



# SP 15000 C5

**with compact straightness measurement**  
*Product information*

Laser interferometer for high-precision simultaneous measurement and calibration of length, pitch angle, yaw angle and straightness on positioning axes

# Laser interferometer measurement system

## **SP 15000 C5 WITH COMPACT STRAIGHTNESS MEASUREMENT**

Taking high-precision, dynamic measurements of guide characteristics during the adjustment and alignment of machine axes, as well as the calibration of the axes in accordance with standards, is very time-consuming.

The SP 15000 C5 calibration laser interferometer was specially developed to meet the requirements of manufacturers of coordinate measuring machines and high-precision machine tools. It enables synchronous, continuous and, in conjunction with an optional roll angle sensor, 6-DOF measurements. All of the length, pitch angle, yaw angle and straightness variables are measured with high-precision laser interferometry, whereby the same highly stable laser frequency is used in all three length measurement channels.

With the compact straightness option, the straightness mirror is mounted directly on the sensor head. This means that there are only two components that need to be assembled and aligned with each other. The measurement system can now be installed quickly and reliably, especially in tooling machines, and even where space is restricted. The fibre optic coupling of the sensor head together with the integrated beam direction detection system ensures easy handling and adjustment.

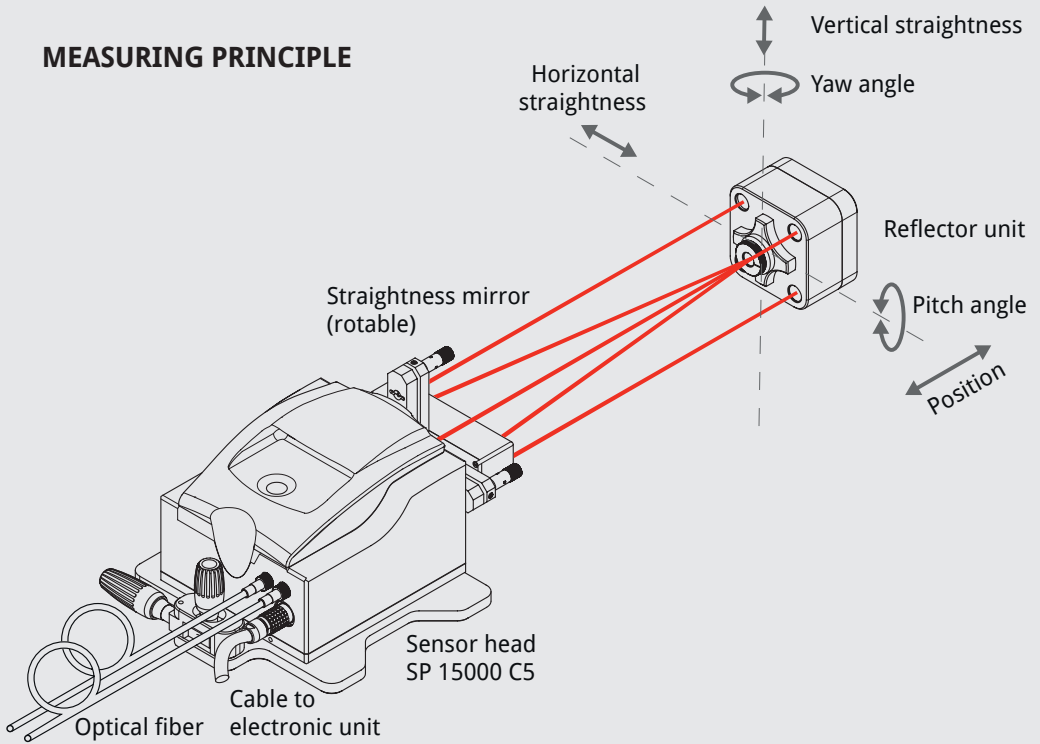
For large measurement ranges or calibration tasks, the use of wireless temperature sensors or the LCS climate station is recommended.

### **Ideal for**

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- Calibration
- Quality assurance
- Volumetric compensation
- Development

## MEASURING PRINCIPLE

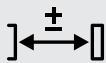


### Useful accessories expand the range of possible applications

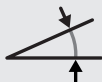
- Roll angle sensors optionally available
- Beam deflection with an optional adjustable deflection mirror
- Extensive accessories for fixing and adjustment
- InfasMTCAL calibration software for calibration, error analysis and error compensation
- Support for all commonly used CNC controls
- InfasAXIS calibration software for calibration in accordance with VDI/DGQ 3441, DIN ISO 230 or VDI 2617
- InfasALIGN calibration software for aligning and adjusting guides



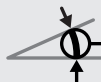
bis zu 50 m



0.1  $\mu\text{m}/\text{m}$



$\pm 5^\circ$



0.0004  
arcsec




$\pm 2 \text{ mm}$  über  
3 m




10 nm

We develop and manufacture laser interferometric measurement technology and precision measuring instruments for calibration and nano metrology.


 Length Measurement Systems


 Length and Angle Measurement Systems


 Calibration Systems

 Vibration Measurement Systems


 Gauging Probe


 Nanopositioning

 Measurement and Calibration systems

 Stabilized HeNe Lasers

 Climate Measuring Station

 Measurement Software

 For customer-specific versions, OEM applications or integration in special measurement stations, please contact us.

We will be happy to personally assist you in finding solutions for your measuring tasks.

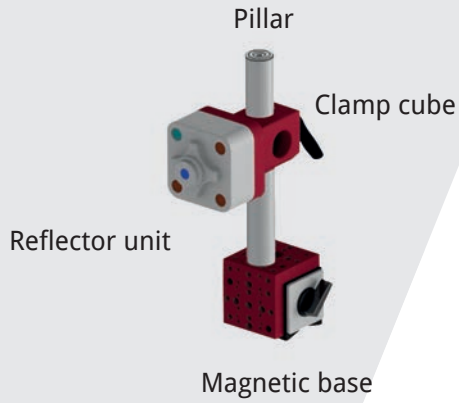
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# Accessories



Sensorhead with adjustable mount



Adjustment table

Straightness reflector with angle adjustment unit



Roll angle sensor RAS 175 W



Deflection mirror



Compact measurement on a high-precision machine tool



Measurement of the Z-axes