




Tool Measurement

 Linear working principle

 Hardwired

 Infrared Transmission

 Radio Transmission

 Tool breakage detection

 Tool length measurement

 Coolant Load

 Single and Mass Production

 Wear Compensation

 Temperature Compensation



Tool Setting Probes Z-Series
COMPACT TOOL MEASUREMENT

BLUM
focus on productivity



Tool Setting Probes Z-Series

COMPACT TOOL MEASUREMENT

Tool setting probe with linear working principle for monitoring the smallest tools

Robust and economic – the compact tool setting probes are extremely economic solutions for fast tool breakage detection and highly precise length measurements in machine tools. The well-proven design and the wear-free optoelectronic measuring mechanism with linear working principle, provide the highest reliability under the most adverse manufacturing conditions.

- Fast tool length measurement and breakage monitoring
- Temperature compensation

Your benefit:

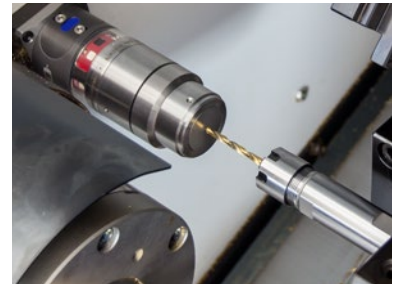
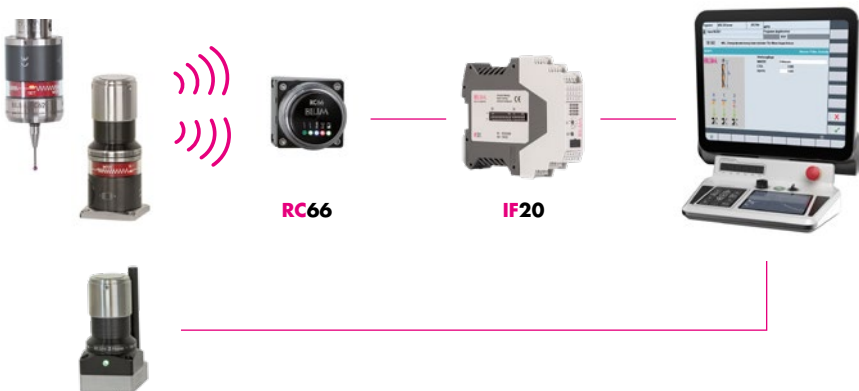
- Measurement of sensitive and very small tools
- No secondary damage due to unrecognised tool breakage
- Fast ROI
- No-wear, optoelectronic measuring mechanism
- Compact and robust design

Reliable and proven transmission technologies

Tool setting probes from BLUM are available with cable, radio or infrared technology:

- Extremely fast and reliable transmission
- Sequential use of up to 6 radio measuring systems with one receiver
- Sequential use of 2 infrared measuring systems with one receiver (DUO mode)
- Simultaneous use of 2 radio measuring systems on one machine (TWIN-Mode)

System overview



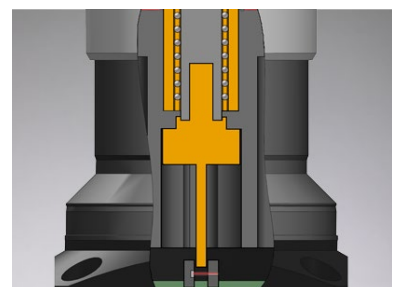
Z-Nano IR and Z-Nano RC – the wireless versions



Z-Pico – for micro-machining



Tool length measurement



The ball bearing mounted linear guide enables low measuring forces

Technical data

	Z-Pico	Z-Nano	Z-Nano IR	Z-Nano RC
Height	55 mm	75 mm	100 mm	100 mm
Transmission type	Cable	Cable	Infrared	Radio
Repeatability	1 μm 2 σ	0.5 μm 2 σ 0,2 μm 2 σ (HP)	0.5 μm 2 σ	0.5 μm 2 σ
Minimum tool \varnothing	0.05 mm*	> 0.1 mm* > 0.2 mm**	> 0.1 mm* > 0.2 mm**	> 0.1 mm* > 0.2 mm**

* Depending on the geometry and material of the tool, probing force must not result in damage of tool ** With chip protection