

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

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| Travel/measuring path X1 axis | 200 mm |
| Travel/measuring path X2 axis | 200 mm |
| Travel/measuring path Y-axis | 40 mm |
| Pos.-/Meas. path Z-axis | 1000 mm |
| Positioning speed C-axis | 0.2 - 120 l/min |
| Positioning speed X1 axis | 0.5 - 200 mm/s |
| Positioning speed X2 axis | 0.5 - 200 mm/s |
| Positioning speed Y-axis | 0.5 - 50 mm/s |
| Positioning speed Z-axis | 0.5 - 200 mm/s |
| Workpiece length max. | 1000 mm |
| Workpiece diameter max. | 210 mm |
| Table load max. | 20 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 tactile |
| Optical system | telecentric precision optics, image field approx. 15 x 10 mm (W x H) |
| Camera system | CMOS matrix camera |
| Probe system | Mahr T7W and/or RENISHAW SP25M |
| Special equipment | 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 |

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|-------------------------------|---|
| Transportation options | suitable for air freight |
| Scope of delivery | PC holder and two 60° centering tips (2 – 44 mm) |