

Infrared probing system IRP25.50

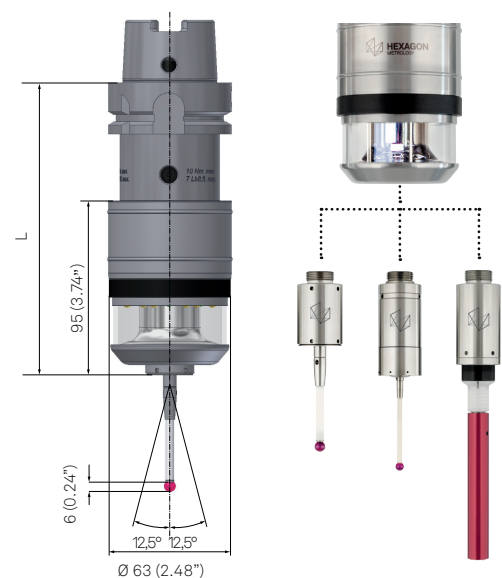
Flexible measurement system for highest demands

Mass production places the highest demands on the production process. The IRP25.50 infrared touch probe system meets all these requirements in the machine tool. Extreme accelerations, high positioning speeds, constant vibrations, hard tool changes, increased temperatures and aggressive coolants pose no problems for Hexagon touch probes. Hexagon's precision mechanics can continue to switch without wear and extremely precisely for years under all these conditions.

The bidirectional probe IRP25.50 is characterized by its modular structure. Various measuring units, different extensions and cross-probes can be used. This makes it possible to optimally adjust the probe to future requirements and applications in the machine tool at any time. The development of further measuring units and sensors which can be used on the same system basis is planned for the future.

- Robust, flexible and future-proof
- Battery lifetimes of up to 1000 hours

Technical data	
Power Supply	1 x 9 V battery block, 6LR61 Lithium: 1200 mAh, Alkaline: 550 mAh
Material	Stainless steel, POM
Weight without Shank	Approx. 920 g
Temperature Range	Storage: 5 °C – 70 °C, Operation: 10 °C – 50 °C
Sealing	IP68: EN60529
Battery lifetime in continuous operation (Probing every 2 seconds)	±X, ±Y, -Z
Maximum stylus overtravel	PP41.00 – XY ±12,5°; Z –6 mm MY21.00 – XY ±14°; Z –4,5 mm
Trigger force with 50 mm stylus	PP41.00 – XY = 0,3 - 1,4 N; Z = 2,5 - 12,5 N MY21.00 – XY = 1 N; Z = 6 N
Recommended probing feedrates	Max. 2000 mm/min
Repeatability at probing from one direction	2 Sigma ≤ 1 µm with 50 mm stylus and 254 mm/min probing feedrate
Extensions Ø 25 (0.98")	30 mm (1.18"), 50 mm (1.97"), 100 mm (3.94"), 200 mm (7.87")
Signal transmission	HDR+



State-of-the-art

ITE-technology and One-Touch-Strategy

The infrared probe moves at top speed to the measuring point, so that it can reliably probe at constant measuring speed with only one touch.

HDR+ infrared transmission

HDR+ transmission guarantees that only the system's own signals are processed. Disturbances caused by extraneous light are ruled out. The HDR+ transmission ensures the bidirectional signal transmission between the receiver and probe with a homogeneous directional characteristic over reflecting surfaces.

Enhanced activation options

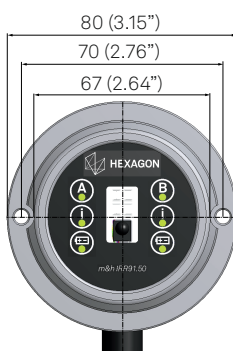
In addition to the proven, reliable mechanical activation options, the IRP25.50 also offers the option of bidirectional activation. This is done using separately coded signals and is therefore not inferior to mechanical methods with regard to reliability.

Infrared receivers

Hexagon infrared receivers reliably process measurement and temperature data. All receivers are extremely robust and waterproof and can communicate with m&h infrared probes and infrared tool setters.

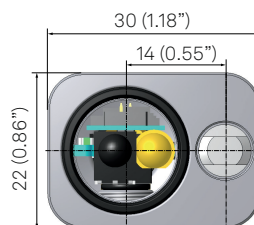
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- Dual Probe and bidirectional HDR and HDR+ technology
- Available with radial and axial cable outlets



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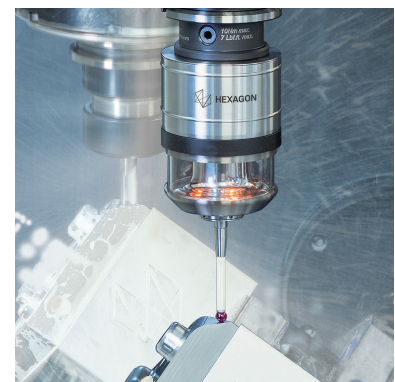
- Bidirectional HDR+ technology within compact housing
- Can be directly mounted in the headstock of the machine



Determination of the workpiece temperature directly on the machine - thanks to the patented temperature measuring unit



The probes moves at high speed, so that measurement times are significantly reduced.



The IRP25.50 is designed for the rough condition in the machine tool.

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit [hexagonmi.com](https://www.hexagonmi.com).

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