# Opto-tactile Calibration Standards

Standards for the monitoring of optical and tactile coordinate measuring instruments





## Delivery Programme and Services:

- Gauge Blocks
- Gauge Block accessories
- Step Gauge KOBA-step
- Sphere Plate KOBA-check
- Ball Bar
- Thread Gauges
- Cylindrical Gauges
- Feeler Gauges
- Sline Gauges
- Precision Parts
- KOBA-calibration service KKS
- DKD-laboratory for gauge blocks

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### Stepped standards

Calibration standards on the basis of gauge blocks with diffuse reflecting or highly shining measuring faces. Manufactured completely in carbide thus corrosion resistant.

Customized designs are possible within wide limits.

#### Range of application:

Optical length- and coordinate measuringsystems, such as:

- Triangulation laser scanner
- Laser-focus-measuring systems
- Fringe projection systems



2-Stepped standard with diffuse reflecting measuring faces

Sphere standard with diffuse reflecting surface

#### Sphere standards

Measuring spheres with diffuse reflecting surface in various designs. Sphere in carbide with scratch resistant surface that also allows tactile probing.

Range of application:

Optical form- and coordinate measuring-systems, such as:

- Triangulation-laser scanner
- Video measuring systems
- Fringe projection systems

#### 3D-Calibration standards

Classical test pieces like sphere plate, ball bar or ball cube with spheres that can be probed optically or tactile. The advantage of this combination is that the tactile calibration values (small uncertainty of measurement) can be transferred to the optical measuring systems. Coordinate measuring instruments with optical or tactile measuring probes can be calibrated with a single standard.

Range of application:

3D-coordinate measuring systems, such as:

- Multi-Sensor-measuring instruments
- 3D-coordinate measuring instruments with optical probing systems



opto-tactile sphere plate