

T4

HD

high definition
metrology

CNC 4-axis contour and roughness measuring device

Optimised for production measurement:

- Autocalibration as standard feature
- Impossible-to-confuse
USB probe arms
- Automatic zenith search
- 3D evaluation software



Triebw^orx

Manufacturer: Triebworx GmbH & Co. KG

KITOTEC

Sales: **KITOTEC GmbH**

T4

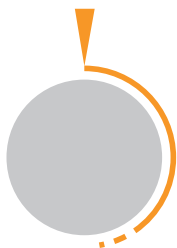
Our cutting edge technology, which sets new standards and solves a lot of problems.

HD

high definition metrology
4-axis CNC contour- and
roughness measuring device

Made by Triebworx

Autocalibration as standard feature



Problem: Reliable quality control requires regular calibration. In contour- and roughness measuring devices in particular, which have to be manually calibrated, this is often put off. The reason? People are afraid of the time it takes and of operator errors in the calibration process.

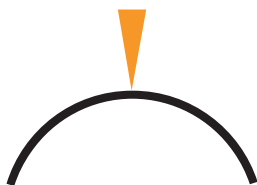
The **T4HD** with serial autocalibration spares the long-term consequences of incorrect use.

3-D evaluation software

Problem: Your previous 2-D evaluation software can't handle undercuts or rotate series of measurements?

The **T4HD** with its flexible 3-D evaluation software allows automated, repeatable contour- and roughness tests even on rotated, undercut and topographically created contours and saves you unnecessary head-turning.

Automatic zenith search



Problem: Manual zenith search on a calibration ball or test subject is an activity that it hard to repeat. A manual zenith search is always subject to user influences.

The **T4HD** with automatic zenith search saves you the long-term consequences of measuring astray of the ideal line.

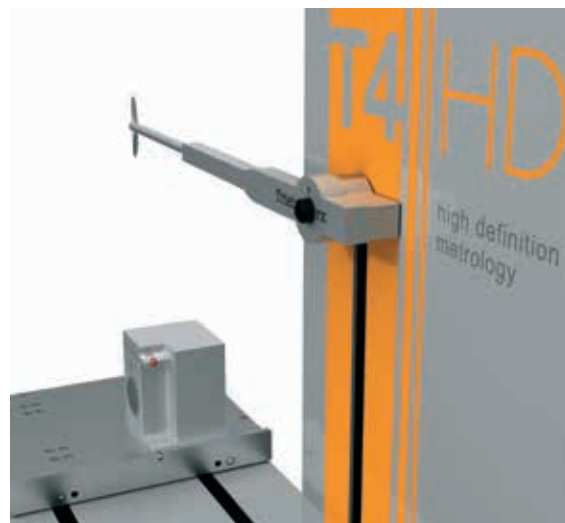
Impossible-to-confuse USB scanning arms



Problem: CNC measuring programmes are indispensable in production measurement. Are you sure that the right scanner has been selected from a long list of scanners similar to one another?

The **T4HD** with impossible-to-confuse USB scanning arms saves broken probes and measurement error due to wrongly selected or calibrated scanners.

Narrow Z-column



Problem: Contour- and roughness measuring devices with solid Z-columns can prevent an unobstructed view of drillings and test subjects when teaching-in the measurement programme. Longer test subjects, such as shafts or ball screw spindles, must often be cut to length for measuring to prevent collision with the measuring device.

The **T4HD** with its narrow Z-column allows the measuring of even the longer test subjects. And allows an obstructed view of drillings and measurement setup.

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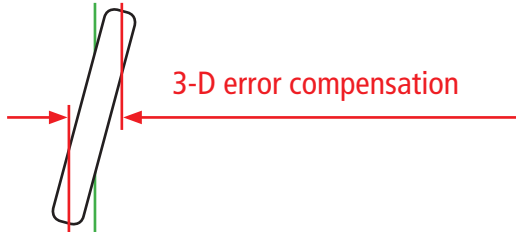
Save yourself time, money and energy
with our cutting-edge technology

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Motorised 3-D measuring construction



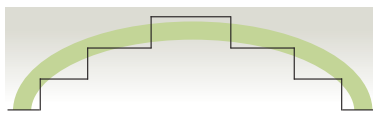
Problem: Double-sided probing 2-axis contour measuring devices always breach the profile principle through unavoidable 3-D alignment errors from upper to lower probe tip. Contour measuring devices with manually activated crossadjustment cannot offer any error compensation in this case.

The **T4HD** with 3-D error compensation allows the profile principle even with double-sided CNC measurements.

24" 16:9 full HD screen

Spare yourself tiring work on small 4:3 monitors and see the finest details on the **T4HD's** 24" 16:9 full HD screen.

Standard roughness measurement



Problem: Stepper motor drives can cause multiple resonances and vibrations in contour measuring devices due to their unsteady propulsion. Precise roughness measurements may lose quality and may have to be with non-standard and therefore excessive tracking forces so as not to lose scanner contact with the test subject.

The **T4HD** with its super-silent and low-resonance X- and Z-drive guarantees standard roughness measurement.

Speed-optimised CNC repeat measurements

Speed

Problem: CNC measuring programmes are often saved on the PC via teach-In. The playback of these programs can waste a lot of time in the measuring process. Often a fast measurement program requires a lot of teach-in attempts. **Teach the T4HD without hassle and immediately save time with speed-optimised CNC repeat measurements.**

Durable probe force switching

Problem: Servo-driven probe force switchings are subject to wear and tear and frequently have to be replaced with varying frequency depending on their efficiency.

The **T4HD** with its durable, servo-free probe force switching saves high maintenance costs.

Autocalibration

Problem: Necessary probe tip checks under a microscope.

The **T4HD** with its autocalibration always provides you with a visualisation of your probe tips.

Form-fitting HD probe tips

Problem: Incorrectly fitted probe tips can lead to measurement errors. You can change the **T4HD's** form-fitting HD probe tips as needed with a single click without tools or even dangerous adhesive.

T4

T4HD, a global innovation – Made in Germany

HD high definition metrology 4-axis CNC contour- and roughness measuring device

Made by Triebworx

High definition metrology:

- Contour and roughness measuring with highest accuracy in the range of 200 x 205 mm (X, Z) and 20 mm (Y)
- Optimised for production measurement
- Autocalibration as standard feature
- Impossible-to-confuse probe arms
- Automatic zenith search in X and Y direction
- Unobstructed view to drillings and measurement assembly
- 3D error compensation for double probe-tip measurements
- Durable and servo-free probe force switching
- 3D evaluation software for contour and roughness
- Speed-optimised repeated CNC measurements
- USB 4-axis CNC control for maximum flexibility of PC applications
- Form fitting HD probe tips
- Probe-tip visualisation
- 24" 16:9 full HD monitor
- Expansion port as standard for optional 4th CNC axis
- High measurement resolution and accuracy
- Very easy to operate for the user
- Wide range of possibilities for administrators and qualified personnel
- Roughness measurement according to the standards with super-silent, low-resonance X and Z drive
DIN EN ISO 4287:2010-07
DIN EN ISO 4288:1998-04
DIN EN ISO 11562:1998-09
DIN EN ISO 13565-1:1998-04
DIN EN ISO 13565-2:1998-04
- 3D CNC axes X/Y/Z as standard
- Up to 100 multicontour measurements in one 4-axis CNC sequence
- T4HD enables optional mobile battery operation with laptop connection
- Flexible evaluation software for automatised, reproducible contour and roughness measurements even with rotated parts

Save time,
money and energy
with our advanced
technology

- **Dimensions:**
592 x 492 x 220 mm (W x H x D)
- **Weight:** 45 kg
- **Table load capacity:** 25 kg

Sales:

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