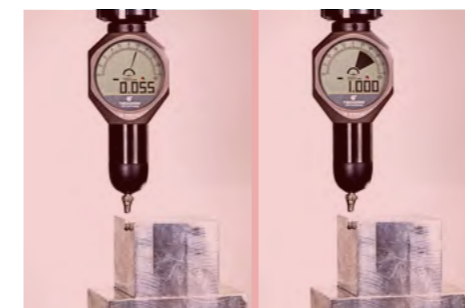
Fine scale (0,25 till 0 mm)
At -0,250 mm, the display changes to the fine scale and the green LED lights up.



Zero point (precisely reached)
When the „0“ is reached, the spindle axis is positioned precisely on the edge of the workpiece.



Danger of crash (0 mm till ERR01)
When overpassing, the LED warns in red and the black bar builds up clockwise to the right. Shortly before crash (>1 mm), you can see ERR01 on the display..



Of course, the 3D Tester Digital is small and slim, waterproof (IP67) and is delivered with a serial number and a test certificate. The scope of delivery also includes a CR2450 battery and a ceramic probe tip $\varnothing 3$. Both items are available as spare parts. Switch on the 3D Tester Digital by moving the probe tip in any direction X, Y or Z. If not used, the probe switches off after 2 minutes.

3D Digital



Revolutionary: Digital & Analogue on one display!



Delivery starts in January 2023

Article no.	Description	Shank	Ball
001D30012	3D Digital	$\varnothing 12$	$\varnothing 3$
001D32450	Spare battery CR2450		



Zero clamping system

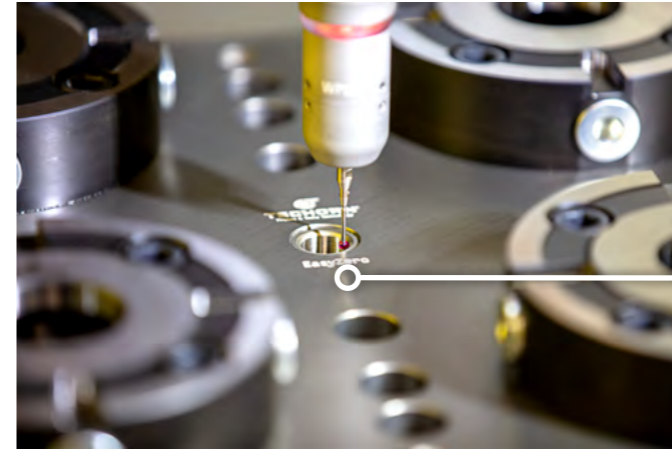
Easy, independent, precise!
- exactly what you need!



Manual

Minimize set-up times
with EasyZero zero point system

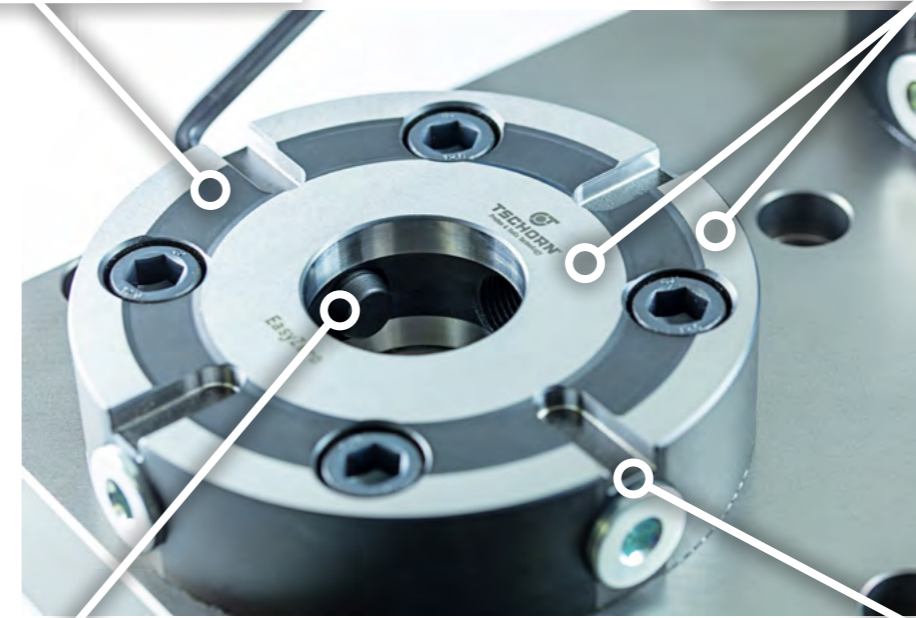
Useful in every detail!



EASY centre point:
Exactly in the middle of the system, there is a hole for quick and precise recording of the centre point.

EASY laid open:
More safety from chips and dirt thanks to the open area.

EASY massively clamped:
Broad and massiv clamping surfaces make the system stable and reduce vibrations.



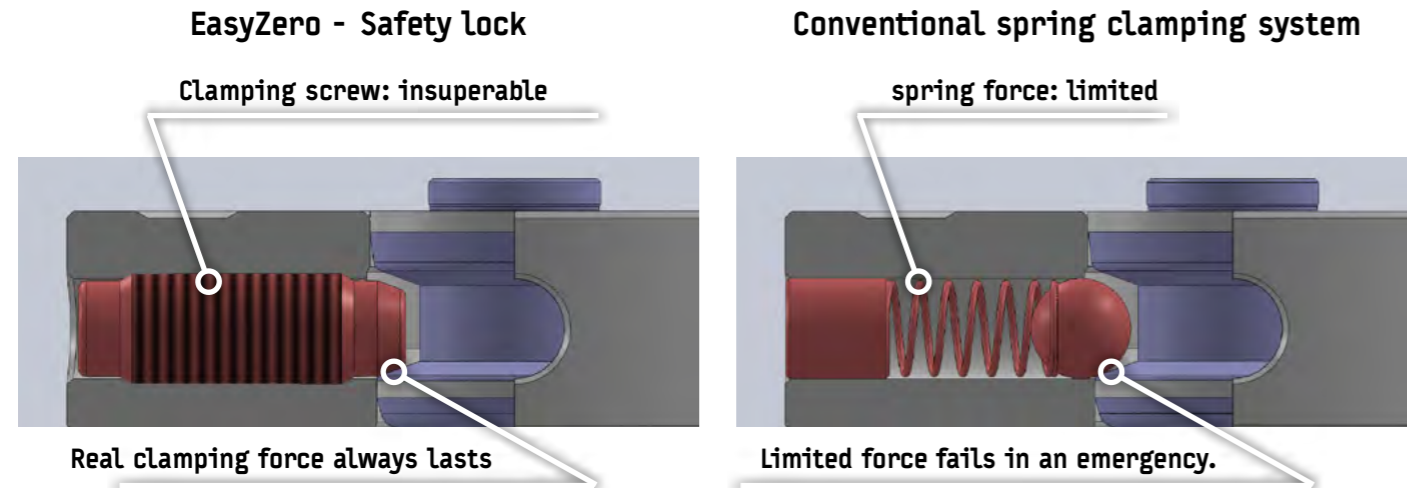
EASY powerful:
With only 60Nm torque, we reach up to 50 kN clamping force.
(Usable in 4 directions)

EASY indexed:
Precisely indexed via the indexing slots width 8 mm.

Zero clamping system

EasyZero - Safety lock

Process reliability thanks to safety lock: conventional spring-loaded zero point systems have limited spring force. That is why they are often error-prone and are a safety risk. On the other hand, the EasyZero zero point system impresses with its insuperable safety lock.



This safety lock has especially been developed for the EasyZero zero point system. It secures clamping devices and workpieces mechanically and insuperably on the machine table. An opening of the safety lock due to overload is impossible - the clamping screw or clamping stud would have to be smashed for this.

Spring force, however, is limited and fails at high machining forces and in an emergency. Dirt can also reduce the spring force and allow risky opening. This usually provokes a crash which can lead to damage to the workpiece, tool or machine and can even cause injury to the machine operator.

Therefore safety first with EasyZero safety lock:

A low crash risk minimizes the risk of injury, prevents damage to the workpiece, tool and machine and ensures precise work results.



Clamping force up to 50 kN
Turning moment max. 60Nm

Clamping screw:



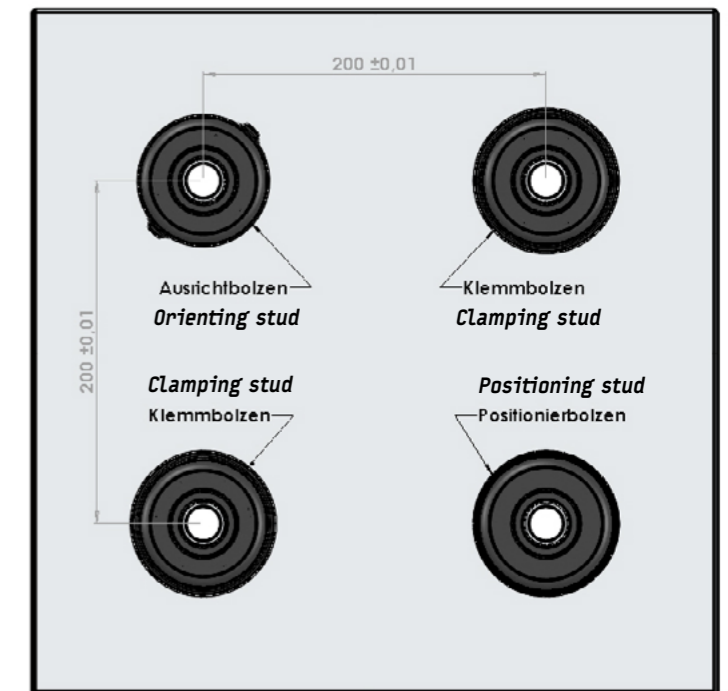
EasyZero - Studs



Positioning stud:
responsible for highly precise positioning.

Orienting stud:
responsible for exact orienting to the axis.

Clamping stud:
with undersize simply useful for safe clamping.



It slips easily:
minimized canting, user-friendly as well as highly precise.

- + Simple inserting
- + Repeatability < 0,005 mm

Systems and accessories

Zero clamping system



Adapter plate
4 clamping points
Art.No. 003511004



Adapter plate
2 clamping points
Art.No. 003511002



Adapter plate
1 clamping point
Art.No. 003511001



Basic system 4 pots
Art.No. 003501004



Basic system 2 pots
Art.No. 003501002



Basic system 1 pot
Art.No. 003504001



Zero clamping system

For direct installation



Basic system 1 pot
Art.No. 003501001

Space-saving



Basic system 1 pot
Art.No. 003502001

For 5-axis machines



Basic system 1 pot
Art.No. 003503001



Cover stud
003521011



Clamping screw
003521021



Cover
003521012



Positioning stud
003521001



Orienting stud
003521002



Clamping stud
003521003

Article-No.	Description	A	B	H
003501001	EasyZero Zero point system 1 pot for direct installation	Ø130	-	32
003502001	EasyZero Zero point system 1 pot	Ø130	-	72
003503001	EasyZero Zero point system 1 pot	Ø147	-	125
003504001	EasyZero Zero point system 1 pot	140	175	72
003501002	EasyZero Zero point system 2 pots	340	175	72
003501004	EasyZero Zero point system 4 pots	340	375	72
003511001	EasyZero Adapter plate 1 clamping point	180	180	26
003511002	EasyZero Adapter plate 2 clamping points	346	156	26
003511004	EasyZero Adapter plate 4 clamping points	346	346	26
003521001	EasyZero Positioning stud			
003521002	EasyZero Orienting stud			
003521003	EasyZero Clamping stud			
003521011	EasyZero Cover stud			
003521012	EasyZero Cover for boreholes (package: 5 pcs)			
003521021	EasyZero Clamping screw			
003521031	EasyZero Positioning segment 8 mm (for indexing in the indexing slot)			
003521032	EasyZero Adapter sleeve M12-M10 (for reducing from M12 to M10)			
003521033	EasyZero Positioning round sleeve Ø16 (for positioning of the pots)			

Clamping bolts



Quick setting with the clamping bolts: move each single bolt without clamping screw into the slide block of the machine table and position the bolt by hand as a stopper at the workpiece. Tighten the clamping bolt and it automatically helps you to position the workpiece.

Flexible for diverse workpiece shapes: no matter if round, oval, quadratical or even pentagonal - with the help of the clamping bolts, you can clamp all forms.



Safely fixed: the clamping screws are added from above. They clamp the workpiece powerfully and securely. A soft exchangeable brass ring avoids damages or scratches at the workpiece.

Drill-through: there is not much disturbing space under the workpiece - no clamping jaws, no base, nothing is disturbing when you drill-through your workpiece with diverse divisions of pitch circles.

The small disturbing contour enables multi-purpose machining even at places which you normally hardly reach.

Clamping bolt system FlexiClamp



You only buy what you need!

Build your own clamping system!

Full flexibility thanks to the modular principle

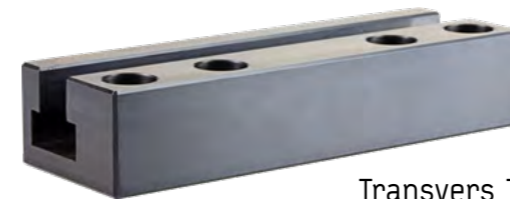
New, incredibly fast and individual application: FlexiClamp

Assemble your FlexiClamp clamping system with the parts you need for your machining!

The FlexiClamp bolts are a modern combination of an aluminum body and hardened steel surfaces. The bolts are available in heights of 50 and 80 mm.

The bolts are positioned and fastened using a centric screw with a hexagonal wrench while the bolt is stationary - without any undesired twisting.

You can reach any position on the machine table with the help of the transvers T-slot bar:



Transvers T-slot bar
Art.No. 003S00Z40




FlexiClamp is also suitable for series production, since the workpiece can be changed in just a few simple steps using the bearing clamping screw:




FlexiClamp

FlexiClamp

Decide which screw you need:

 **Art.No. 003S01000**
Standard screw for small to medium-sized series: minimized interfering contours thanks to the very flat screw head.

 **Art.No. 003S02000**
Bearing clamping screw also for large series: Faster workpiece changes due to the innovative contour of the bearing screw head.

Decide which clamping height you need:

Stable extension of the clamping height by 20 or 40 mm through a rigid extension with the same clamping screw length:



Clamping bolt height 50 mm
Art.No. 003S00050



Clamping bolt height 80 mm
Art.No. 003S00080



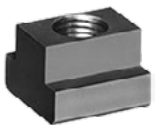
Clamping ring (for bearing clamping screw)
Art.No. 003S00Z22



Clamping ring standard
Art.No. 003S00Z21



Transvers T-slot bar
Art.No. 003S00Z40



Slide block
10 - 18 mm

Order data:

Article No.	Description
003S01050	FlexiClamp Set clamping bolt M8 height 50 mm + clamping screw standard
003S01080	FlexiClamp Set clamping bolt M8 height 80 mm + clamping screw standard
003S02050	FlexiClamp Set clamping bolt M8 height 50 mm + bearing clamping screw
003S02080	FlexiClamp Set clamping bolt M8 height 80 mm + bearing clamping screw
003S00050	FlexiClamp clamping bolt M8 height 50 mm
003S00080	FlexiClamp clamping bolt M8 height 80 mm
003S01000	FlexiClamp clamping screw standard 5-25 mm
003S02000	FlexiClamp bearing clamping screw 5-25 mm
003S00Z11	FlexiClamp clamping bolt extension +20mm
003S00Z12	FlexiClamp clamping bolt extension +40mm
003S00Z21	FlexiClamp clamping ring standard
003S00Z22	FlexiClamp clamping ring for bearing clamping screw
003S00Z40	FlexiClamp transvers T-slot bar 14 mm (for suitable T-slot distances 63, 100 and 125 mm)
002080028	Slide block M8 x 10
002140301	Slide block M8 x 12
002140327	Slide block M8 x 14
002153460	Slide block M8 x 16
002153478	Slide block M8 x 18



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Shareholder: Ralf Tschorn



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