

# Ultrasonic Wireless Gauge

Wireless Ultrasonic Technology: thickness and position for your milling machine.

## THE PRODUCT

Ultrasonic Wireless Gauge is the last Magyc innovative system in ultrasonic NDT field: this instrument marks a new era in ultrasonic NDT and measurement.

Ideally suited for almost every ultrasonic application, the instrument is designed to give the highest performance combining excellence hardware characteristics with flexible software tools.

Wireless Gauge is an Ultrasonic system to be used inside the machine tool with "HSK attachment", hosted in tool magazine, for the acquisition of thickness and position of a particular metal part, within the working area of the machine itself.

The measurement is carried out by moving the instrument without contact over the surface of the item under examination (position relative to the machine axes).

For the measurement it is required that the part presents parallel faces and the instrument probe is orthogonal ( $\pm 0.5^\circ$ ) to the measurement surface.

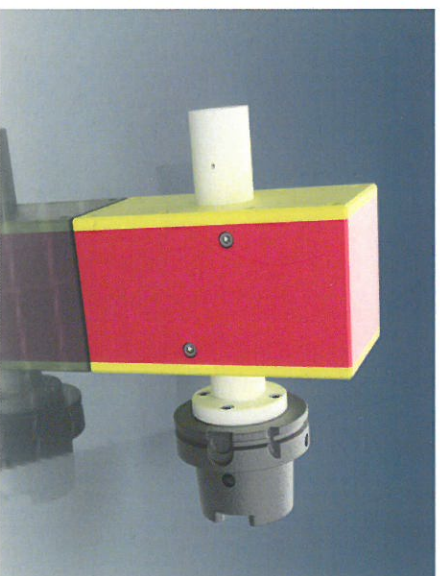
Non-orthogonality will cause, in addition to obvious geometrical errors, the interruption of the ultrasound signal.

To convey the ultrasound to the piece under examination, it is necessary to have a liquid flow (up to 15 liters/min) between the probe and the part: the liquid must be filtered (max 40 micron) and free of bubbles or impurities.

The main characteristics of the Wireless Gauge are:

- Minimum measurable Thickness \*: 3 mm
- Maximum measurable Thickness: 20 mm
- Accuracy:  $\pm 0.01$  mm
- Repeatability:  $\pm 0.01$  mm
- Probe orientation:  $90^\circ \pm 0.5^\circ$
- Maximum data rate: 2000/sec
- Data transmission: WiFi
- Autonomy: 30-60 min
- Battery Charging: Wireless Qi (in tool magazine)
- Machine Attachment: HSK

\* Measurement smaller thicknesses must be verified experimentally.



## FEATURES

### APPLICATIONS

The Wireless Gauge is designed to measure thickness within milling machine but it is very flexible and can be adapted to many different purposes, by eding software based features.

Some customized applications can be:

- Detection, Locating and sizing of hidden cracks, voids, disbondings.
- Measurements of internally corroded pipes.
- Detection of discontinuities in welds, forgings, composites, billets, axles, shafts, tanks.
- Measurement of elastic properties of materials.

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