

Measuring System for Threaded Tube

Brief Description

- measuring system for sample check

Measuring Task

- measurement of lengths (groove)

Technology

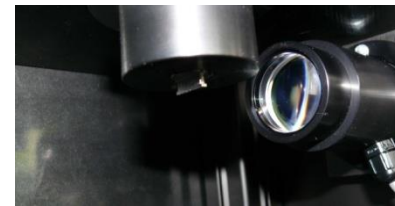
- contactless, optical

Tolerances

- lengths tolerance = 0,1 mm

Special Features

- loading/unloading: manual
- calibration: manual
- interface to second measuring computer (data interface and handshake via Ethernet)



Measuring Automaton for Axial Angular Contact Ball Bearing

Brief Description

- measuring automaton for 100% check and classification

Measuring Task

- measurement of diameters, lengths, assembly size, temperature/compensation of the temperature

Technology

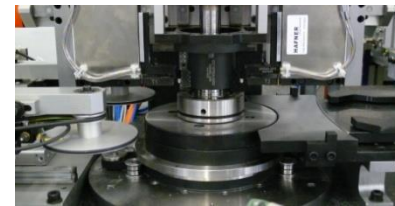
- tactile as well as contactless, pneumatical
- dynamic

Tolerances

- length 7 μm , tolerance $\pm 2 \mu\text{m}$

Special Features

- cycle time: between 21 - 76 s., depending on the type
- loading/unloading: with an integrated handling
- calibration: automatic
- retrofitting: manual
- traceability and sorting of the workpieces
- nok-classification
- batch mode for 250 different types of workpieces



Measuring Automaton for E-Motor-Housing

Brief Description

- measuring automaton postprocess for 100% check

Measuring Task

- measurement of diameters , form tolerances (roundnesses), location tolerances (concentricities)

Technology

- tactile
- static

Special Features

- loading/unloading: with a handling supplied by the customer or manual
- calibration: manual
- basis is build in 6 small grooves, which are made by extruding



Measuring System for Combustor

Brief Description

- measuring system for sample check

Measuring Task

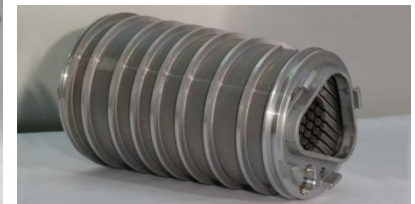
- measurement of diameters

Technology

- tactile
- static

Special Features

- loading/unloading: manual
- calibration: manual



Measuring Devices for Oil Pump

Brief Description

- measuring devices for 100% check and classification

Measuring Task

- measurement of distance, assembly size, parallelism

Technology

- tactile
- static

Tolerances

- $< 10 \mu$

Special Features

- loading/unloading: manual
- calibration: sophisticated calibration concept
- Retrofitting: without retrofitting
- batch mode for 70 different types of work pieces
- Matching of single parts for assembling process



Measuring automaton for workpiece “Konus”

Brief Description

- measuring automaton for 100% check

Measuring Task

- measurement of diameters, lengths

Technology

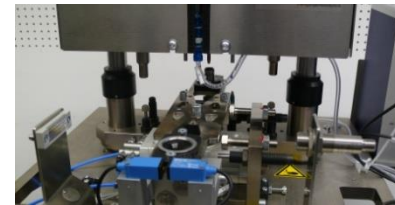
- tactile
- contactless, pneumatical
- static

Tolerances

- Ø-tolerance: 11 µm

Special Features

- cycle time: 8 s
- loading/unloading: with a robotic handling supplied by the customer
- calibration: automatic
- control system: external control
- sorting of the workpieces with robotic handling according to their determined status
- integrated into customers automation cell



Measuring and setting device for blankholder distance sensor

Brief Description

- measuring device for 100% check

Measuring Task

- measurement of heights

Technology

- tactile
- static

Tolerances

- $\pm 0,1$ mm

Special Features

- loading/unloading: manual
- calibration: manual
- retrofitting: without retrofitting for 4 types of workpieces
- dial gauges with digital readout as well as green/red status signal
- set up of the three pins by the operator by means of the displayed value shown on the respective dial gauge without removal of the workpiece

