

Product information

MarShaft 600 plus 3D optical shaft measuring system MarShaft MarShaft SCOPE 600 plus 3I ng device

Product features

As a specialist in camshaft applications and more recently (optional) in straight and helical cylinder gears, Mahr now offers a completely new measuring technique with the new MarShaft SCOPE 600 plus 3D measuring station: The combination of optical and tactile sensors enables 3D functionality for the first time and thus a complete inspection of the workpiece in one setup. To this end, Mahr has enhanced its already very successful MarShaft SCOPE 750 plus measuring station. It now has a new 2D probe system, a motorized tailstock and calibration for the linear axes. The matrix camera optically measures features such as diameters, lengths, radii, form, position features, cam angles and the cam pitch in just a few seconds. The additional 2D probe records features that cannot be measured optically: concave cam profile, all standard gear parameters on cylindrical gears, axial runouts, reference elements in an axial direction, such as axial grooves. The tactile and optical system are calibrated in one coordinate system. The measuring station uses the MarWin software platform to deliver complete 3D functionality. Performance features at a glance:

- Complete measurement of camshafts, including the cam angle and all standard cam contours
- Measurement of the gears on cylindrical gears
- Measurement of contour elements
- Drive pins not used
- Direct measurement of references (e.g. 2-flat or feather key groove)
- Measurement of feather key grooves
- Measurement of blind holes
- 100% 3D function using new 2D probe
- Additional Y measurement axis
- Special calibration of linear axes (Z-X-Y)
- MarShaft Professional
- Manual control panel

Item no.: 5361522

Technical data

Measuring range diameter (X) (mm)	120
Measuring range length (Z) (mm)	600
Angle resolution (°)	0.01 to 0.0001
Length error limit (Z) (µm)	(2 + L/125) L in mm (at 20°C ± 1°C on reference standard)
Diameter error limit (X) (µm)	(1.0 + L/125) L in mm (at 20°C ± 1°C on reference standard)
Workpiece weight max.	15
Lens	Telecentric precision optics High-resolution CMOS camera



Application