

The MEAX MT10

Effective checks on turning centres

With MEAX MT10 you get a full overview of the geometric status of a turning centre in less than 30 minutes. The all-in-one solution measures coaxiality and spindle alignment, as well as straightness and pitch of the machine slider in three easy steps. This is because the user-friendly measuring instrument performs through weighing, guided by the logic of the software. MEAX MT10 is a high-precision instrument and will provide accurate measurements down to 0.001 mm via its laser sensors. The all-in-one solution comes supplied complete with wireless connection to the shock-proof display unit.



2-axis-levelling and pitch/roll of the machine bed

To check that the machine's movements run straight without any pitching, a solution with multiple sensors is required. The MEAX LR sensor is positioned on the machine bed and the MEAX LM sensor is fitted to the tool holder using the attachment supplied. In this way you measure the angle deviation of the machine's movement in relation to its bed. At the same time, you measure straightness with the help of a laser. The result is presented in graphic form the wireless display unit, with the option of naming the specific movement you have measured.



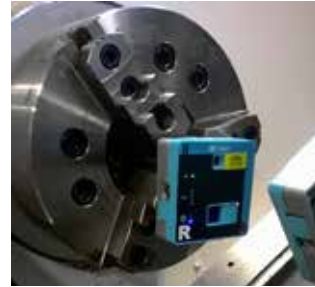
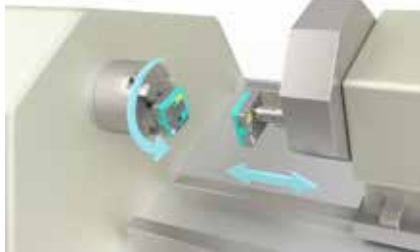
	R	M
a	+0.431	+0.303
b	-0.517	-0.575
∠	+0.14°	+0.46°



Measuring spindle alignment

Because deviations in spindle alignment impact on the end product, it is important that this can be easily measured. You check the deviation via four measurements in two positions.

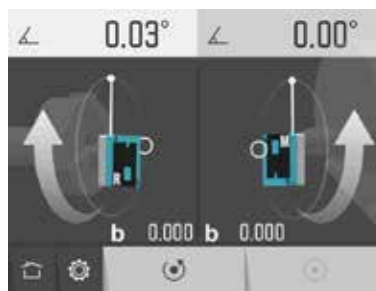
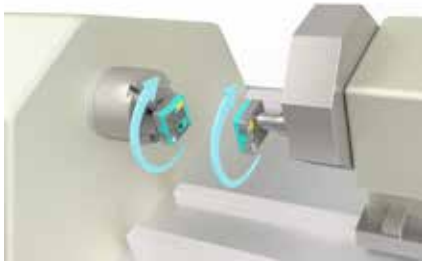
By rotating the laser in the spindle and moving the receiver along the Z axis, you can obtain a reading for parallel alignment between the Z axis and the spindle. The results are displayed in graphic form in two directions: at right angles to the machine bed and in parallel with it.



Measuring and adjusting the turret

Using the MEAX SR and SM sensors, you can measure coaxiality between the main spindle and the tool holder so as to quickly set a zero point on the X axis.

The measuring instrument guides you through the entire measuring process. It helps you take measurements in four rotation positions and then calculates a result that shows the deviation between spindle and tool holder. Adjustments can then be made in the live function unique to MEAX.



MEAX SM/SR

Housing material:	Anodized Aluminium and ABS plastic
Operating Temp:	15 to 30°C (59 to 86°F)
Weight:	306 g (10.9 oz)
Dimensions:	82mm x 86mm x 33mm (3.2 in x 3.4 in x 1.3 in)
Environmental protection:	IP 65
Laser:	650 nm class II diode laser
Laser power:	< 1mW
Measure distance	Up to 3 m
Detector:	2-axis PSD
Detector size:	16mm x 16mm (0.6in x 0.6in)
Detector resolution:	1µm
Measurement accuracy:	1% ± 3 µm
Inclinometer resolution:	0.01°
Inclinometer accuracy:	± 0.1°
Communication range:	10 m (33 ft)
Power supply:	High performance Lilon battery or external power
Battery charging time (system off, room temp):	8 h
Battery LED indicators:	Unit state, laser transmission, battery status and Bluetooth

MEAX LM/LR

Operating Temp:	15 to 30°C (59 to 86°F)
Storage Temp:	-20 to 70°C (-4 to 158°F)
Relative humidity:	10 – 90%
Weight:	386 g (13.6oz)
Dimensions:	77mm x 84mm x 45mm (3.0 in x 3.3 in x 1.8 in)
Environmental protection:	IP 65
Inclinometer:	High performance MEMS inclinometers
Calibrated measuring range:	±50mm/m
Internal resolution:	0.001mm/m
Displayed resolution:*	0.01 mm/m
Inclinometer accuracy:	1% ± 0.005mm/m
Temperature error:	0.015 mm/m/°C
Communication range:	10 m (33 ft)
Warming up time:	30 min
Operating time:	12 hours continuously
Battery Charging time:	8 h
Wireless communication:	Class I Bluetooth transceiver with multi-drop capability.

DISPLAY UNIT

Weight:	1,2 kg (2,6 lbs) with battery
Dimensions:	124 mm x 158 mm x 49 mm (4,9 in x 6,2 in x 1,9 in)
Environmental protection:	IP 65 (Dust tight and protected against water jets)
Display size:	6,5" (165 mm) diagonal (133 x 100 mm)
Operating time	10 hours continuous use (with 50% LCD backlight)
Environmental protection:	IP 65
Battery charging time (system off, room temperature):	1 hour charge – 6 hours operating time



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