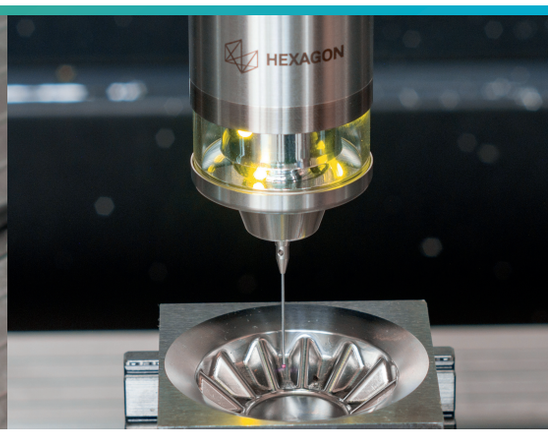


Infrared touch probe IRP40.42

Infrared probing systems with constantly low trigger forces

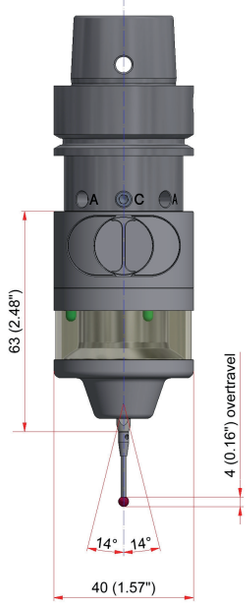
The infrared touch probe IRP40.42 has been specially designed for measuring sensitive materials and thin, fragile workpiece geometries within harsh machine tool environments. The IRP40.42 combines the strengths of the IRP40.02 touch probe with a highly versatile touch trigger probe developed by Hexagon for taking fast, repeatable measurements on coordinate measuring devices.

The trigger forces of the IRP40.42 remain consistently low even at higher probing speeds and greater stylus overtravel, protecting your sensitive workpieces from damage. The IRP40.42 has a repeatability of 2 Sigma 1 µm and can be equipped with styli and stylus balls as small as 0.2 mm.

A robust design means it can operate efficiently under extreme accelerations, high positioning speeds, constant vibrations, hard tool changes and increased temperatures. And its compact size makes it suitable for use within an extremely limited inspection space.

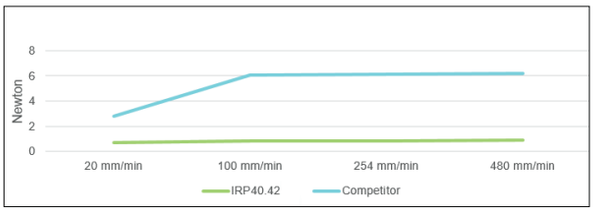
IRP40.42	Technical Data
Probing directions	±X; ±Y; -Z
Max. stylus overtravel	XY = ±14°; Z = –4 mm
Tripping force* with 20 mm stylus	XY = 0,06 ±0,02 N; Z = 0,8 N ±0,1N
Recommended probing feedrate	Max. 480 mm/min
Power supply	2x batteries (3,6 V / ½ AA)
Max battery life	Approx. 800 h in continuous use, standby 12 months
Material	Stainless steel
Weight without shank	Approx. 250 g
Temperature range	Operation: 10° C - 50° C, Storage: 5° C - 70° C
Repeatability (deflection from one direction)	Max. 1 µm (2 Sigma) with 20 mm stylus and 254 mm/min probing feedrate
Sealing	IP68: EN60529
Maximum probing frequency	50 Hz = 50 points/s
Shock-test	In ±X; ±Y; -Z, 25 g for 7 ms (2000 times)
Load resonant frequency	Test passed

* Tripping force = Force when the probing signal is tripped at the touch point not influenced by the machine dynamics (stops without delay when the touch point is reached)

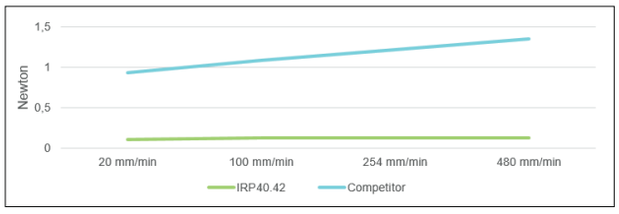


Comparsion Speed | Trigger forces

	Comparsion Speed	Trigger forces Z	
Z-direction	20 mm stylus	IRP40.42	Competitor's probe
	20 mm/min	**0,72 N**	2,60 N
	100 mm/min	**0,81 N**	6,24 N
	254 mm/min	**0,86 N**	6,26 N
	480 mm/min	**0,93 N**	6,30 N

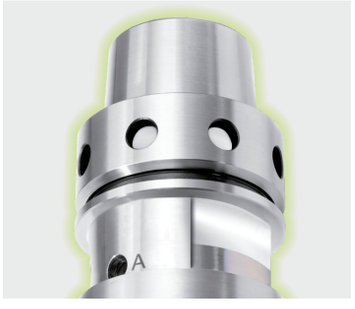


	Comparsion Speed	Trigger forces X/Y	
X/Y-direction	20 mm Stylus	IRP40.42	Competitor's probe
	20 mm/min	**0,11 N**	0,82 N
	100 mm/min	**0,13 N**	0,96 N
	254 mm/min	**0,13 N**	1,09 N
	480 mm/min	**0,13 N**	1,22 N



Shank with patented Thermo-Lock® Technology

Thermo-Lock® enables precise measurement results even with large temperature differences. It eliminates uncontrolled expansion of the shank and probe body. Thermo-Lock® prevents heat transfer from the spindle to the probe

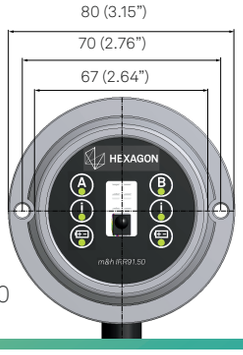


Thermo-Lock® Technology

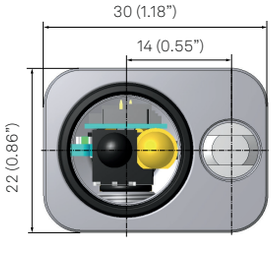
Infrarot-Empfänger IRR91.42 | IRP91.50

The innovate HDR+ transmission ensures, that only the system's own signals are processed. Disturbances caused by extraneous light are ruled out. The IRR91.42 and IRR91.50 infrared receivers have large transmission and receiving angles and can be used with additional Hexagon tool setters inside the machine.

- Extremely process reliable and dependable
- Innovative HDR+ transmission
- Several devices on one machine



IRR91.50



IRR91.42

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.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us @HexagonAB.