

# Product information

## Optical-tactile devices with tailstock Mar4D PLQ 4200-T2

### Product features

#### • Speed:

- 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) in effective combination with innovative probe systems
- Mahr T7W with motorized rotation axis and thus fastest stylus change on the market or RENISHAW SP25M 3D scanning probe system
- Joint evaluation of all collected measurement data via MarWin

#### • Productivity:

- Many different measuring functions combined in one device
- Flexible measurement of workpieces with up to D=210 mm, L=1000 mm and 20 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.: 5554202

### Technical data

<b>Travel/measuring path X1 axis</b>	200 mm
<b>Travel/measuring path X2 axis</b>	200 mm
<b>Travel/measuring path Y-axis</b>	40 mm
<b>Pos.-/Meas. path Z-axis</b>	1000 mm
<b>Positioning speed C-axis</b>	0.2 - 120 1/min
<b>Positioning speed X1 axis</b>	0.5 - 200 mm/s
<b>Positioning speed X2 axis</b>	0.5 - 200 mm/s
<b>Positioning speed Y-axis</b>	0.5 - 50 mm/s
<b>Positioning speed Z-axis</b>	0.5 - 200 mm/s
<b>Workpiece length max.</b>	1000 mm
<b>Workpiece diameter max.</b>	210 mm
<b>Table load max.</b>	20 kg
<b>Error limit Length</b>	$MPE \leq (2.4 + l/200) \mu\text{m}; 'l' \text{ in mm}$
<b>Error limit diameter</b>	$MPE \leq (1.3 + d/150) \mu\text{m}; 'd' \text{ in mm}$
<b>Measured value resolution Length</b>	0.01 - 0.0001 mm
<b>Measured value resolution diameter</b>	0.01 - 0.0001 mm
<b>Angular resolution</b>	0.01 - 0.0001 °
<b>Reference temperature</b>	20 °C
<b>Sensors</b>	optical tactile
<b>Optical system</b>	telecentric precision optics, image field approx. 15 x 10 mm (W x H)
<b>Camera system</b>	CMOS matrix camera
<b>Probe system</b>	Mahr T7W and/or RENISHAW SP25M
<b>Special equipment</b>	motorized tailstock
<b>Measuring computer</b>	AIO PC or industrial AIO PC with UPS (each incl. Microsoft Windows 10 IoT LTSC)
<b>Operating temperature</b>	10 °C to 35 °C
<b>Storage and transport temperature</b>	5 °C to 60 °C
<b>Sound pressure level</b>	<75 dB(A)
<b>Permissible humidity</b>	max. 70 %; non-condensing
<b>Mains voltage</b>	90 – 240 V
<b>Mains frequency</b>	50/60 Hz
<b>Power consumption max.</b>	850 W

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<b>Transportation options</b>	suitable for air freight
<b>Scope of delivery</b>	PC holder and two 60° centering tips ( 2 – 44 mm)