

Product information

Dimensional Metrology Mar4D Mar4D PLQ 4200-T4 for parts up to L=450/D=210 mm and 20 kg

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.: 5554204

Technical data

Verfahr-/Messweg X1-Achse	200
Verfahr-/Messweg X2-Achse	200
Verfahr-/Messweg Y-Achse	40
Verfahr-/Messweg Z-Achse	450
Positioniergeschwindigkeit C-Achse	0.01 - 60 1/min
Positioniergeschwindigkeit X1-Achse	0.01 - 200 mm/s
Positioniergeschwindigkeit X2-Achse	0.01 - 200 mm/s
Positioniergeschwindigkeit Y-Achse	0.01 - 50 mm/s
Positioniergeschwindigkeit Z-Achse	0.01 - 200 mm/s
Messwertauflösung Länge	0.01 - 0.0001 mm
Messwertauflösung Durchmesser	0.01 - 0.0001 mm
Winkelauflösung	0.01 - 0.0001 °
Tischbelastung max.	20.00
Fehlergrenze Länge	$MPE \leq (2.4 + l/200) \mu\text{m}$ with 'l' in mm
Fehlergrenze Durchmesser	$MPE \leq (1.3 + d/150) \mu\text{m}$ with 'd' in mm
Werkstücklänge max.	450
Werkstückdurchmesser max.	210
Workpiece weight max.	20
Netzspannung	90 – 240 V
Netzfrequenz	50/60 Hz
Power consumption max.	850
Sensorik	optical tactile
Optisches System	Telecentric precision optics, image field approx. 15 x 10 mm (W x H)
Kamerasystem	CMOS matrix camera
Probe system	Mahr T7W and/or RENISHAW® SP25M
Messrechner	Standard panel PC or industrial panel PC with UPS, each with Microsoft® Windows® 10 IOT LTSC
Besondere Ausstattung	fully automatic centering and tilting table, motorized tailstock with clamping force monitoring, PC holder and two 60° centering seats (2 – 44 mm) included with the machine
Operating temperature	10 °C to 35 °C

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Storage and transport temperature	5 °C to 60 °C
Zulässige Luftfeuchte	max. 70%; non-condensing
Schalldruckpegel	<75 dB(A)
Transportmöglichkeiten	suitable for air freight