

Portable Hardness Tester TIME5620

-Ultrasonic Contact Impedance (UCI) Method



Larger, clear screen displays probe information, battery information, the average, maximum, minimum readings of select hardness scale as well as HV reading. Easy to use. Fast and accurate.

Unlike Leeb's portable rebound hardness testers, TIME5620 portable hardness tester can test both large and small parts. It requires less on thickness (minimum 2 mm thick) and weight of the parts. That means this model can be used on both large and small parts.

It leaves a much smaller indentation compared to Leeb's portable hardness testers because of its Vickers-sized indenter. This is particular useful in critical non-destructive testing.

The motorized probes have two unique advantages. The magnetic shoe helps to attach the probe to ferrous surface and keep it stable. The shoe can also be taken off in situations where access area is not wide enough.

TIME5620 has wide range selection of probes. Motorized probe starts from extra-light load force 1 N for delicate surfaces to 8 N. Manual probe is from 20 N to 98 N. Motorized probes operate automatically.

Two optional platforms are available. The regular platform is very useful if you need to test a lot of small parts. The platform for cylinders will increase the speed as well as accuracy on cylinders.

Specifications:

Loading force	1 N (0.1 kgf), 3 N (0.3 kgf), 5 N (0.5 kgf), 8 N (0.8 kgf) 20 N (2 kgf)-standard probe, 10 N (1 kgf), 50 N (5 kgf), 98 N (10 kgf)
Measuring range	85-650 HB, 80-1599 HV, 20-70 HRC, 41-100 HRB, 61-85.6 HRA, 34.2-97.3 HS, Mpa 255-2180 N/mm
Measuring accuracy	±3% HV, ±1.5 HRC, ±3% HB
Indenter	136° Vickers diamond indenter
Measuring direction	360°
Onboard memory	1000 groups of data and 20 groups of calibration setting
Hardness scales	HV, HB, HRC, HRA, HRB, & MPa
Data display	Loading force, testing times, testing results, average, maximum, minimum, deviation, and conversion scale.
Display screen	LCD display
Battery indicator	
Operating environment	Temperature -10 °C to 50 °C, humidity 30%-80% RH
Operating voltage	DC 4.8 V
Dimensions	6.3"×3.1"×1.2"(160×80×31 mm)
Weight	500 g (without probe)

Manual Probe Specifications:

Probe model	HP-1K	HP-2K	HP-5K	HP-10K
Part#	882-311	882-321	882-331	882-341
Loading force	10 N	20 N	50 N	98 N
Diameter	22 mm	22 mm	22 mm	22 mm
Length	154 mm	154 mm	154 mm	154 mm
Oscillating rod diameter	2.4 mm	2.4 mm	3 mm	3 mm
Surface roughness requirement	Ra<3.2 μ m	Ra<5 μ m	Ra<10 μ m	Ra<15 μ m
Min weight requirement	0.3 kg	0.3 kg	0.3 kg	0.3 kg
Min thickness requirement	2 mm	2 mm	2 mm	2 mm

Motorized Probe Specifications:

Probe Model	MP-100	MP-300	MP-500	MP-800
Part#	882-211	882-221	882-231	882-241
Loading force	1 N	3 N	5 N	8 N
Diameter	46 mm	46 mm	46 mm	46 mm
Length	200 mm	200 mm	200 mm	200 mm
Diameter of oscillating rod	3.7 mm	3.7 mm	3.7 mm	3.7 mm
Min weight of test material	0.3 kg	0.3 kg	0.3 kg	0.3 kg
Min thickness of test material	2 mm	2 mm	2 mm	2 mm



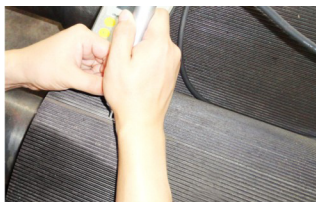
With Magnetic Shoe



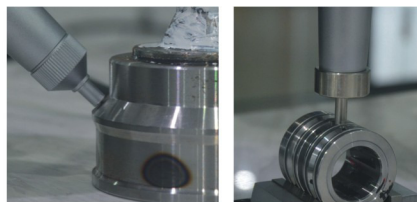
Without Shoe

Selection of optional probes:

Load	Model	Features	MP-500
98 N	Standard length (manual)	Leaves larger indentations than probes of lighter forces. Requires minimal surface preparation	Small forgings, cast material, weld inspection, HAZ
50 N	Standard length (manual) Extended length (manual) Short probe (manual)	For general use Extended length (by 30 mm) Reduced length (to 90 mm) Electronics in separate housing	Induction hardened or carburized machine parts, for example, camshafts, turbine weld inspection, HAZ Measurement in grooves, on gear tooth flanks and roots Turbine blades, inside wall of pipes with $\text{Ø} > 90 \text{ mm}$
10 N	Standard length (manual) Extended length (manual) Short probe (manual)	Load is easy to apply Extended length (by 30 mm) Reduced length (to 90 mm) electronics in separate housing	Ion-nitrided stamping dies and molds, forms, presses, thin walled parts Bearings, tooth flanks Turbine blades, inside wall of pipes with $\text{Ø} > 90 \text{ mm}$
8 N	Motorized probe	Load is applied by servomotor	Finished precision parts, gears, bearing raceways
3 N	Motorized probe	Load is applied by servomotor; rather small indentations	Thin layers, for example, copper or chromium on steel cylinders Copper rotogravure cylinders, Coatings, case hardened parts
1 N	Motorized probe	Load is applied by servomotor. Leaves the smallest indentations	Thin layers and coatings



Gear Materials



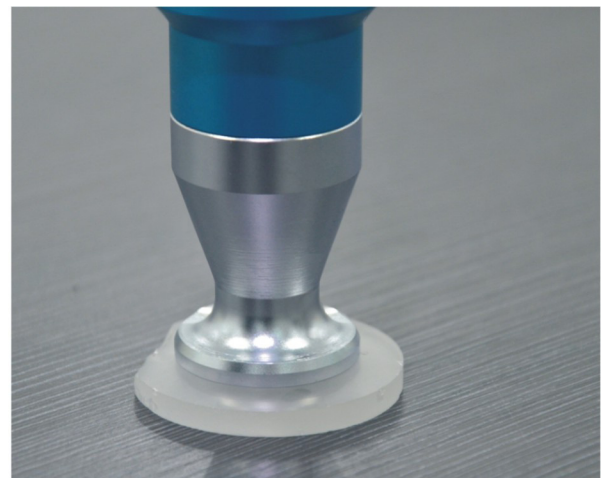
Tube-shape Materials



Radiofrequency Materials



Die steel



Sapphire

Optional test blocks:

Hardness Range	Code#	Uniformity	Roughness	Dimensions
28-35 HRC	882-611	±1.5 HRC	Ra=0.02 μm	Ø90×16 mm
38-45 HRC	882-621	±1.5 HRC	Ra=0.02 μm	Ø90×16 mm
48-55 HRC	882-631	±1.5 HRC	Ra=0.02 μm	Ø90×16 mm
58-65 HRC	882-641	±1.5 HRC	Ra=0.02 μm	Ø90×16 mm
50-999 HV1	882-661	±3% HV	Ra=0.02 μm	Ø90×16 mm
50-999 HV5	882-671	±3% HV	Ra=0.02 μm	Ø90×16 mm

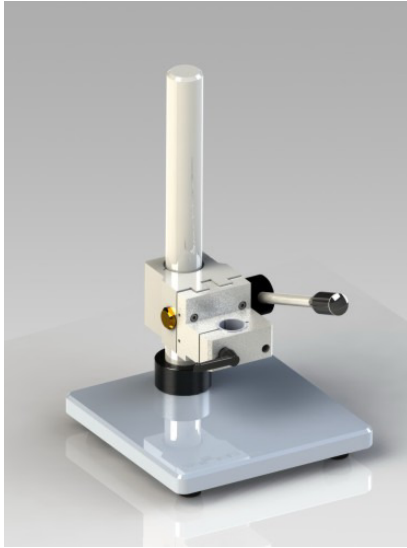


Optional support Rings:

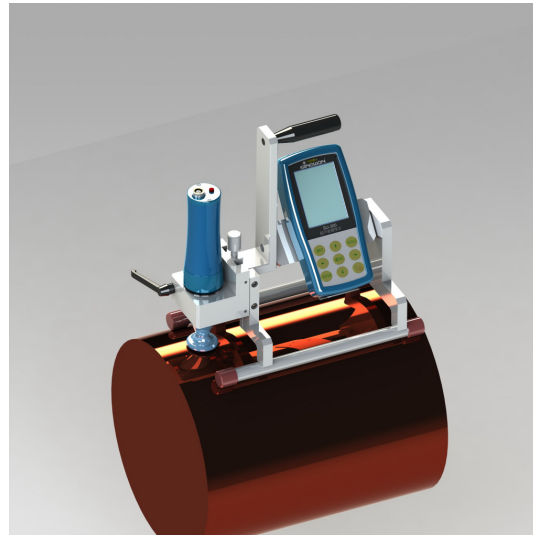
	Flat support ring	Small cylinder support ring	Large cylinder support ring
Part#	882-511	882-521	882-531
Application	Flat test piece	Parts diameter 8-22mm	Parts diameter 16-80mm



Optional platforms:



Testing Stand MU-100



Cylinder test stand MU-200

Standard accessories:

Main unit

Manual probe 2 kgf (HP-2K, 20 N)

Cable

Probe silicone cap

USB cable

Instruction manual

Calibration certificate

Carrying case

Two year warranty

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