

MiniProfiler-CMM

Miniaturized Pickup

breitmeier
A NanoFocus Company

nanofocus
see more

Tactile Roughness Sensor for Coordinate Measuring Machines

**Roughness
+
Waviness**
100 μm - 2 mm

Adaptable
Usable on
various
workpiece
shapes

Versatile
Wide variety of
measurement
tasks

Rotation Axis
360°

Tilting Axis
184°


Stylus protection


60 sec.
Quick-change stylus


Vibration resistant


Wireless



The MiniProfiler-CMM is a **self-contained tactile skidless measurement device with an articulated arm**. Rotation and pivot axis, forward feed and internal battery are enclosed in the small housing.

It belongs to the MiniProfiler product line of Breitmeier Messtechnik GmbH. Since 2001 the company has been designing, developing and building cutting-edge measurement devices and systems in Germany.

Our MiniProfiler product line is available for a **wide range of applications** which require measurement of technical surfaces, such as shafts, grooves on shafts and pistons, camshafts, vent sealing lips, cylinder bores and metalsheet.

for Quality Assurance in Laboratories & on Production Lines



Technical data subject to change without notice. Breitmeier is a registered Trademark of Breitmeier Messtechnik GmbH. The Breitmeier MiniProfiler products are protected by patent law.

MiniProfiler-CMM

Technical Specification

ISO 3274	Measurement system with reference datum
Measurement principle	Skidless stylus; tactile
Reference datum	Precision flat
Measurement uncertainty [%]	0.5
Measurement range [µm]	100; 500; 1000; 2000;*
Resolution [Bit]	20
Stylus tip radius [µm]	2; 5; *
Stylus angle [°]	90; 60; *
Measuring distance [mm]	15; 50; 70; *
Travel speed [mm/s]	0.1 - 2
Stylus protection	Lift off actuator
Internal memory	Pickup and service data; measurement programs
Quick-change components	Stylus; cable

Axes

Rotation axis [°]	≥ 360
Angular resolution [°]	0.018
Smallest configurable angular change [°]	0.02
Tilting axis [°]	184
Angular resolution [°]	0.01
Smallest configurable angular change [°]	0.01
Time for 360° rotation / 180° pivoting [s]	≤ 7

Standards

ISO	ISO 4287; ISO 13565-2; *
Other standards	Daimler MBN 31007; SEP 1941; JIS B 0610; *
Profile parameters	Pt; Pc; Pv; Py; Pa; Pp; Pmr; *
Waviness parameters	Wt; Wc; Wv; Wy; Wa; Wp; Wsa(1-5); Wa0.8; Wca; *
Roughness parameters	Rt; Rv; Ry; Ra; Rmr; Rp; Rq; Rz; Rmax; dominant waviness; *
Core roughness parameters	Rk; Rpk; Rpk*; Rvk; Rvk*; Mr1; Mr2; R3z; R3max; *
Filters	Gauss; ISO 1562/16610-21; ISO 13565-1; VDA 2008; ISO 16610-31; *

Software

Number of measurement programs	> 1000
Data interfaces	USB 2.0; USB 3.0; RS 232; QDAS; Excel; PDF (configurable); *

Measurement Environment and Dimensions

Operating position	Arbitrary
Operating temperature [°C]	5 - 35
Dimensions [mm]	80 x 28 x 40 (without trunk); Ø 70, 1335 (full system with jointed arm)
Weight [g]	500

* Customizable

MiniProfilers



MiniProfiler-C
with camera



MiniProfiler MP15



MiniProfiler MP50/75



MiniProfiler MP15
for CMM or robot