

Measure angles easily and faster

KeMes Angle Meter

The precision solution
for efficient angular measurement



KeMes stands for a completely new method of angle measurement and was primarily designed for users of press brakes to allow angle deviations to be directly detected during the production process. The measurement is performed by laser and guarantees high productivity and saves time. Compared to conventional measurement methods, the production process does not need to be interrupted. KeMes enables consistent quality assurance without wasting time, thus significantly reducing scrap.

Easy – User-friendly

KeMes enables angle measurements at the push of a button, and the device can be quickly operated thanks to the intuitive user guidance. Not only does the KeMes protractor simplify angle inspection directly at the press brake but also the manual quality control of sheet metal angles. Unlike other hand-held measurement devices, the measurement blade does not need to be held against the workpiece, thereby



resulting in considerable time savings. In addition, a specially designed function enables continuous measurement along the entire workpiece.

Faster – Measure without losing time

For automatic measurements on the press brake, KeMes is simply fastened to the upper die of the press brake using the integrated magnets. No time is lost on manual spot checks and calibration work. Consistent quality control is guaranteed and deviations are immediately identifiable. Even large, bulky workpieces can be measured directly on the press brake without having to manipulate the workpiece.

Measure angles – Maximum quality and precision

KeMes is based on an innovative laser technology. The measurement is contactless, wear-free and gentle on the workpiece. Only a narrow gap between the upper dies of the press brake is needed. This can easily be created by appropriately arranging the dies. Horn-shaped or slotted tools can also be used.

The patented KeMes solution functions for a wide range of machine types and manufacturers. The measurement cycle is controlled by the integrated sensors. No intervention in the machine control is necessary. Therefore existing machines can be upgraded with KeMes at any time.

The data logging function supports user in terms of quality assurance and process optimization. Up to 30,000 measurement values can be saved to a CSV file and transferred via USB interface for further processing.

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Technical data

KeMes A100

Measurement

- Patented laser measurement principle
- Measurement range: 30-150°
- Measuring accuracy: $\pm 0.2^\circ$ *)
- Repeatability: 0.1°
- Resolution: 0.01°

*) See "Reference measurement accuracy" in the operating instructions

Laser

- Laser beam diameter: 3 mm (at the exit point)
- Beam divergence: 35 mrad
- Pulse frequency: 167 Hz
- Calibration uncertainty laser output: ± 0.9 mW
- IEC 60825-1:2014, Table 10, Condition 3: 200 mm (most restrictive location); 36 μ s (impulse duration in measuring aperture)

Display

- High-contrast OLED display
- Measurement values in degrees resp. arcminutes

Power supply

- 5 V DC; 500 mA
- Battery type: lithium-ion-polymer
- Charging time: approx. 2 h
- Charging: via USB High Power

Housing

- W x H x D: 162 x 48.5 x 15.3 mm
- Protection rating: IP20
- Material: zinc / glass / plastic

Certifications

- CE, UL LISTED (File E507547)

Environmental conditions

- Operating temperature: 5 to 40 °C
- Temperature during charging: 5 to 40 °C
- Storage temperature: -20 to 45 °C
- Rel. humidity: 5 to 95 % (non condensing)

Delivery contents

- KeMes angle meter
- USB charger incl. cable and country adapter
- Storage box
- Quick start guide
- Measurement aid incl. centering adapter



CAUTION! LASER RADIATION DO NOT LOOK INTO THE BEAM

Laser class 2, IEC 60825-1:2014,
660 nm; 7 mW; pulsed

