

Product information

Optical devices with CNC table and tailstock Mar4D PLQ 3200-T4

Product features

• Speed:

- Extremely fast, mechanical-optical workpiece alignment by means of a fully automatic centering and tilting table in combination with the matrix camera
- Axis movements with a unique speed of up to 200 mm/s
- Very fast and high-resolution matrix camera with a large field of view of 15x10 mm (WxH)
- Joint evaluation of all collected measurement data via MarWin

• Productivity:

- Workpieces that have not been manufactured between tips are simply clamped in the chuck
- Many different measuring functions combined in one device
- Flexible measurement of workpieces with up to D=210 mm, L=450 mm and 50 kg directly in production next to the production machines
- Increase in measuring capacities and reduced waiting times

• Precision:

- Compensation of eccentrics of several millimeters to 1 µm in less than 30 seconds
- Integrated environmental controls, such as active temperature compensation of the device, ensure consistent measurement quality and significantly reduce waste.
- The motorized tailstock with clamping force monitoring prevents operator influences and increases the reproducibility of the measurement results

• User-friendliness:

- The ergonomic housing and interior design enables convenient and gentle operation for many hours
- Light curtains and interior monitoring protect people and measuring devices
- All devices are "robot-ready" and automation solutions, such as robot loading, can be implemented quickly and directly through our specialized MES department



Item no.: 5553254

Technical data

Travel/measuring path X1 axis	200 mm
Pos.-/Meas. path Z-axis	450 mm
Positioning speed C-axis	0.2 - 15 1/min
Positioning speed X1 axis	0.5 - 200 mm/s
Positioning speed Z-axis	0.5 - 200 mm/s
Workpiece length max.	450 mm
Workpiece diameter max.	210 mm
Table load max.	50 kg
Error limit Length	$MPE \leq (2.4 + l/200) \mu\text{m}; 'l' \text{ in mm}$
Error limit diameter	$MPE \leq (1.3 + d/150) \mu\text{m}; 'd' \text{ in mm}$
Measured value resolution Length	0.01 - 0.0001 mm
Measured value resolution diameter	0.01 - 0.0001 mm
Angular resolution	0.01 - 0.0001 °
Reference temperature	20 °C
Sensors	optical
Optical system	telecentric precision optics, image field approx. 15 x 10 mm (W x H)
Camera system	CMOS matrix camera
Special equipment	CNC table and motorized tailstock
Measuring computer	AIO PC or industrial AIO PC with UPS (each incl. Microsoft Windows 10 IoT LTSC)
Operating temperature	10 °C to 35 °C
Storage and transport temperature	5 °C to 60 °C
Sound pressure level	<75 dB(A)
Permissible humidity	max. 70 %; non-condensing
Mains voltage	90 – 240 V
Mains frequency	50/60 Hz
Power consumption max.	850 W
Transportation options	suitable for air freight
Scope of delivery	PC holder and two 60° centering tips (2 – 44 mm)