

# 3810A Digital Portable Hardness Tester



### Fast & Accurate Hardness Testing

The 3810A is a state-of-the-art digital instrument designed to test the hardness of large hard metal parts. Loaded with useful functions such as USB output and a built in printer, the 3810A is an ideal choice for fast accurate hardness testing.

This versatile tester can perform tests that easily convert to the most popular hardness scales, including Rockwell, Brinell, Vickers and Shore.

The tester is easy to use. Simply load the impact body, place the impact body on your test piece, then push the button to begin testing.

The 3810A is designed to test large hard parts. For example, tool steel should be close to 1" thick of solid material. The 3810A comes with a D impact device, calibration block, cleaning brush, manual and a carrying case.

### Functions

- Easy to use keypad operation
- Auto identification of impact device
- Large LCD display with back light
- USB output
- Automatic conversions to: Brinell, Rockwell B & C, Vickers and Shore
- Automatic mean value as well as Min & Max values
- Battery indicator
- Memory capacity (100 groups)

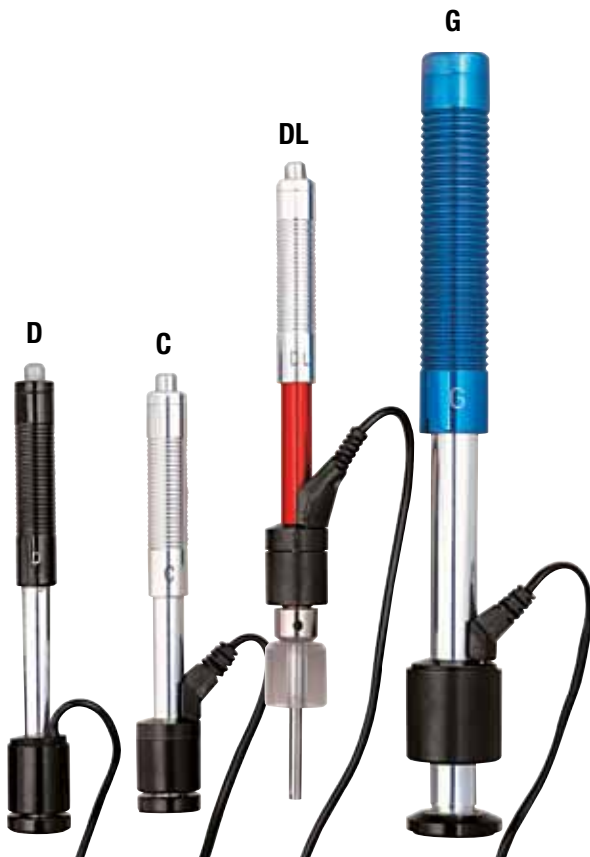
### Specifications

- Accuracy:  $\pm 0.5\%$  (referred to L=800)
- Repeatability accuracy:  $\pm 4L$  units (L=Leeb)
- Measuring range: 200-960 HL
- Materials: steel & cast steel, alloy tool steel, stainless steel, grey cast iron, spheroidal iron, cast aluminum, brass, bronze, wrought copper alloy
- Battery type: AA alkaline (4)
- Operating temperature: 5-104°F
- Dimensions: 150 x 74 x 32mm
- Weight: 245 grams
- Includes 3810A tester, impact device D, calibration test block, cleaning brush, operation manual, custom carry case
- Available options include DC, D+15, DL, G, C impact devices, and special support rings

### 3810A Hardness Tester & Accessories

Cat. No.	EDP	Description
3810A	69871	Tester, D impact device, calibration block, cleaning brush, operation manual, custom carry case
HT-1800-110	20940	D+15 impact device. Very narrow contact area with set backed measurement coil. Measures hardness in grooves and recesses.
HT-1800-115	20941	DL impact device. Needle front section with 4mm diameter and 50mm length. For testing in confined spaces such as groove bases and special components such as gear wheels.
HT-1800-125	20942	G impact device. For components such as heavy castings and forgings. Enlarged test tip and increased impact energy range. For lower quality finishes measuring in the Brinell range only. G block required.
HT-1800-130	20943	C impact device. Reduced impact energy probe for measuring hardness of coatings and surface hardened, thin wall or impact-sensitive components. Applies superficial indentation.
HT-1800-120	20944	DC impact device. Very short for confined areas such as internal bores for various inside measurements.
HT-1800-100	20945	Replacement D impact device. Universal standard probe for a wide variety of applications.
HT-1800-102	20946	Replacement cable for all impact devices
HT-2500-105	20947	Replacement impact body D
HT-1300-01	20948	Leeb D test block
HT-1100G-01	20949	Leeb G test block
S38R	67285	Support ring set

### 3810A Hardness Tester



#### Technical Data for Impact Devices

		D, DC & DL	D+15	C	G
Impact Energy		11Nmm	11Nmm	3Nmm	90Nmm
Mass of the Impact Body		D & DC: 5.5g DL: 7.3g	7.8g	3.0g	20g
Test Tip DL: 7.3 g	Hardness	1600HV	1600HV	1600HV	1600HV
	Diameter	3mm	3mm	3mm	5mm
	Material	Tungsten carbide			
Impact Device	Diameter	20mm	20mm	20mm	30mm
	Length	147/86mm	162mm	141mm	254mm
	Weight	75/50g	80g	75g	250g
Max. Hardness of Sample		940HV	940HV	1000HV	650HB
Preparation of Surface	Roughness class ISO	N7	N7	N5	N9
	Max. roughness depth Rt	10µm	10µm	2.5µm	30µm
	Average roughness Ra	2µm	2µm	0.4µm	7µm
Min. Weight of Sample	Of compact shape	5kg	5kg	1.5kg	15kg
	On solid support	2kg	2kg	0.5kg	5kg
	Coupled on plate	0.1kg	0.1kg	0.02kg	0.5kg
Min. Thickness of Sample	Coupled	3mm	3mm	1mm	10mm
	Min. thickness of layers	0.8mm	0.8mm	0.2mm	—
Indentation of Test Tip with 300 HV	Diameter	0.54mm	0.54mm	0.38mm	1.03mm
	Depth	24µm	24µm	12µm	53µm
Indentation of Test Tip with 600 HV	Diameter	0.45mm	0.45mm	0.32mm	0.90mm
	Depth	17µm	17µm	8µm	41µmC
Indentation of Test Tip with 800 HV	Diameter	0.35mm	0.35mm	0.30mm	—
	Depth	10µm	10µm	7µm	—