

**Mahr** | Dimensional Metrology – Semi-Automatic Solutions

# **Engineered Solutions**



### Measuring Device for Crankshaft

### **Measurement Task**

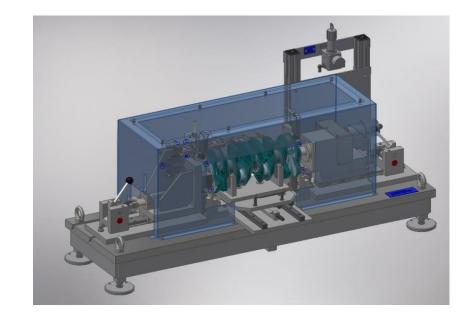
- Main Bearing: Diameters, Roundness, Runout, Width
- Flange: Diameter, Runout

### **The Solution**

This measuring station is designed for manual loading by workshop personnel. The workpiece is placed on a slide in pre-storage prisms. The workpiece is then transported into the device. In this position the workpiece is lifted out of the prisms and clamped between centres. The measurement is started. All static and dynamic measuring tasks are performed automatically.

Finally, the results are displayed and transferred to a QA database. The workpiece is moved out of the measuring device by means of the loading slide and can be removed.

The measuring station concept can generally be adapted to different measuring tasks and shaft types.



Automation:	semi-automatic
Main application:	crankshaft; shaft

81

Ø	<b>1</b>	
	\/	0
$\bigcirc$	M	=
egraphical	€ <sub>R</sub>	

Reference No:



### Measuring Device for Camshaft

#### **Measurement Task**

- Diameter
- Roundness
- Runout
- Cylindricity
- Distances

### The Solution

This measuring station is designed for manual loading by workshop personnel. For this purpose, the workpiece is placed in pre-storage prisms. After loading, the workpiece is picked up between centres by means of manual operated tail-stocks on both sides and the measurement is started. All static and dynamic measuring tasks are performed automatically. Finally, the results are displayed and transferred to a QA database.

The measuring station concept can generally be adapted to different measuring tasks and shaft types.



Automation:	semi-automatic
Main application:	camshaft; shaft





## Shaft / Commutator / Armature Measuring Gauge

#### **Measurement Task**

- Shaft Diameter
- Runout
- Roundness
- Bar-to-Bar Height (commutator)
- Segment gap
- Segment pitch
- Segment form deviation etc

#### The Solution

This measuring device is designed for the measurement of typical dimensional parameters on shafts.

The workpiece is inserted and then clamped between centres by actuating a lever. To enable dynamic measurements, a drive is applied to rotate the shaft.

The standard version is designed for shaft lengths from 130 mm to 300 mm and diameters from 25 mm to 80 mm. Special versions are available on request.





Automation:	semi-automatic
Main application:	shaft; e-mobility; turbo-charger
man approation	onart, e mosmty, tarse onarge.

90



Reference No:

Mahr GmbH



### Inline Shaft Measurement

### **Measurement Task**

- Diameter on bearing carrier
- Axial runout on shaft

### The Solution

This measurement station is designed for both manual and automatic loading by applying a robot.

After loading the workpiece a housing will close the station automatically. Center tips will close to fix the workpiece. Static and dynamic measurements are beeing performed fully automatic.

Afterwards results being displayed and transferred to QS-Data-Base of the customer and housing is opened for unloading and loading of next workpiece.



Automation:	full-automatic
Main application:	shaft; gear

Ø	<u>I</u>	
	1/	0
$\oplus$	M	=
√_	(Se	

Reference No: 66