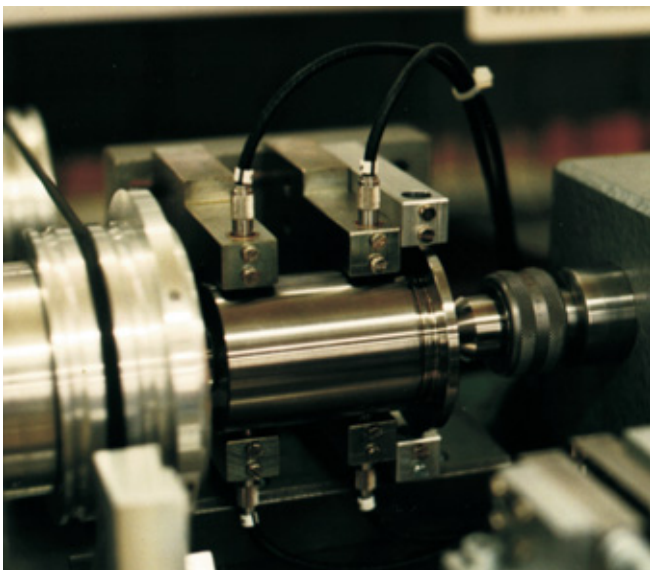


Diameter - radial/axial runout - measurement at disk motors

The production of disk motors has to meet the highest mechanical accuracy requirements. In order to ensure perfect functioning of the disk drives the drive units are measured and evaluated with respect to diameter, true running, and axial running. Since production tolerances of $< 5 \mu\text{m}$ have to be measured under nominal speed, a decision has been made to use the fast and high-resolution capaNCDT system. In this measurement two sensors with measurement range $50 \mu\text{m}$ that are adapted to the flange geometry are of special importance.

Reasons for choosing the system

- small sensor dimensions
- high resolution
- customized sensor
- high temperature stability
- low noise signals
- easy calibrations and adjustment



Technical details

- Measuring range: $200 \mu\text{m} / 50 \mu\text{m}$
- Accuracy: $0,4 \mu\text{m} / 0,1 \mu\text{m}$
- Resolution: $0,04 \mu\text{m} / 0,01 \mu\text{m}$
- Band width: $4 \text{ kHz} (-0,1 \text{ dB})$

Ambient conditions

- Ambient temperature (conditioned air)
- Medium: air
- Clean room conditions

System configuration capaNCDT series

MF684/6HE	eurocard cabinet
DD600	display
OS602	oscillator
DL604.14	demodulator
SU804	peak-to-peak-detector
CU807	arithmetic function module
PA601	pre-amplifier
S601-0.2	sensor
C601-1	sensor cable
C604-5	pre-amplifier cable

