

# Product information

## Universal, fully automatic optical shaft measuring system MarShaft SCOPE 250 plus MarShaft 4

### Product features

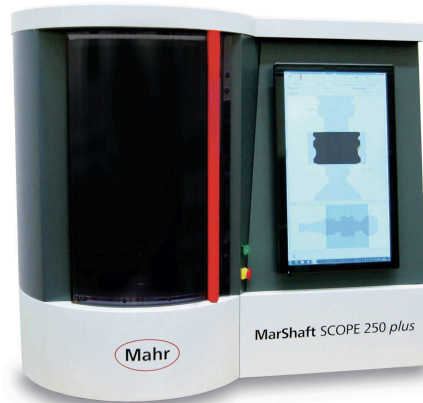
The role of dimensional metrology is expanding at a dramatic rate, in parallel with innovations in manufacturing processes. Given the ever more stringent accuracy requirements and falling cycle times in production (turning, milling, grinding, etc.), rapid measurement directly at the manufacturing machine is absolutely essential. Measurement at the point of origin of the product, with rapid feedback to the manufacturing process to avoid waste. Mahr's flexible MarShaft SCOPE 250 plus shaft measuring machine offers the right measuring solution for the fast, precise and fully automatic measurement of rotationally symmetrical workpieces in production.

The MarShaft SCOPE 250 plus has a high precision roundness measuring axis (C) and a vertical measuring axis (Z) with a measuring range of 250 mm. At its heart is the state-of-the-art, high-resolution CMOS matrix camera (live image) with an image field of 1088 x 2048 mm. The extremely high image acquisition rate of over 120 images per second keeps measuring times to a minimum. Zoom functions allow the smallest details to be measured, which with conventional measuring methods are difficult if not impossible to test.

### Application

#### The main measurable features

- Length
- Diameter
- Form and position tolerances
- Offsets
- Recess width
- Bevel width
- Intersection points
- Position of intersection points
- Angles of rotation
- Radii
- Position of radii
- Taper lengths
- Angles
- Pitches
- Widths across flats
- Outer threads



Item no.: 5361802

### Technical data

<b>Workpiece weight max.</b>	5
<b>Measuring range length (Z) (mm)</b>	250
<b>Measuring range diameter (X) (mm)</b>	40
<b>Length/diameter resolution (mm)</b>	0.01...0.0001
<b>Angle resolution (°)</b>	0.01...0.0001
<b>Length error limit (Z) (µm)</b>	≤ (3.0+I/125) L in mm
<b>Diameter error limit (X) (µm)</b>	≤ (1.5+I/40) L in mm
<b>Lens</b>	Telecentric precision optics High-resolution CMOS camera