

Portable hardness tester



Polygon Manufacturing Limited

Portable hardness tester

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Portable hardness tester

Company Info

Founded in 2005, Polygon Manufacturing Limited specialize in testing instruments. we do as one of the leading manufacturers of testing instruments in China.

Our products include all kinds of metal hardness tester and all of their accessories (test block, impact device. Micro Thermal printer)measure and inspect tools, our employees include a highly trained staff of engineers, sales and service dept. Who are committed to offer satisfactory and prompt service to all home and abroad customers. our customers around the world have witnessed the high quality and perfect after service our products. Now, our sales network has reached to 20 countries in the world.

EPX5500 Leeb Hardness Tester

EPX5500 is a small, light and portable tester. It is most suitable for testing of heavy, big or outdoor metal parts. It can measure in any direction and also easy to be used and accurate on curved test surfaces. Especially, it can automatically compensate effect of weight which according to the test direction.



EPX5500 uses wireless IR to communicate with printer,

operates with touch screen and test data could be linked into PC.

EPX5500 Conforms to the Standard **ASTM A956-02 & DIN 50156** (in preparation)

Technical Parameters

HL display range	170~960HLD
Repeatability	6HLD
Testing direction	All direction
Display	3.9inch 240*320(with touch screen), Bright and clear LCD display with back light
Operating voltage	3.7V (rechargeable lithium battery)
Charging power supply	DC5.5V/1A
Printer	Mini thermal printer with IrDA (Cable no need)
Operating environment	Temperature : -20°C~+50°C
	Humidity: 20%~85%
Storage environment	Temperature : -30°C~+70°C
	Humidity: 5%~95%
Dimensions	135mm*83mm*24mm
Weight	350g (include impact device)
Accessories	Display Unit, Impact Device D, Test Block, Mini-printer, Charger, Little Support Ring, Cleaning Brush, Printer Cable
Certificate	CE

EPX300 Leeb Hardness Tester



EPX300 Leeb Hardness Tester is a small, light and portable tester. It is most suitable for testing of heavy, big or outdoor metal parts. It conforms to the Standard **ASTM A956-02 & DIN 50156** .

Technical Parameters

Accuracy	± 6 HL
Scales	HRC, HRB, HB, HV, HSD, MPa
Display	Bright and clear LCD display with backlight
Testing direction	All direction
Optional Probe	DC
Printer	Mini thermal printer with IrDA (Cable no need)
Operating voltage	4.5V (3 AAA batteries)
Operating environment	Temperature : -10~+40℃ Humidity: 20%~85%
Storage environment	Temperature : -30~+80℃ Humidity: 5%~95%
Dimensions	150mm*80mm*30mm
Weight	Approx.200g
Accessories	Display Unit, Impact Device D, Test Block, Mini-printer, Charger, Little Support Ring, Cleaning Brush , Printer Cable
Certificate	CE

Portable Hardness Tester ETIPD

MAIN FEATURES:

- Self contained (Impact Device D integrated): no cables.
- Highly accurate ($\pm 4HL$) in any impact direction (360°) – automatically.
- Integrated display of results for all common hardness scales.
- Large, high contrast LCD for optimum viewing in all conditions.
- Easy calibration.
- Full USB communication with PC, software included free of charge.
- Internal storage of data with day and time.
- Battery: Rechargeable Li ion, charges through device USB port,
- Intelligent sleep mode.
- Standardization: ASTM A956 (2006); DIN 50156 (2007); GB/T 17394 (1998); JB/T 9378 (2001); JJG 747 (1999).
- Printer: Wireless (Bluetooth) mini printer.



MEASURING RANGE / MATERIALS

Material	HLD	HRB	HRC	HB	HV	HSD
Steel and cast steel	300-900	38-100	20-68	81-654	81-955	32-100
Cold work tool steel	300-840	-	20-67	-	80-898	-
Stainless steel	300-800	46-101	-	85-655	85-802	-
Grey cast iron	360-650	-	-	93-334	-	-
Nodular cast iron	400-660	-	-	131-387	-	-
Cast aluminum	170-570	23-84	-	19-164	-	-
Brass	200-550	13-95	-	40-173	-	-
Bronze	300-700	-	-	60-290	-	-
Copper	200-690	-	-	45-315	-	-

Portable Hardness Tester ETIPG

This model is recommended for the exclusive measurement of solid and heavy components in the Brinell range. Unit G places low demands on measuring location surface finish. Typical applications: forgings or solid castings.



MAIN FEATURES:

- Self contained (Impact Device G integrated): no cables.
- Highly accurate ($\pm 6HL$) in any impact direction (360°) – automatically.
- Integrated display of results for HB, HRB hardness scales.
- Large, high contrast LCD for optimum viewing in all conditions.
- Easy calibration.
- Full USB communication with PC, software included free of charge.
- Internal storage of data with day and time.
- Battery: Rechargeable Li ion, charges through device USB port,
- Intelligent sleep mode.
- Standardization: ASTM A956 (2006); DIN 50156 (2007); GB/T 17394 (1998); JB/T 9378 (2001); JJG 747 (1999).
- Printer: Wireless (Bluetooth) mini printer.

MEASURING RANGE / MATERIALS

Material	HLG	HRB	HB
Steel	300-750	47.7 ~ 99.9	90-646
Grey cast iron	340-600	-	92-326
Nodular cast iron	340-600	-	127-364

Portable Hardness Tester ETIPD+ 15

Application: Particularly slim front section and with measuring coil moved back. Hardness measurements in grooves and on recessed surfaces.

MAIN FEATURES:

- Self contained (Impact Device D+15 integrated): no cables.
- Integrated impact direction sensor.
- Highly accurate ($\pm 4\text{HL}$) in any impact direction (360°) – automatically.
- Integrated display of results for all common hardness scales.
- Large, high contrast LCD for optimum viewing in all conditions.
- Easy calibration.
- Full USB communication with PC, software included free of charge.
- Internal storage of data with day and time.
- Battery: Rechargeable Li ion, charges through device USB port,
- Intelligent sleep mode.
- Standards and Guidelines applied: DIN 50156 (2007), DGZfP Guideline MC 1 (2008), VDI / VDE Guideline 2616 Paper 1 (2002), ISO 18625 (2003), ASTM A956 (2006), GB/T 17394 (1998), JB/T 9378 (2001), JJG 747 (1999), CNAL T0299 (2008), JIS B7731 (2000).
- Printer: Wireless (Bluetooth) mini printer.
- Operating environment: Temperature: $-10\sim+60^\circ\text{C}$; Humidity: 20%~85%.
- Storage environment: Temperature: $-30\sim+80^\circ\text{C}$; Humidity: 5%~95%.
- Dimensions: 162 x 35 x 22 mm.
- Weight: 125g.



MEASURING RANGE / MATERIALS

Material	HLD+15	HRC	HB	HV	HSD
STEEL	481~850	19.3 ~ 67.9	80 ~ 638	180~818	33.3 ~ 99.3

Portable Hardness Tester ETIPC

Application: Surface hardened components, coatings, thin walled or impact sensitive components (small measuring indentation).



MAIN FEATURES:

- Self contained (Impact Device C integrated): no cables.
- Integrated impact direction sensor.
- Highly accurate ($\pm 4\text{HL}$) in any impact direction (360°) – automatically.
- Integrated display of results for all common hardness scales.
- Large, high contrast LCD for optimum viewing in all conditions.
- Easy calibration.
- Full USB communication with PC, software included free of charge.
- Internal storage of data with day and time.
- Battery: Rechargeable Li-ion, charges through device USB port.
- Intelligent sleep mode.
- Standards and Guidelines applied: DIN 50156 (2007), DGZfP Guideline MC 1 (2008), VDI / VDE Guideline 2616 Paper 1 (2002), ISO 18625 (2003), ASTM A956 (2006), GB/T 17394 (1998), JB/T 9378 (2001), JJG 747 (1999), CNAL T0299 (2008), JIS B7731 (2000).
- Printer: Wireless (Bluetooth) mini printer.
- Operating environment: Temperature: $-10\sim+60^\circ\text{C}$; Humidity: 20%~85%.
- Storage environment: Temperature: $-30\sim+80^\circ\text{C}$; Humidity: 5%~95%.
- Dimensions: 141 x 35 x 22 mm.
- Weight: 100 g.

MEASURING RANGE / MATERIALS

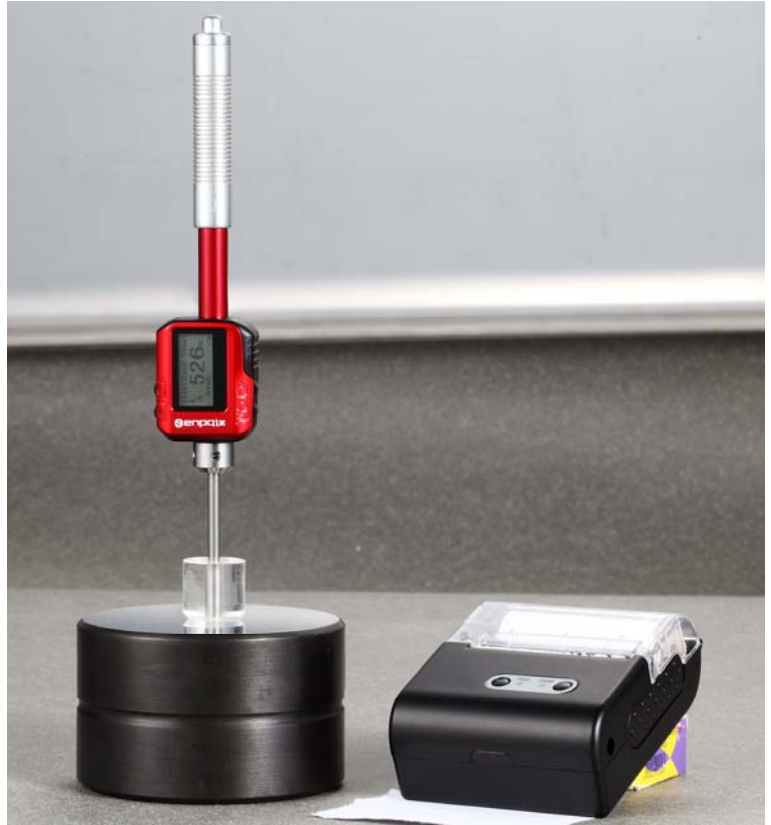
Material	HLC	HRC	HRB	HB	HV	HSD
STEEL	350 ~ 960	20.0 ~ 69.5	38.4 ~ 99.5	80 ~ 683	80 ~ 996	31.9 ~ 102

Portable Hardness Tester ETIPDL

Application: For measurements in extremely confined spaces or at the base of grooves.

MAIN FEATURES:

- Self contained (Impact Device DL integrated): no cables.
- Integrated impact direction sensor.
- Highly accurate ($\pm 4HL$) in any impact direction (360°) – automatically.
- Integrated display of results for all common hardness scales.
- Large, high contrast LCD for optimum viewing in all conditions.
- Easy calibration.
- Full USB communication with PC, software included free of charge.
- Internal storage of data with day and time.
- Battery: Rechargeable Li ion, charges through device USB port,
- Intelligent sleep mode.
- Standards and Guidelines applied: DIN 50156 (2007), DGZfP Guideline MC 1 (2008), VDI / VDE Guideline 2616 Paper 1 (2002), ISO 18625 (2003), ASTM A956 (2006), GB/T 17394 (1998), JB/T 9378 (2001), JJG 747 (1999), CNAL T0299 (2008), JIS B7731 (2000).
- Printer: Wireless (Bluetooth) mini printer.
- Operating environment: Temperature: $-10\sim+60^\circ\text{C}$; Humidity: 20%~85%.
- Storage environment: Temperature: $-30\sim+80^\circ\text{C}$; Humidity: 5%~95%.
- Dimensions: 202 x 35 x 22 mm.
- Weight: 125g.



MEASURING RANGE / MATERIALS

Material	HLDL	HRC	HRB	HB	HV	HSD
STEEL	560-950	20.6-68.2	37.0-99.9	81-646	80-950	30.6-96.8

Portable Hardness Tester ETIPDC

Application: Use in very confined spaces, e.g. in holes, cylinders or for internal measurements on assembled machines.



MAIN FEATURES:

- Self contained (Impact Device DC integrated): no cables.
- Integrated impact direction sensor.
- Highly accurate ($\pm 4HL$) in any impact direction (360°) – automatically.
- Integrated display of results for all common hardness scales.
- Large, high contrast LCD for optimum viewing in all conditions.
- Easy calibration.
- Full USB communication with PC, software included free of charge.
- Internal storage of data with day and time.
- Battery: Rechargeable Li ion, charges through device USB port.
- Intelligent sleep mode.
- Standards and Guidelines applied: DIN 50156 (2007), DGZfP Guideline MC 1 (2008), VDI / VDE Guideline 2616 Paper 1 (2002), ISO 18625 (2003), ASTM A956 (2006), GB/T 17394 (1998), JB/T 9378 (2001), JJG 747 (1999), CNAL T0299 (2008), JIS B7731 (2000).
- Printer: Wireless (Bluetooth) mini printer.
- Operating environment: Temperature: $-10\sim+60^\circ\text{C}$; Humidity: 20%~85%.
- Storage environment: Temperature: $-30\sim+80^\circ\text{C}$; Humidity: 5%~95%.
- Dimensions: 86 x 35 x 22 mm.
- Weight: 75 g.

MEASURING RANGE / MATERIALS

Material	HLDC	HRB	HRC	HB	HV	HSD
Steel and cast steel	300-900	38-100	20-68	81-654	81-955	32-100
Cold work tool steel	300-840	-	20-67	-	80-898	-
Stainless steel	300-800	46-101	-	85-655	85-802	-
Grey cast iron	360-650	-	-	93-334	-	-
Nodular cast iron	400-660	-	-	131-387	-	-
Cast aluminum alloys	170-570	23-84	-	19-164	-	-
Brass	200-550	13-95	-	40-173	-	-
Bronze	300-700	-	-	60-290	-	-
Copper	200-690	-	-	45-315	-	-

5. Standard Test Blocks



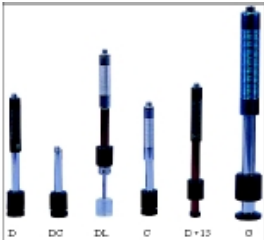
Description

Test Blocks D, G, are calibrated in accordance with the dynamic hardness value L by an independent traceable laboratory. These test blocks are supplied with a certificate to the L-value. Reference values are engraved on the test blocks. Standardized according to JJG747-1999, ASTM A956-02, DIN 50156.

Product Table

Test Block	Impact device calibrated with	Also suitable for use with	Value ranger	Evenness	Dimensions	Weight	Packing
D	D,DC	DL, C, D+15	790±40HLD	4HLD	90(±1)mm×55(±1)mm	2.73Kg	Wood Box Dimensions: 360mm×240mm×130mm 10pcs/Box Gross Weight: 30Kg
			630±40HLD				
			530±40HLD				
G	G		590±40HLG	8HLG	120(±1)mm×70(±1)mm	6.17Kg	Wood Box Dimensions: 370mm×155mm×155mm 4pcs/Box Gross Weight: 28Kg
			500±40HLG				

6. Optional Impact Devices



Description

Optional Impact Devices The ENPAIX unit is fitted with universal impact device D. Special impact devices are available for use in extremely confined spaces, with special component geometry or surface finish. These significantly extend the possibilities of application for the ENPAIX procedure. Each special impact device is compatible with unit D indicating device and is supplied as accessory. Impact device D DC DL D+15 C

Product Table

Impact device	D	DC	DL	D+15	C	G	
Application	For the majority of your hardness testing requirements.	Use in very confined spaces, e.g. in holes, cylinders or for internal measurements on assembled machines.	For measurements in extremely confined spaces or at the base of grooves.	For measurements in grooves or recessed surface.	Surface hardened components, coatings, thin walled or impact sensitive components (small measuring indentation).	Solid components. E.g. heavy castings and forgings.	
Impact energy	11Nmm	11Nmm	11Nmm	11Nmm	3Nmm	90Nmm	
Mass of impact body	5.5g	5.5g	7.3g	7.8g	3g	20g	
Tip	Diameter	3mm	3mm	3mm	2.78mm	3mm	5mm
	Hardness	1600HV	1600HV	1600HV	1600HV	1600HV	1600HV
	Material	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
Impact device	Length	147mm	86mm	202mm	162mm	141mm	254mm
	Diameter	20mm	20mm	20mm	20mm	20mm	30mm
	Weight	75g	50g	100g	80g	75g	250g
Max. hardness of sample	940HV	940HV	950HV	940HV	1000HV	650HB	
The average roughness of sample	Ra: 1.6m	Ra: 1.6m	Ra: 1.6m	Ra: 1.6m	Ra: 0.4m	Ra: 6.3m	

7. Support Rings



Description

Support Rings for round specimen

Product Table

No.		Type	Support rings for round specimen (Figure)	Remark
1		Z10-15		Outer cylinder measuring R10~R15
2		Z14.5-30		Outer cylinder measuring R14.5~R30
3		Z25-50		Outer cylinder measuring R25~R50
4		HZ11-13		Insider cylinder measuring R11~R13
5		HZ12.5-17		Insider cylinder measuring R12.5~R17
6		HZ16.5-30		Insider cylinder measuring R16.5~R30
7		K10-15		Outer spherical Measuring SR10~SR15
8		K14.5-30		Outer spherical Measuring SR14.5~SR30
9		HK11-13		Insider spherical measuring SR11~SR13
10		HK12.5-17		Insider spherical measuring SR12.5~SR17
11		HK16.5-30		Insider spherical measuring SR16.5~SR30
12		UN		Outer cylinder measuring(radius adjustable)R10~