

# Product information

## Dimensional Metrology Mar4D PLQ 4200-T4

### Product features

#### Speed:

Measuring processes in production should be fast above all else. A newly developed control architecture on the Mar4D PLQ 4200 device series therefore ensures that its axes move at a unique speed, such as the C-axis at up to 120 rpm. Fast measurement is also guaranteed by the built-in sensors: the modern, high-resolution matrix camera records the measurement data optically at top speed. The tactile probes - Mahr T7W for form features and Renishaw SP25M for 3D features - also impress with their speed. Particularly with the Mar4D PLQ 4200-T4 variant with automatic centering and tilting table, you also benefit from extremely fast alignment thanks to mathematical-mechanical combination technology. Finally, the user-friendly MarWin software platform evaluates all measurement data reliably and as required. The operator can carry out several measurements in just one clamping operation, which also significantly speeds up inspections and therefore reliable quality statements.

#### Productivity:

An investment in a Mar4D PLQ 4200 is long-term and future-proof. The device saves costs, time and space in production, as it offers up to five measuring functions in one unit, meaning that our customers can use it to replace up to five other measuring systems. In addition, thanks to its multi-sensor technology, the Mar4D PLQ 4200 can handle a wide range of different measuring tasks, including internal measurement, extremely flexibly, quickly and precisely. Rotationally symmetrical workpieces with a diameter of up to 200 mm, a length of 1,000 mm and a weight of 50 kg can be inspected. Overall, users increase their measuring capacities while waiting times are reduced. In addition, waste is significantly reduced as several integrated environmental controls ensure consistently reliable measuring conditions.

#### Precision:



Item no.: **5554254**

### Technical data

|  |   |
|--|---|
| <b>Verfahr-/Messweg X1-Achse</b>           | 200 mm  |
| <b>Verfahr-/Messweg X2-Achse</b>           | 200 mm  |
| <b>Verfahr-/Messweg Y-Achse</b>            | 40 mm   |
| <b>Pos.-/Meas. path Z-axis</b>             | 450 mm  |
| <b>Positioniergeschwindigkeit C-Achse</b>  | 0.2 - 15 1/min  |
| <b>Positioniergeschwindigkeit X1-Achse</b> | 0.5 - 200 mm/s  |
| <b>Positioniergeschwindigkeit X2-Achse</b> | 0.5 - 200 mm/s  |
| <b>Positioniergeschwindigkeit Y-Achse</b>  | 0.5 - 50 mm/s   |
| <b>Positioniergeschwindigkeit Z-Achse</b>  | 0.5 - 200 mm/s  |
| <b>Werkstücklänge max.</b>                 | 450 mm  |
| <b>Workpiece diameter max.</b>             | 210 mm  |
| <b>Table load max.</b>                     | 50 kg   |
| <b>Fehlergrenze Länge</b>                  | $MPE \leq (2.4 + l/200) \mu\text{m}$ with 'l' in mm   |
| <b>Fehlergrenze Durchmesser</b>            | $MPE \leq (1.3 + d/150) \mu\text{m}$ with 'd' in mm   |
| <b>Messwertauflösung Länge</b>             | 0.01 - 0.0001 mm  |
| <b>Messwertauflösung Durchmesser</b>       | 0.01 - 0.0001 mm  |
| <b>Winkelauflösung</b>                     | 0.01 - 0.0001 °   |
| <b>Reference temperature</b>               | 20 °C   |
| <b>Sensorik</b>                            | optical tactile   |
| <b>Optisches System</b>                    | Telecentric precision optics, image field approx. 15 x 10 mm (W x H)                          |
| <b>Kamerasystem</b>                        | CMOS matrix camera  |
| <b>Probe system</b>                        | Mahr T7W and/or RENISHAW SP25M  |
| <b>Besondere Ausstattung</b>               | CNC table and tailstock   |
| <b>Messrechner</b>                         | All-in-one PC or industrial all-in-one 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>Schalldruckpegel</b>                    | <75 dB(A)   |
| <b>Permissible humidity</b>                | max. 70 %; nicht kondensierend  |

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|                               |   |
|-------------------------------|---|
| <b>Netzspannung</b>           | 90 – 240 V  |
| <b>Netzfrequenz</b>           | 50/60 Hz  |
| <b>Power consumption max.</b> | 850 W   |
| <b>Transportmöglichkeiten</b> | suitable for air freight                          |
| <b>Scope of delivery</b>      | PC holder and two 60° centering tips ( 2 – 44 mm) |