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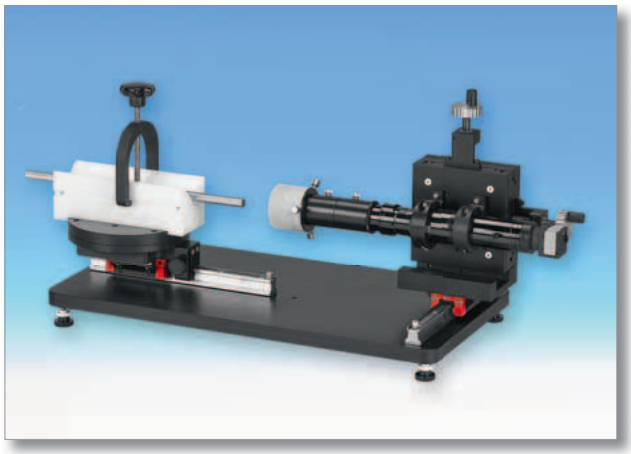
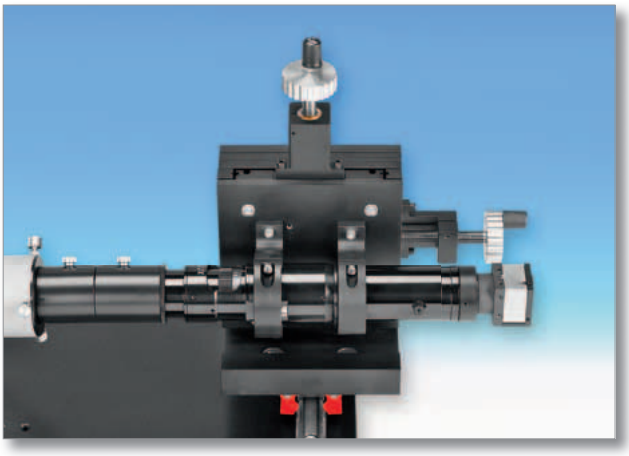
CT-9000

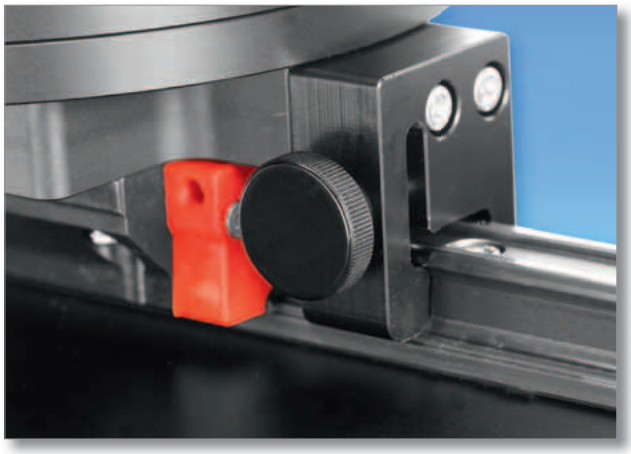
Non-destructive measurement of hard metal rod twist with spiral cooling ducts



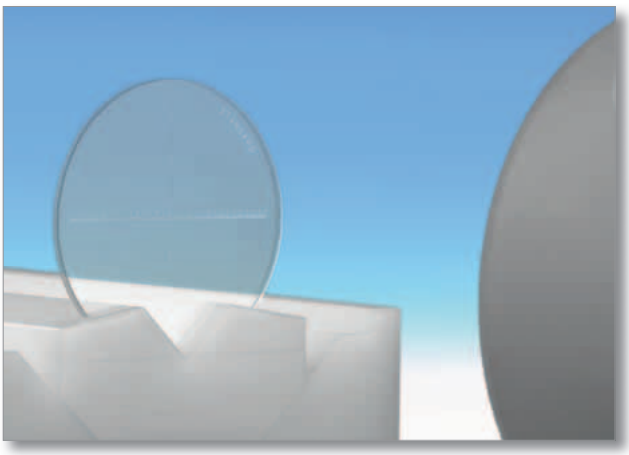
The CT-9000 is mounted on an aluminium base plate and equipped with a high quality 14-stage zoom lens combined with a 1600 x 1200 pixel USB 2.0 camera. A 50 Watt xenon illumination unit with ring light and diffuser serves for perfect illumination.



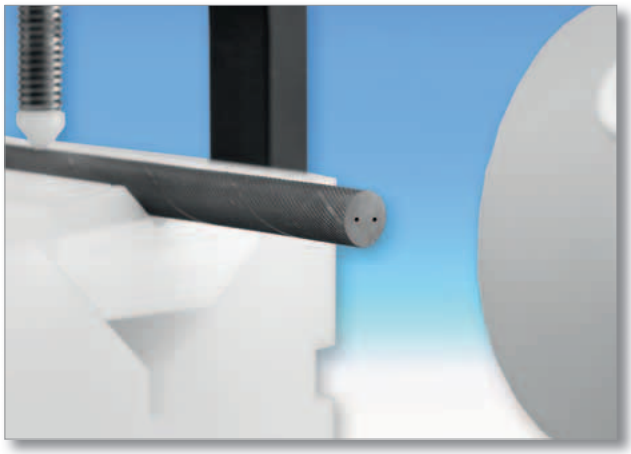
The optical system is mounted on a precision cross type for positioning in the Z and X directions with spindles (0.5 mm pitch).



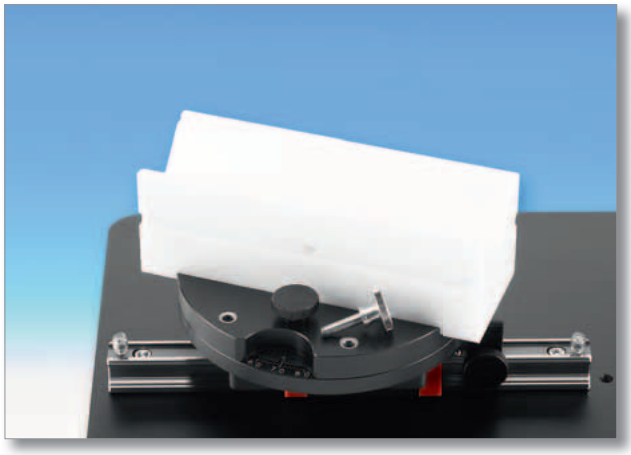
The entire optical system with cross table can be moved and arrested in the Y direction in precision guides.



Glass scales with increments of 0.1 mm (including certificate) serve for calibration of the two programs, Metric Plus and ProfileCheck.

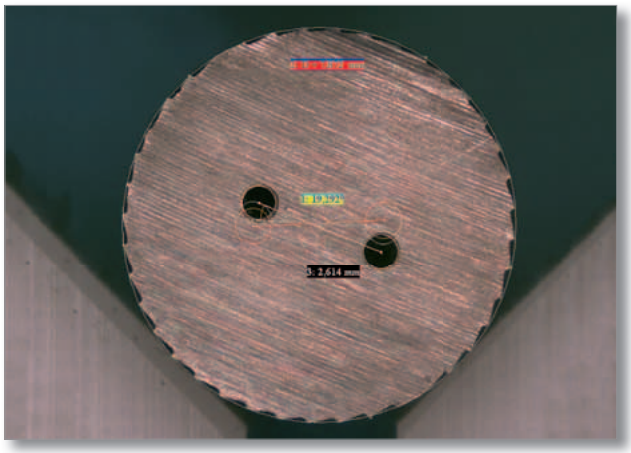


The blank can be inserted into the V-block and moved to the focal point. Additional V-blocks can be used depending on the diameter. A U-bolt serves for clamping, if required.



After the first side of the blank is measured the cross table can be turned 180° (with arresting pin) and moved to the focal point on the precision guide to perform the second measurement (4C angle measurement in Metric Plus software).

The measurements and documentation can be completed very quickly and simply making the amortisation time for the CT-9000 exceptionally short. With the Metric Plus 2D measuring software the special 4C angle function allows the following measurements to be completed and logged manually (function for hard metal rods with two or more round cooling ducts with the same diameter):

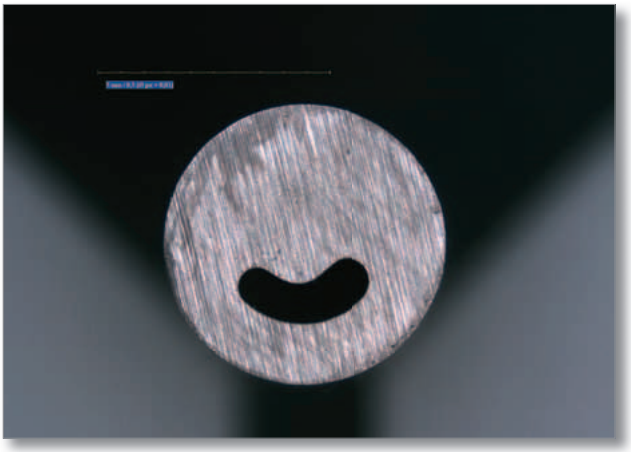


1) Cooling duct twist measurement
2) Diameter of blank
3) Cooling duct centre distance (centre to centre)
4) Minimum cooling duct intervals
5) Cooling duct bore diameter

Unfinished rods with kidney-shaped cooling ducts:

With the optional ProfileCheck image processing program the following measurements are completed automatically, compared with specified values and logged:

1) Diameter of blank
2) Width of kidney-shaped cooling duct
3) Outer radius
   of kidney-shaped cooling duct from centre
4) Inner radius
   of kidney-shaped cooling duct from centre
5) Distance measurement
   from centre to kidney-shaped cooling duct
6) Measurement of degree of twist
   of kidney-shaped cooling duct in relation to centre
7) Area measurement of
   kidney-shaped cooling duct in square millimetres



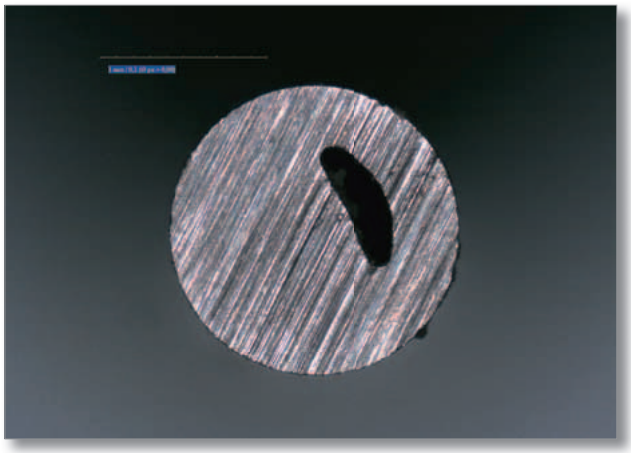
Unfinished rods with two circular cooling ducts with different diameters.

With the ProfileCheck image processing program the following measurements are completed automatically, compared with specified values and logged:

1) Diameter of blank
2) Diameter of first cooling duct
3) Diameter of second cooling duct
4) Distance of both cooling ducts to centre of blank in X and Y directions
5) Measurement of blank clearance angle
6) Clearance angle offset to centre of blank in X and Y directions

Unfinished rods with flat kidney-shaped cooling ducts.

With the ProfileCheck image processing program the following measurements are completed automatically, compared with specified values and logged:



1) Diameter of blank
2) Width of kidney-shaped cooling duct
3) Height of kidney-shaped cooling duct
4) Centre distance of kidney-shaped cooling duct
5) Area measurement of kidney-shaped cooling duct in square millimetres

Automatic measurements accomplished with the ProfileCheck image processing software, are required only on one side.

Custom versions with two cameras for automatic measurement from both sides are a further option. We will be pleased to demonstrate this system to you.

Order no.	Description	Price excl. VAT.
CT-9000	**System price with Metric Plus software and special cooling duct measuring function (round)** (Free updates via internet download)	
CT-9000-P	**System price with Metric Plus software and ProfileCheck image processing software (kidney-shaped cooling ducts)** (Free updates via internet download)	
Delivery:	Incl. packaging, freight charges see **www.m-service.de**	
Payment:	30 days, net	