



TSCHORN®

Mess- und Spannmittel



precise. pioneering. worldwide.

Precision is measurable.
- contrary to child poverty!



For each 3D-Tester sold, we donate one euro to the "Kinderreich" programme of „Deutscher Kinderschutzbund Schorndorf/Waiblingen“. It will support children in our region who are suffering from poverty or are socially disadvantaged.

EXTREMELY SLIM

Conventional products



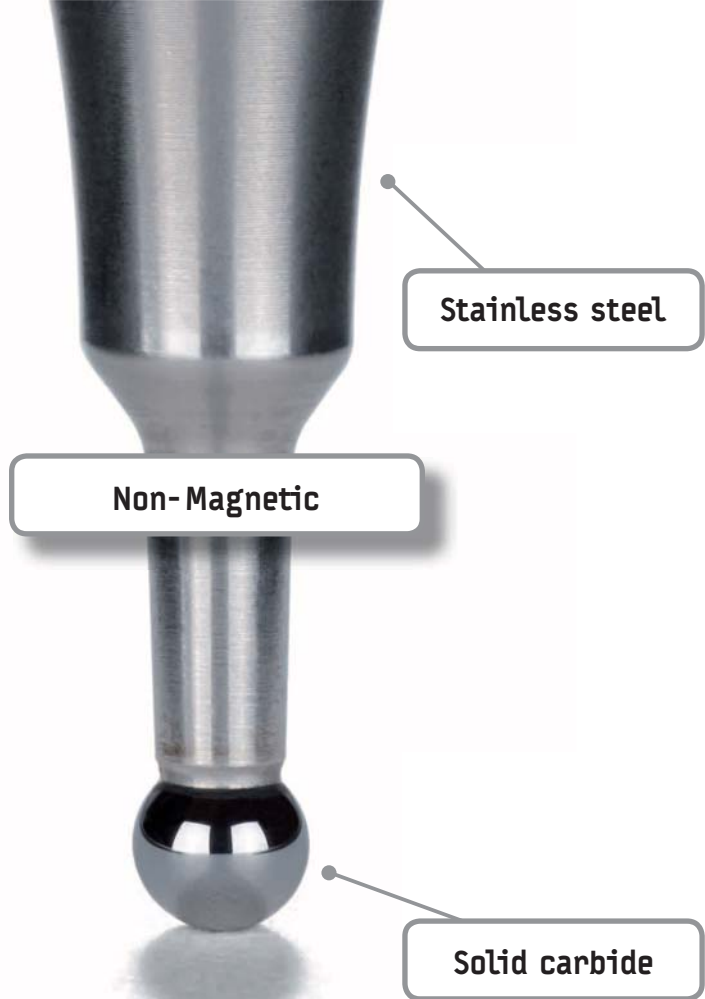
Image to scale 1:1

GOOD OVERVIEW

Perspective of the machine operator:



precise. pioneering. worldwide.



Standard Ø3

Long Ø6



Probe tips don't break easily .
... only



Undefeatable

...y, if it counts!

3D-PROTECTION-SYSTEM

The measuring unit is the most valuable component of the 3D-Tester. Protecting this measuring unit is therefore the most important task. A complete and versatile 3D-Protection-System is integrated into the 3D-Tester. The sensitive clock mechanics are kept safe from any damage.

The 3D-Protection-System is constructed in 4 levels:

Level 1 - breaking point 1 (= bending the narrow probe tip)



Level 2 - breaking point 2 (= a fracture on the taper)



Level 3 - mechanical limits
(= the probe mechanics' mech. limits in X/Y)

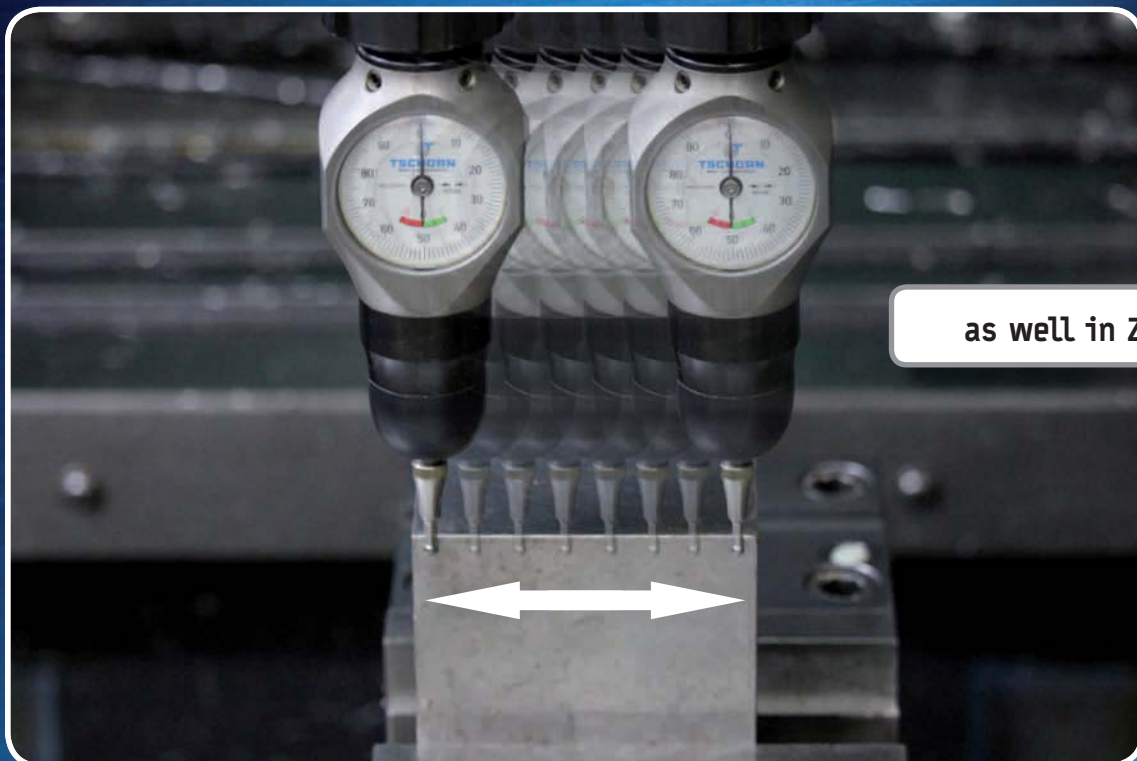


Level 4- mechanical limits
(= the probe mechanics' mech. limits in Z)



PARALLEL RUNNING

If you start moving laterally, even if you reverse, the probing system is steady and does not move. It only shows the exact parallelism failure.



WORLDWIDE SERVICE-NETWORK



- Headquarters
- Service partner
- Authorized Service location



REPAIR SERVICE SIMPLE - FAST - INEXPENSIVE

The 3D-Tester is constructed in a way that the probing unit can be changed. The 3D-Tester must then be fine-tuned and tested. We offer you this flat-rate repair service at a fixed price. If your 3D-Tester develops a malfunction, just place a repair order to a service partner or authorized service location close to you. You will get help easily and quickly.

Repair service process:

1. place an order to the repair service
2. return the 3D-Tester
3. our trained engineers immediately conduct a quick check
4. you get a repaired and tested replacement device back

Our trained service partners are qualified to conduct a quick check of the 3D-Tester and deliver a replacement device to you.

Our authorized service locations additionally can check and repair our 3D-Testers on their own. They have the equipment and are trained so that they are qualified to repair and check the 3D-Testers in the same way as we do it in Germany.

The probing unit of the replaced 3D-Tester is factory fresh. Its accuracy level corresponds to that of a new 3D-Tester. At first glance, it is almost as new. The total duration of the repair service is just 48 hours (approx.).

ACCURACY CHECK WITH FACTORY CERTIFICATE

It is also possible to check your 3D-Tester's accuracy. Our partner at the authorized service location makes a complete check of your 3D-Tester and adjusts it if needed. After the check, you will receive a new factory certificate.



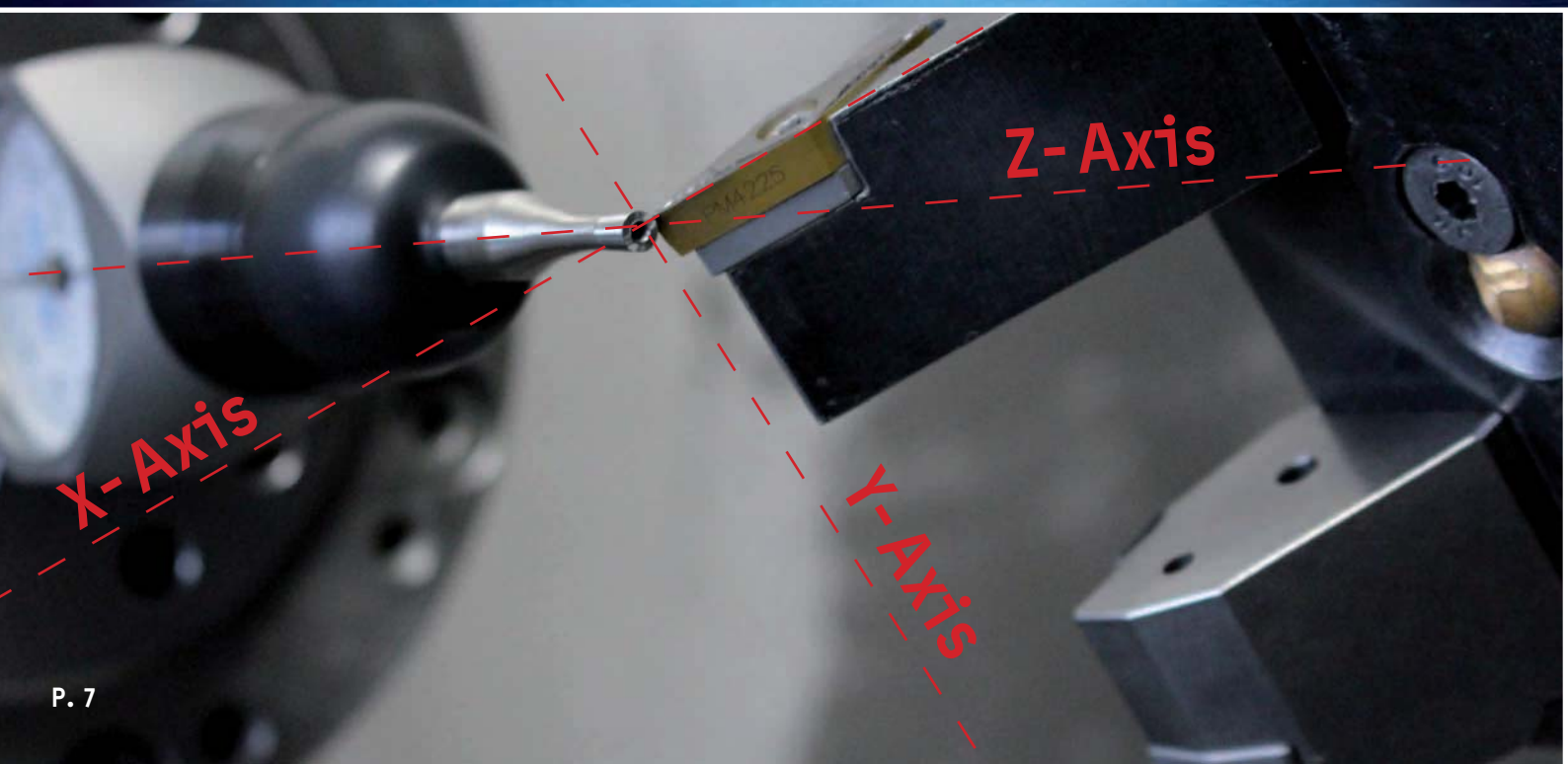
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3D-Tester DREHplus

With the 3D-Tester DREHplus you can measure tools on lathes in all axes X, Y and Z.

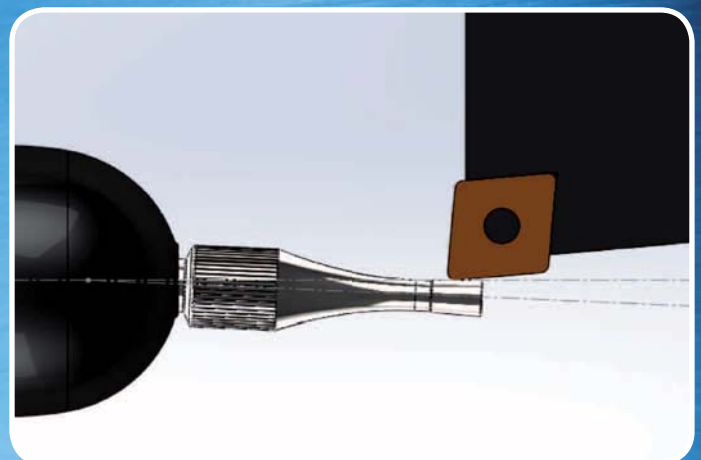
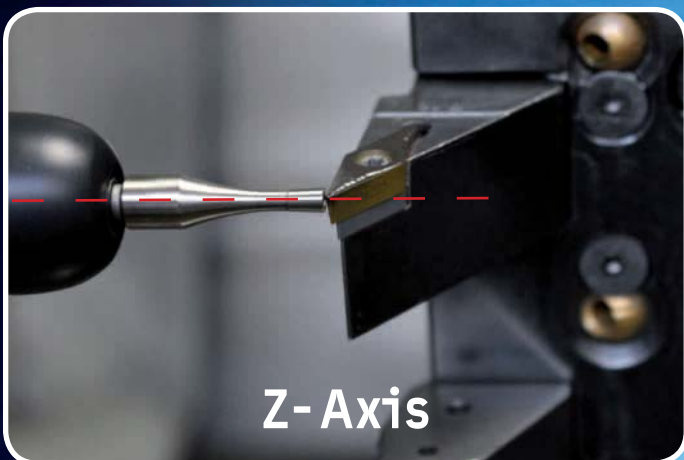
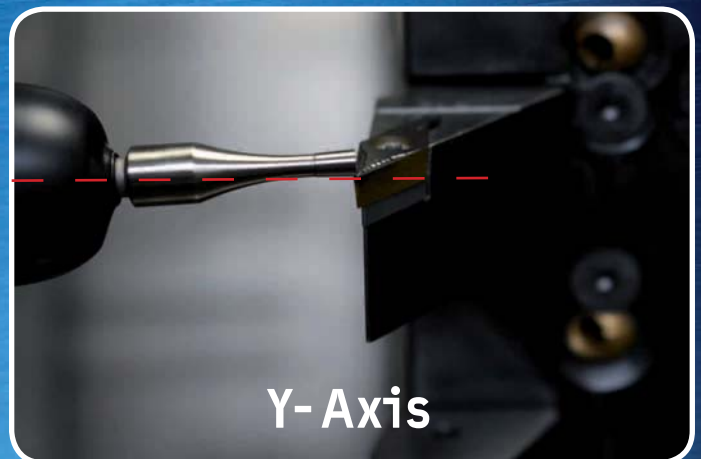
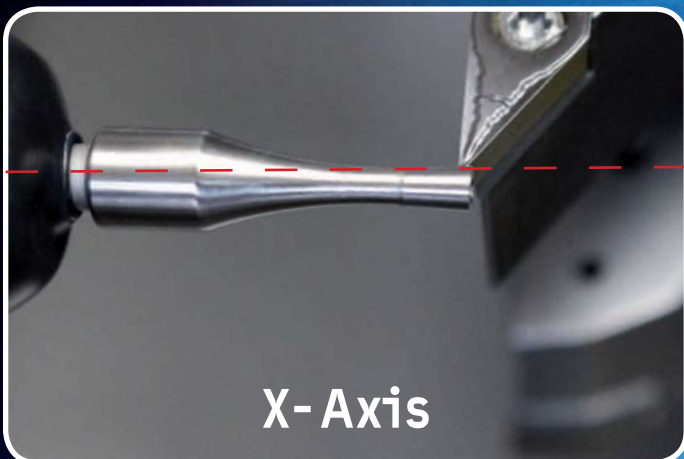
- Innovative probing technology: the conical probing corpus has been adjusted to needs on lathes
- Measuring of tools in all axes: X, Y and Z
- Slim and clear because of its innovative design
- Time-saving and precise as tools can be measured directly in the lathes with the DREHplus
- Cost-saving as no expensive additional equipment is necessary




INNOVATIVE PROBING TECHNOLOGY

The DREHplus has got unique probe tips with an innovative conical probing corpus made from hardened tool-steel.

The conical probing corpus has precisely been developed for the 3D-Tester DREHplus. When probing or reaching the zero position, the outline of the conical probing corpus is exactly on the symmetry axis. Because of the geometrical form of the conical probing corpus, also cutting plates with radiuses and/or angles can be probed at any point of the probing corpus.





3D-Tester VIplus
visuell plus is easier
to read, even at large
machines

3D-Tester SLIMplus
slim, clearly arranged and
handy on all machines

The 3D-Tester stands out with its robust structure and slim and attractive design. Its precise and versatile capabilities enable fast and easy calculation of work piece reference points and lengths. Probing is possible in all axle directions (X/Y/Z) at the same indicator resolution. As soon as the indicator is at "0", the vertical axis is exactly on the edge of the work piece.

ORDER - DETAILS:



3D-Tester SLIMplus
Art-No. 00163D012



3D-Tester VIplus
Art-No. 00163V012



3D-Tester DREHplus
Art-No. 00163T020



Probe tip long
Art-No. 00163D006



Probe tip standard
Art-No. 00163D003



Probe tip DREHplus
Art-No. 00163T036



Sealing
Art-No. 00163D099

Art.-No.	Description	Shank	Length	Probe
00163D008*	3D-Tester SLIMplus	Ø8	approx. 129	Ø3
00163D010*	3D-Tester SLIMplus	Ø10	approx. 129	Ø3
00163D012	3D-Tester SLIMplus	Ø12	approx. 129	Ø3
00163V008*	3D-Tester VIplus	Ø8	approx. 150	Ø3
00163V010*	3D-Tester VIplus	Ø10	approx. 150	Ø3
00163V012	3D-Tester VIplus	Ø12	approx. 150	Ø3
00163T020	3D-Tester DREHplus	Ø20	approx. 135	Ø3,6 / Ø3,2
00163D003	Probe tip standard	-	27	Ø3
00163D006	Probe tip	-	62	Ø6
00163T036	Probe tip DREHplus	-	approx. 34	Ø3,6 / Ø3,2
00163D099	Probe tip 3D-Taster	-	-	-
00163D0R0	Repair service 3D-Tester	-	-	-

*not deliverable from stock

Prices are ex-works including loading at the factory, however excluding packaging and unloading. Sales tax will be added to the price at the legal required amount.

The Incoterms 2010: EXW Urbach apply.

Our general terms are available on our website www.tschorn-gmbh.de.

Technical modifications are subject to change.

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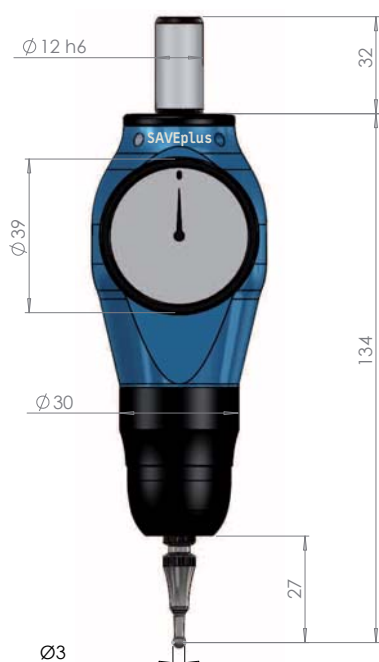


Adjustable
scale

NON-MAGNETIC

Stainless steel

Solid carbide



3D-Tester SAVEplus
Art-No. 00163B012



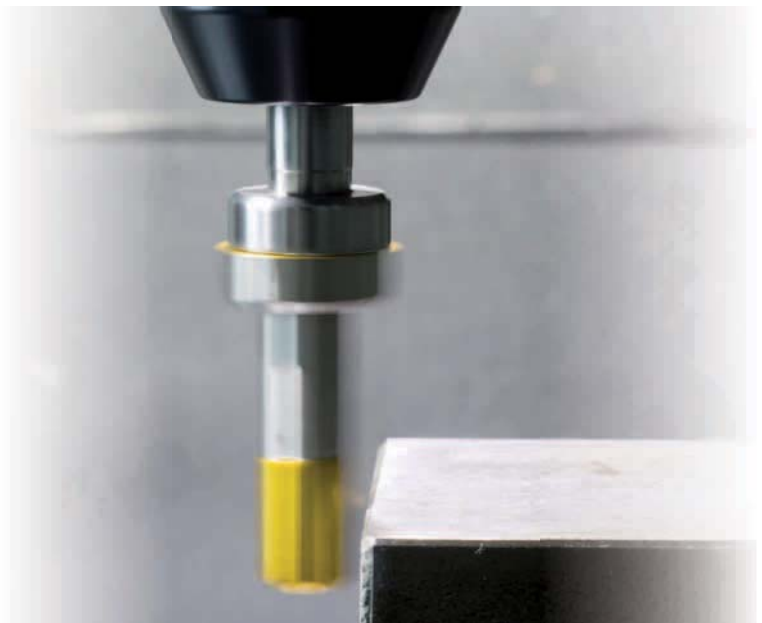
Probe tip standard
Art-No. 00163D003

Probe tip long
Art-No. 00163D006

Art.-No.	Description	Shank	Length	Probe
00163B012	3D-Tester SAVEplus	Ø12	approx. 134	Ø3
00163D003	Probe tip standard	-	approx. 27	Ø3
00163D006	Probe tip long	-	approx. 62	Ø6



Edge finders mechanical



— precise. pioneering. worldwide. —



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product video

The origin of all testers!

To approach reference surfaces or edges with a highly precise repeatability. We deliver all standard version edge finders with probe head Ø6 mm, Ø10 mm as well as the popular probe head Ø10/4 mm. Shanks are available with Ø6 mm, Ø10 mm and also Ø8 mm.

Special versions are our TIN edge finders. These are made out of antimagnetical stainless steel and are coated with a wear-resistant TIN layer.

We deliver all our edge finders in a plastic case. We also offer a wooden case for storage.



1. The edge finder body can be slipt out from the axis' centre by a gentle tip of the finger and is out-of-the-round.



2. By slowly and carefully approaching the rotating edge finder to the respective reference surface, the oscillation movement steadies successively.



3. When reaching the final position, the edge finder body passes along the edge. Now, the position corresponds to the radius of the tracer.



001001000

001010400

001081000

001081400

001000600

Standard version:

(Made in India)

The standard version is manufactured by our long-term supplier in India according to our quality standards. Here in Germany, we check the edge finders in details in our quality laboratory so that we can guarantee the unique quality of our edge finders.

Article-No.	Description	Shank	Tracer
001000600	Edge finder mech.	Ø6	Ø6
001001000	Edge finder mech.	Ø10	Ø10
001010400	Edge finder mech.	Ø10	Ø10 / Ø4
001081000	Edge finder mech.	Ø8 (Ø10)	Ø10
001081400	Edge finder mech..	Ø8 (Ø10)	Ø10



In wooden case

Standard version:

(Made in India)

Identical to the articles above but in a high-quality wooden case.

Article-No.	Description	Shank	Tracer
001000699	Edge finder (in wooden case)	Ø6	Ø6
001001099	Edge finder (in wooden case)	Ø10	Ø10
001010499	Edge finder (in wooden case)	Ø10	Ø10 / Ø4
001081099	Edge finder (in wooden case)	Ø8 (Ø10)	Ø10
001081499	Edge finder (in wooden case)	Ø8 (Ø10)	Ø10 / Ø4



TIN version:

(Made in Germany)

The TIN version is **antimagnetical** and the probe head is made out of stainless steel. The probe head is covered with a wear-resistant TIN layer.

Article-No.	Description	Shank	Tracer
001TIN010	Edge finder TIN	Ø10	Ø10
001TIN104	Edge finder TIN	Ø10	Ø10 - Ø4



Edge finders mech. spare parts

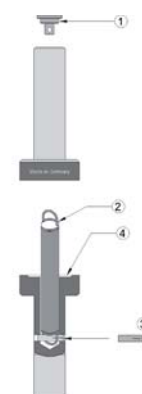
Article-No.	Description	Shank	Tracer
001Z01000	Spare spring Ø4,6 x 40 (package: 10 pc.)	Ø10 / Ø8	Ø10 / Ø10-Ø4
001Z00600	Spare spring Ø2,6 x 25 (package: 10 pc.)	Ø6	Ø6



Repair Kit:

- 1 - Cover
- 2 - Spring
- 3 - Pin
- 4 - Mounting paste

Article-No.	Description	Shank	Tracer
001K01000	Repair Kit	Ø10 / Ø8	Ø10 / Ø10-Ø4
001K00600	Repair Kit	Ø6	Ø6



Version ECO

- *low-cost*
- *Made in India*

Article-No.	Description	Shank	Tracer
0010010EP	Edge finder mech.	Ø10	Ø10
0010104EP	Edge finder mech.	Ø10	Ø10 / Ø4



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Edge finders optical



— precise. pioneering. worldwide. —

Edge finder 3D: developed by us -
- sold only by us.



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Product video



Function:

If a conductive workpiece and the tracer touch (within the axis X, Y and Z), the electrical circuit gets closed and a LED signal appears.

When the LED signal appears, the workpiece's edge is reached with a distance of 5 mm (= tracer radius Ø10).

In Z axis, the reference length has to be measured and taken into account respectively.

Probing X/Y axis

Probing X/Y axis

Pass over

Probing Z axis



Quality
with certificate



Probing accuracy ≤ 0.010 mm

3D version:
Probing in X, Y and Z

Application:

For accurate zero point determination and bore centers to the spindle with an accuracy of probing smaller than 0.010 mm.

Please note:

Protection against humidity is essential for the edge finder due to the built-in electronic components.

Delivery includes:

Edge finder with serial number and test certificate in a plastic case.

Article-No.	Description	Shank	Length	Ball	Battery
001031200	Edge finder 3D	Ø12	approx. 111 mm	Ø10	12V-Type 27A
001031600	Edge finder 3D	Ø16	approx. 111 mm	Ø10	12V-Type 23A
001032000	Edge finder 3D	Ø20	approx. 106 mm	Ø10	12V-Type 23A
001032500	Edge finder 3D	Ø25	approx. 116 mm	Ø10	12V-Type 23A
00103M200	Edge finder 3D	MK2	approx. 146 mm	Ø10	12V-Type 27A



Edge finder optical 3D in wooden case

Article-No.	Description	Shank	Length	Ball	Battery
001031299	Edge finder 3D	Ø12	approx. 111 mm	Ø10	12V-Type 27A
001031699	Edge finder 3D	Ø16	approx. 111 mm	Ø10	12V-Type 23A
001032099	Edge finder 3D	Ø20	approx. 106 mm	Ø10	12V-Type 23A
001032599	Edge finder 3D	Ø25	approx. 116 mm	Ø10	12V-Type 23A



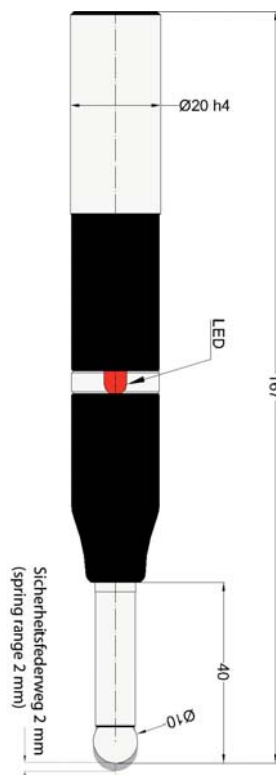
Quality
with certificate

Probing accuracy $\leq 0.005 \text{ mm}$!

3D version:
Probing in X, Y and Z !



Scan me
Product video



Application:

Our 3D precision probe is a highly precise measuring device which gives out highly precise three dimensional probing results on metal-cutting machines.

Accuracy:

Within all three axis, the accuracy of probing is smaller than $0.005 \mu\text{m}$.

Please note:

Protection against humidity is essential for the edge finder due to the built-in electronic components.

Delivery includes:

3D precision probe with serial number and test certificate in a plastic case (for clean storage).

Article-No.	Description	Shank	Length	Ball	Battery
001532000	3D precision probe	Ø20	approx. 167 mm	Ø10	12V-Type 23A



Quality
with certificate



Probing accuracy ≤ 0.010 mm !

3D version:
Probing in X, Y and Z !

2D version:
Probing in X and Y !

Application:

For accurate zero point determination and bore centers to the spindle with an accuracy of probing smaller than 0.010 mm.

When you reach the position, you hear an additional acoustic signal.

Please note:

Protection against humidity is essential for the edge finder due to the built-in electronical components.

Delivery includes:

Edge finder with serial number and test certificate in a plastic case.

Article-No.	Description	Shank	Length	Ball	Battery
001122000	Edge finder 2D	Ø20	approx. 119 mm	Ø10	12V-Type 23A
001132000	Edge finder 3D	Ø20	approx. 131 mm	Ø10	12V-Type 23A



Quality
with certificate

Probing accuracy ≤ 0.010 mm

2D version:
Probing in X and Y

Application:

For accurate zero point determination and bore centers to the spindle with an accuracy of probing smaller than 0.010 mm.

Please note:

Protection against humidity is essential for the edge finder due to the built-in electronic components.

Delivery includes:

Edge finder with serial number and test certificate in a plastic case.



Article-No.	Description	Shank	Length	Ball	Battery
001021200	Edge finder 2D	Ø12	approx. 99 mm	Ø10	12V-Type 27A
001021600	Edge finder 2D	Ø16	approx. 99 mm	Ø10	12V-Type 23A
001022000	Edge finder 2D	Ø20	approx. 94 mm	Ø10	12V-Type 23A
001022500	Edge finder 2D	Ø25	approx. 104 mm	Ø10	12V-Type 23A
00102M200	Edge finder 2D	MK2	approx. 133 mm	Ø10	12V-Type 27A

Edge finder optical 2D in wooden case

Article-No.	Description	Shank	Length	Ball	Battery
001021299	Edge finder 2D	Ø12	approx. 99 mm	Ø10	12V-Type 27A
001021699	Edge finder 2D	Ø16	approx. 99 mm	Ø10	12V-Type 23A
001022099	Edge finder 2D	Ø20	approx. 94 mm	Ø10	12V-Type 23A
001022599	Edge finder 2D	Ø25	approx. 104 mm	Ø10	12V-Type 23A



Version ECO

- low-cost
- Made in Germany
- no serial number
- no test certificate

Article-No.	Description	Shank	Length	Ball	Battery
0010216EP	Edge finder 2D	Ø16	approx. 99 mm	Ø10	12V-Type 23A
0010220EP	Edge finder 2D	Ø20	approx. 94 mm	Ø10	12V-Type 23A



Spare parts

Article-No.	Description	Volt
0011Z6000	Spare battery 23A	12V
0012Z6000	Spare battery 27A	12V



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Coaxial indicator : CENTREplus



— precise. pioneering. worldwide. —



CENTREplus: for simple centring of bore holes and spindles.

Application:

To determine centres of a circle to the spindle with a probing accuracy < 0.010 mm. The dial gauge shows 1/100 mm sub-steps.

Design:

Thanks to the horizontal arrangement of the dial gauge, you can always see the dial gauge.



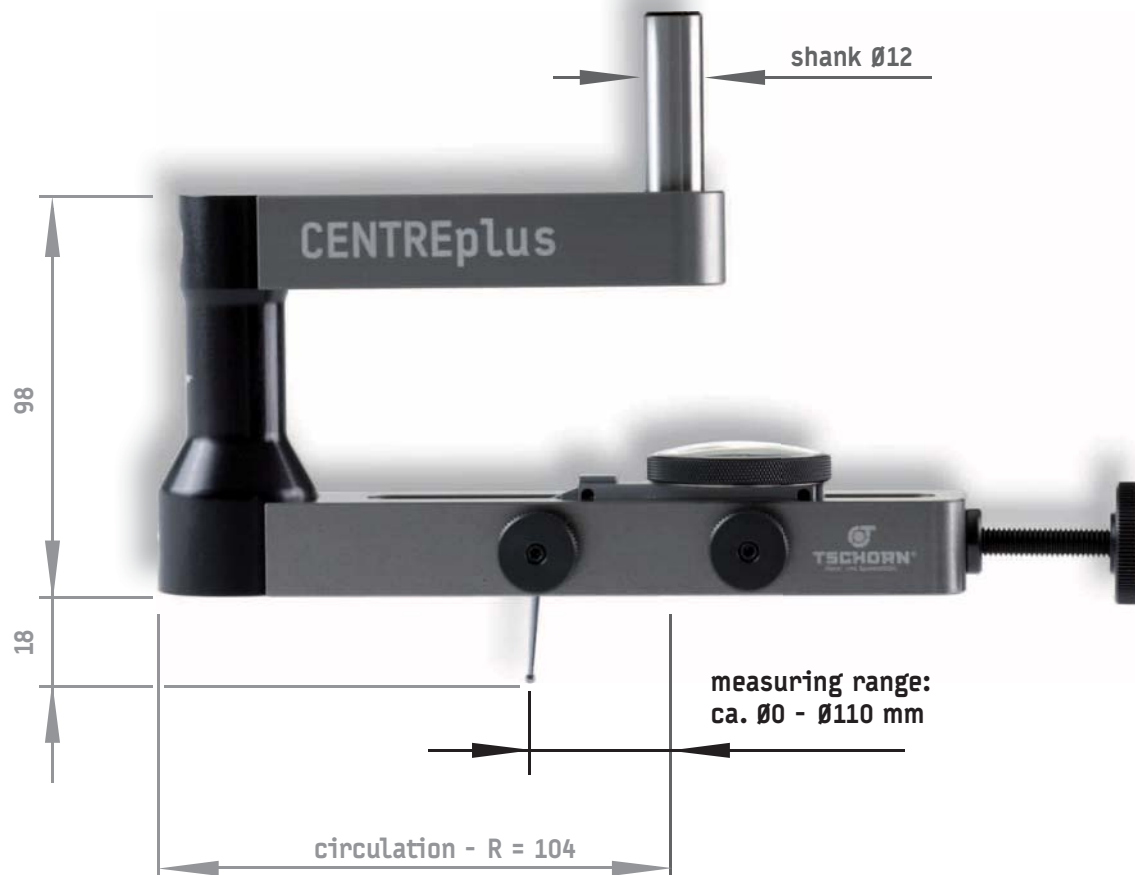
Fine adjustment:

With the fine adjustment, you can position the dial gauge precisely.



Clamping:

With the two knurled screws, you can clamp the dial gauge quickly and precisely.

**Optional spare part:**

You can order separately a short-arm which increases the measuring range up to $\varnothing 200$ mm.

Article-No.	Description	Shank
0017C1012	Coaxial indicator CENTREplus $\varnothing 0$ - $\varnothing 110$	$\varnothing 12$
0017C1098	Spare dial gauge	
0017C1099	Short-arm (measuring range up to $\varnothing 200$)	



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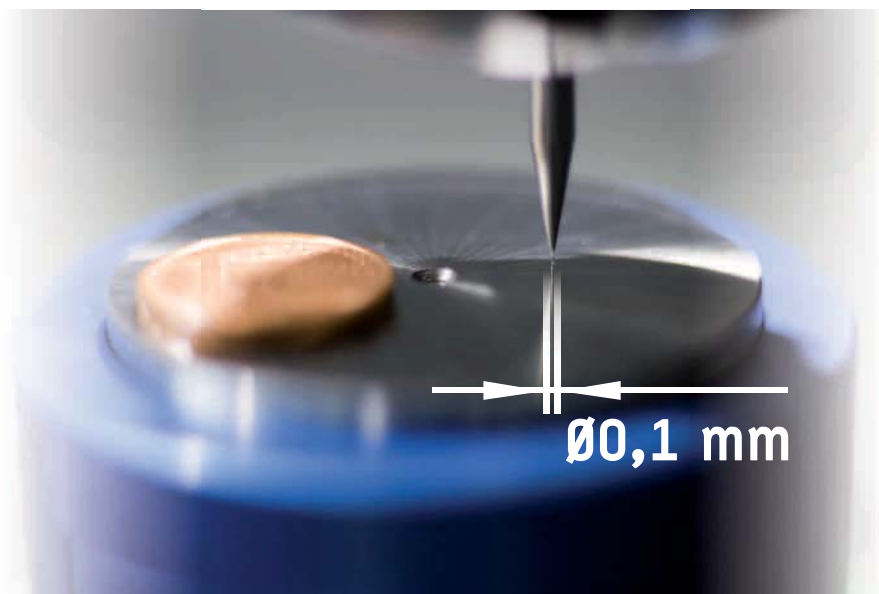


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Zero setters



— precise. pioneering. worldwide. —

NEW!

New development: 100 mm - handy - Micro

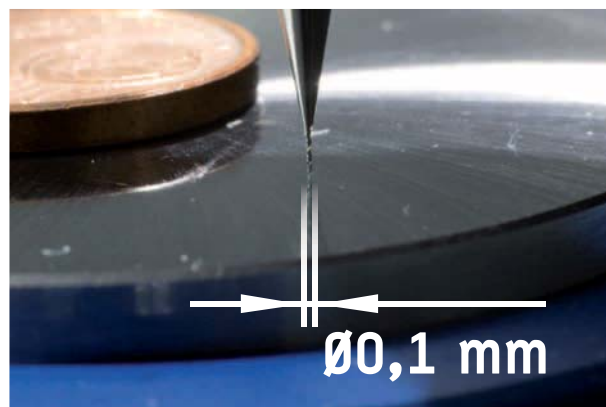
Simple adjustment:

- Push tester
- Small indicator at -2 mm
- Turn scale for large indicator to 0
- Ready!



Micro tools:

We even measured milling tools with $\varnothing 0,1$ mm without any problems.





Quality
with certificate



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Product video

Application:

To determine the position of workpiece surfaces or tool lengths in Z-direction at milling machines or lathes. The zero setter is placed on the workpiece. The spindle has to be moved carefully onto the tracer until the dial gauge indicates „0“. The reference dimension 100 mm to the workpiece has been reached. A safety spring range of max. 2 mm is included.

Type:

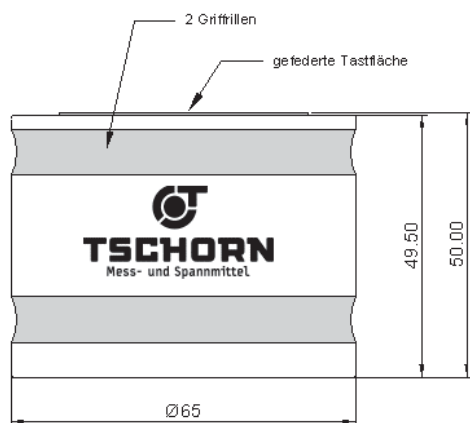
To allow lateral mounting, a zero setter with built-in magnets is also available.

Delivery includes:

Zero setter with serial number and test certificate in a wooden case.

Article-No.	Description	Body	Tester
002400100	Zero setter Micro 100 mm	Ø54,5	Ø42
002402100	Zero setter Micro 100 mm (Magnet)	Ø54,5	Ø42





Application:

To determine the position of workpiece surfaces or tool lengths in Z-direction at milling machines or turning lathes. The zero setter is placed on the workpiece. The spindle has to be moved carefully onto the tracer until the dial gauge indicates „0“. The reference dimension 50 mm to the workpiece has been reached. A safety spring range of max. 2 mm is included.

Type:

To allow lateral mounting, a zero setter with built-in magnets is also available.

Delivery includes:

Zero setter with serial number and test certificate in a wooden case.

Article-No.	Description	Body	Tester
002101000	Zero setter 50 mm	Ø65	Ø47
002102000	Zero setter 50 mm (Magnet)	Ø65	Ø47



Version ECO

- low-cost
- Made in Germany
- no serial number
- no test certificate



Article-No.	Description	Body	Tester
0021010EP	Zero setter ECO 50 mm	Ø39	Ø20
0021020EP	Zero setter ECO 50 mm (Magnet)	Ø39	Ø20



Application:

To determine the position of workpiece surfaces or tool lengths in Z-direction at milling machines or turning lathes. The zero setter is placed on the workpiece. The spindle has to be moved carefully onto the tracer until the dial gauge indicates „0“. The reference dimension 50 mm to the workpiece has been reached. A safety spring range of max. 2 mm is included.

Type:

To allow lateral mounting, a zero setter with built-in magnets is also available.

Delivery includes:

Zero setter with serial number and test certificate in a wooden case.

Article-No.	Description	Body	Tester
002050000	Zero setter opt. 50 mm	Ø39	Ø19
002050200	Zero setter opt. 50 mm (Magnet)	Ø39	Ø19



NEW!

! New development:
quickly measure lengths at lathes

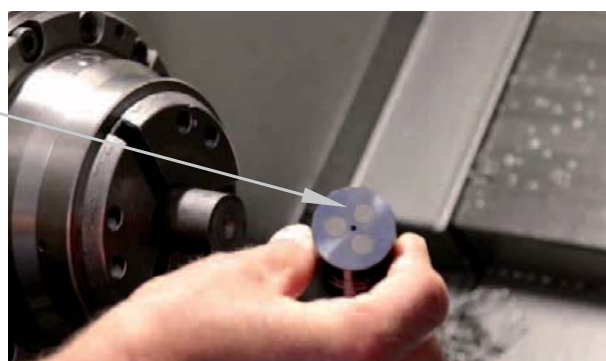


Scan me
Product video



! Perfectly thought-out in detail

Secure horizontal grip
already at $\varnothing 8$
thanks to 3 powerful magnets



Tolerance for the turning scrap,
avoids measuring faults



Application:

To determine the position of workpiece surfaces or tool lengths in Z-direction at milling machines or lathes. The zero setter is placed on the workpiece. The spindle has to be moved carefully onto the tracer until the dial gauge indicates „0“. The reference dimension 60 mm to the workpiece has been reached. A safety spring range of max. 2 mm is included.

Type:

To allow lateral mounting, a zero setter with built-in magnets is also available.

Delivery includes:

Zero setter with serial number and test certificate in a wooden case.

Article-No.	Description	Body	Tester
002060200	Zero setter TURNING 60 mm	Ø32	Ø19



Article-No.	Description	Volt	Size
0013Z4400	Spare battery SR44	1,5V	Ø11,6 x 5,4



Article-No.	Description	Body	Reading
002U01000	Spare dial gauge	Ø40	0,01 mm



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