

Artefact for monitoring the accuracy of medium-sized coordinate measuring machines (Articulated-arm CMM and laser tracker)

KOBA-Cone Bar



DELIVERY PROGRAMME AND SERVICE:

- gauge blocks
- gauge block accessories
- step gauge KOBA-step
- sphere plate KOBA-check
- ball bar
- optical scale KOBA-optima
- thread gauges
- feeler gauges
- plug gauges
- ring gauges
- precision parts
- KOBA-calibration service
- DKD-calibration laboratory for length measurements

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Properties and design features

- ▶ Carrying body of long-term stabilized CFK material (Carbon Fibre)
- ▶ Hermetically sealed on all sides
- ▶ Protected against humidity by special coating
- ▶ Measuring range 20 x 100 mm (2000 mm)
- ▶ Extended measuring range up to 12,000 mm by evaluation of coupling measurements in combination with programme iti-check
- ▶ There are different probing elements for individual measurement tasks:
 - ceramic spheres for use with any CMM with axes > 2000 mm or volumetric diagonals > 3000 mm
 - small conical rings of stainless steel for flexible-arm type CMM with rigid probes (Faro, Romer, CimCore ...), for optical systems with tactile probing (Krypton: Space probe, GPS-system: Vector probe)
 - large conical rings of stainless steel for laser tracker with 1.5" spheres (Faro, Leica)
- ▶ With three stainless supporting rollers
- ▶ With calibration certificate
- ▶ in-house-calibration
 - for spheres: $U_{95} = 1 \mu\text{m} + 1.5 \mu\text{m} \times L/1000 \text{ mm}$
 - for cones: $U_{95} = 2 \mu\text{m} + 1.5 \mu\text{m} \times L/1000 \text{ mm}$

Accessories

- ▶ Stand (standard) with two quick supports (for fixation of the cone bar to the supporting rollers for 20°, 25°, 30°, 35° inclined or vertical assembly, with three switchable magnetic bases)
- ▶ Supplementary stand with support only at the top for 35° inclined assembly, in combination with standard stand for horizontal fixation of the cone bar in a height of approx. 1 m (of advantage in case of horizontal coupling measurements for checking large measuring volumes), with three switchable magnetic bases
- ▶ Aluminium boxes for the cone bar and stand



Recommended scope of supply for user of broad spectrum of CMM

For monitoring the accuracy of CMM according to VDI/VDE 2617 or ISO 10360-2:

Use cone bar:

- ▶ For Leica laser tracker up to 12,000 mm length
- ▶ For articulated-arm type CMM (e.g. Faro, Romer, CimCore)
- ▶ For medium-size CMM (approx. 3000 x 2000 x 1500 mm) with cone bar (cone bar with supplementary set of 21 high-precision ceramic spheres) – in combination with evaluation software iti_Check (identical to Wenzel_Check)

