

Integrated Hardness Tester DHT-300^{PLUS} / DHT-310^{PLUS}



DHT-300C^{plus}



DHT-300D^{plus}



DHT-300DL^{plus}



Bluetooth Printer



Features

- Pocket size, easy to operate
- High contrast OLED display
- High Accuracy +/-4HL (0.5% at 800HL)
- Conveniently exchange between impact device D and DL
- Automatic orientation correction
- Work with Mini-printer thru Bluetooth (DHT-310 series)
- For most metals
- Based on the hardness HL value, conversion can be performed to HRB, HRC, HV, HB, and HS
- USB interface for both recharging and data transfer to PC
- Internal memory in a batch of 1250 average readings
- Lower and upper limits setting with Low-High display judge
- Works on 3.7V rechargeable lithium-battery with working more than 16 hours continuously
- Auto shutdown after 5 minutes
- Conforming to ASTM A 956

Technical Specification

Hardness parameter		HL, HRC, HRB, HV, HB, HS
Measurement range / metallic materials		See the table 1
Display		OLED display
Display functions		Battery power consumption, Hardness scale, Hardness value, Average value, Max/Min value, Material
Accuracy Statistics		+/- 0.5% (HLD=800)
Testable workpiece	Thickness coupled	Minimum 3 mm or more (Except with Impact device G:10mm)
	Mass	5kg or more (2-5kg on solid support, <2kg with couplant paste)
	Surface roughness	Ra 10
	Test Points	Radius (convex/concave): Rmin=30mm or more (<30mm with support ring) 5mm or more from the edge of the sample, 3mm or more to each of the tested points
Memory		1250 groups
Output		USB port
Impact device (standard)		D
Optional Impact Device		DL / C
Power supply		3.7V rechargeable lithium-battery with working more than 16 hours continuously
Operating temperature		-20°C ~ +40°C
Dimensions & Weight		158mm × 41mm × 26mm, 120g (including batteries)

Table 1 (For impact device D)

Materials	HL	HRC	HRB	HB	HS	HV
Steel & Cast Steel	300~890	19.8~68.5	59.6~99.6	80~651	26.4~99.5	83~976
Alloy teal Steel	300~840					80~898
Stain less steel	300~800	20.4~67.1		85~655		85~802
Grey Cast Iron	444~650		46.5~101.7	140~334 (30 D2)		
Spheroidal Iron	416~658	19.6~62.4		140~384 (30 D2)		
Cast Aluminum	200~560			30~159 (10D2)		
Brass	200~550	13.5~95.3		40~173 (10D2)		
Bronze	300~700			60~290 (10D2)		
Copper	200~690			45~315 (10D2)		



Standard Delivery

- Main Unit
- Integrated Impact device D, C or DL
- Certified Test Block with HLD-value
- Software and cable
- Cleaning Brush
- Small Supporting ring
- Calibration Certificates
- AC Adapter/Charger
- Bluetooth Printer (DHT-310 series)
- Carrying case
- Operation manual

Optional Accessories

- Support rings for convex, concave and spherical surfaces

Portable Hardness Tester DHT-200



Features

- Build in Mini-printer
- 320 × 240 LCD display with backlight
- For most metals
- Based on the hardness HL value, conversion can be performed to HRB, HRC, HV, HB, HS and Tensile strength
- Impact devices D, DC, DL, C, D+15 and G are available for special applications
- Test at any angle, even upside down
- Lower and upper limits setting with low-high display judge
- High accuracy +/- 0.5%
- USB output for both recharging and data transfer to PC
- Extended memory in 1750 datas
- Works on 4 standard AA batteries or 4 AA rechargeable batteries with working 100 hours continuously (without backlight)
- Auto shutdown after 2min, 5 min, 8min selection
- Conforming to ASTM A 956



User-Friendly operating interface



Standard Delivery

- Main Unit
- Impact device D
- Certified Test block with HLD-value
- Software and cable
- Cleaning brush
- Small supporting ring
- Calibration Certificates
- AC adapter/charger
- Aluminum carrying case
- Operation manual



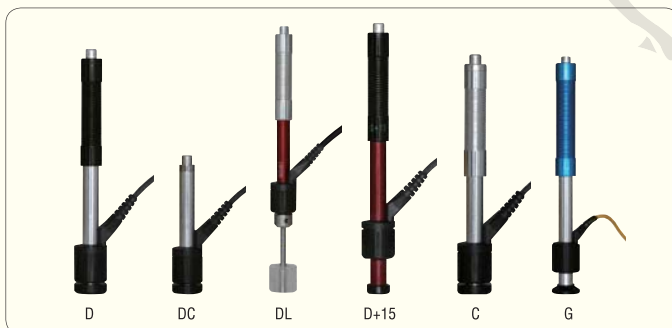
Technical Specification

Display Functions	Impact direction, Date, Time, Battery life status, Memory reference, Hardness scale, Hardness value, Average value, Max/Min value, Material, Type of impact device connected, Times, operating instructions	
Hardness Parameter	HL, HRC, HRB, HV, HB, HS	
Measurement	See the table 1	
Optional Impact Device	D / DC / D+15 / DL / C / G	
Tensile Strength UTS range (steel only)	δ_b from 370 to 2000 (106 N/mm \approx)	
Materials	Steel & Cast steel, Alloy tool steel, Stainless steel, Grey cast iron, Spheroidal iron, Cast aluminum, Brass, Bronze, Wrought copper alloy	
Accuracy	+ / -0.5% (HLD=800)	
Memory	Extended memory in 1750 datas	
Output	USB interface or Built-in mini-printer	
Impact Device Recognize	Manually / Auto	
Testable workpiece	Thickness coupled	Minimum 3 mm or more (Except with Impact device G:10mm)
	Mass	5kg or more (2-5kg on solid support, <2kg with couplant paste)
	Surface roughness	Ra 10
	Radius (convex/concave)	Rmin=30mm or more (<30mm with support ring)
	Test Points	5mm or more from the edge of the sample, 3mm or more to each of the tested points
Display	320 × 240 LCD with backlight	
User Defined	Defined the measurement conditions	
Power supply	4 AA standard batteries or 4 × 1.25V rechargeable batteries with working 100 hours continuously (withought backlight)	
Operating temperature	-20°C to+50°C	
Dimensions & Weight	215mm × 140mm × 45mm , 700g (including batteries)	

Table 1 (For impact device D)

Materials	HL	HRC	HRB	HB	HS	HV
Steel & Cast Steel	300~890	19.8~68.5	59.6~99.6	80~651	26.4~99.5	83~976
Alloy tool Steel	300~840					80~898
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Optional Accessories



Impact devices D, C, DC, D+15, DL, G



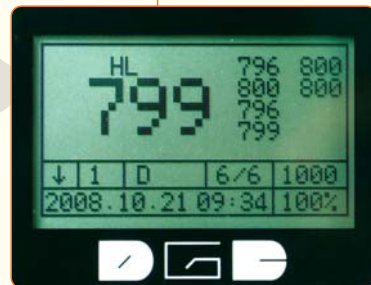
Special support rings

Portable Hardness Tester DHT-100



Features

- Wrist type Hardness Tester
- Easy to read menu operation
- Large LCD display with backlight
- For most metals
- Based on the hardness HL value, conversion can be performed to HRB, HRC, HV, HB, HS and Tensile strength
- Impact devices D, DC, DL, C, D+15 and G are available for special applications
- Test at any angle, even upside down
- RS 232 output and internal memory in a batch of 1250 average readings
- High accuracy $\pm 0.5\%$
- Works on 4 standard AAA batteries
- Auto shutdown after two minutes
- Conforming to ASTM A 956



User-Friendly operating interface



Standard Delivery

- Main Unit
- Impact device D
- Certified Test block with HLD-value
- Software and Cable
- Cleaning brush
- Small supporting ring
- Calibration Certificates
- Leather wrist strap
- Carrying case
- Operation manual



With leather wrist strap, Convenience to operate

Technical Specification

Display functions	Hardness Value, times, average indicator and average value, impact direction, type of impact device connected, memory, reference, date, time, battery power consumption	
Hardness Parameter	HL, HRC, HRB, HV, HB, HS	
Measurement	See table 1	
Optional Impact Device	DC / D+15 / DL / C / G	
Tensile Strength UTS range (steel only)	δ_b from 370 to 2000 (106 N/mm \approx)	
Materials	Steel & cast steel, Alloy tool steel, Stainless steel, Grey cast iron, Spheroidal iron, Cast aluminum, Brass, Bronze, wrought copper alloy	
Accuracy	+/- 0.5% (at HLD=800)	
Memory	1250 groups	
Output	RS 232-USB converter	
Display	128 x 64 LCD display with backlight	
Impact Device Recognize	Manually	
Testable workpiece	Thickness coupled	Minimum 3 mm or more (Except with Impact device G:10mm)
	Mass	5kg or more (2-5kg on solid support, <2kg with couplant paste)
	Surface roughness	Ra 10
	Test Points	Radius (convex/concave) : Rmin=30mm or more (<30mm with support ring) 5mm or more from the edge of the sample, 3mm or more to each of the tested points
Display	128 x 64 LCD with backlight	
Power supply	2 Pcs AAA alkaline batteries	
Operating temperature	-20°C~+50°C	
Dimensions & Weight	108mm x 62mm x 25mm, 230g (including Batteries)	

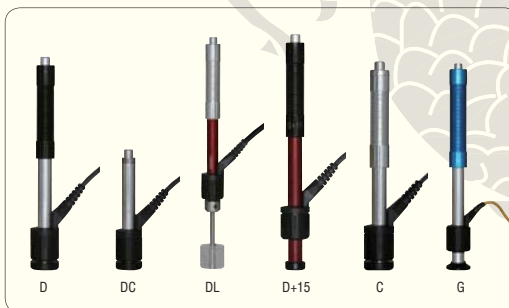
Table 1 (For impact device D)

Materials	HL	HRC	HRB	HB	HS	HV
Steel & Cast Steel	300~890	19.8~68.5	59.6~99.6	80~651	26.4~99.5	83~976
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Bronze	300~700			60~290 (10D2)		
Copper	200~690			45~315 (10D2)		

Optional Accessories



Mimi-printer and Cable



Impact devices D, C, DC, D+15, DL, G



Special support rings

Optional Impact Devices



D



DC



DL



D+15



C



G

D for general purpose detector
C For surface hardened components, coatings, thin walled or impact sensitive components

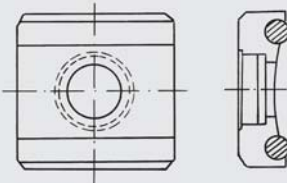
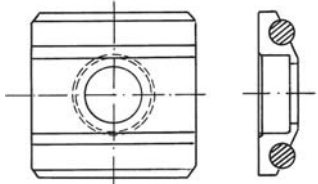
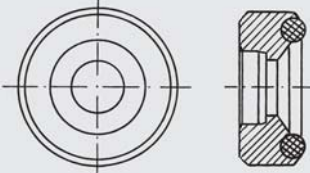
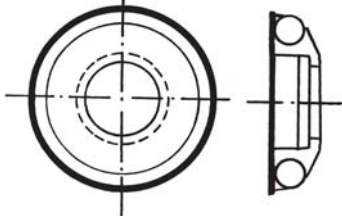
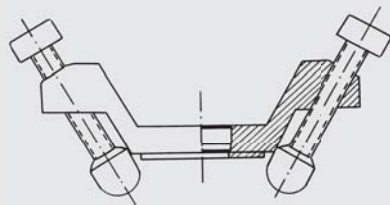
DC for internal walls of pipes with diameter that cannot be tested with the D type
D+15 for bearings and gears

DL for small areas such as the bottom of small gears and weld corners
G For solid components, such as heavy castings and Brinell only

Technical Specification

Impact Devices		D / DC / D+15	DL	C	G
Impacting energy (Nmm)		11	11	3	90
Mass of impact body (g)		5.5/5.5/7.3	7.8	3.0	20
Test tip	Hardness (HV)	1600	1600	1600	1600
	Diameter (mm)	3	3	3	5
	Material	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
Impact body	Diameter (mm)	20	20	20	30
	Length (mm)	147/86/147	250	141	254
	Weight (g)	75/75/50	80	75	250
Max. Hardness of work piece		940HV	940HV	1000HV	650HB
Preparation of surface	Roughness class ISO (ISO)	N7	N7	N5	N9
	Max. roughness depth Rt (µm)	10	10	2.5	30
	Average roughness Ra (µm)	2	2	0.4	7
Min. weight of sample	Of compact shape (kg)	5	5	1.5	15
	On solid support (kg)	2	2	0.5	5
	Coupled on plate (kg)	0.1	0.1	0.02	0.5
Min. thickness of sample	coupled (mm)	3	3	1	10
	Min. thickness of hardened layers (mm)	0.8	0.8	0.2	-
Indentation of Test tip					
With 300HV	Diameter (mm)	0.54	0.54	0.38	1.03
	Depth (µm)	24	24	12	53
With 600HV	Diameter (mm)	0.45	0.45	0.32	0.90
	Depth (µm)	17	17	8	41
With 800HV	Diameter (mm)	0.35	0.35	0.30	-
	Depth (µm)	10	10	7	-

Optional Support Rings

No.	Type	Chart	Remarks
1	Z10-15		For testing cylindrical outside surface R10~R15
2	Z14.5-30		For testing cylindrical outside surface R14.5~R30
3	Z25-50		For testing cylindrical outside surface R25~R50
4	HZ11-13		For testing cylindrical inside surface R11~R13
5	HZ12.5-17		For testing cylindrical inside surface R12.5~R17
6	HZ16.5-30		For testing cylindrical inside surface R16.5~R30
7	K10-15		For testing spherical outside surface SR10~SR15
8	K14.5-30		For testing spherical outside surface SR14.5~SR30
9	HK11-13		For testing spherical inside surface SR11~SR13
10	HK12.5-17		For testing spherical inside Surface SR12.5~SR17
11	HK16.5-30		For testing spherical inside surface SR16.5~SR30
12	UN		For testing cylindrical outside surface, radius adjustable R10~∞

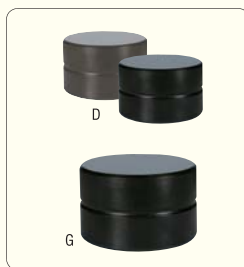
Optional Accessories



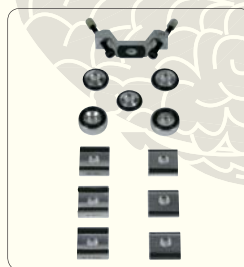
It can be connected with DHT-100



Impact Body DL/G/D/C



Test Block (with certificate)



Support rings



Cable