D06 Information



Digital Portable Hardness Tester D06 for Metals

Koopa D06 is a state-of-the-art digital portable hardness tester designed to test the hardness of large metal parts. The D06 uses a unique indentation technique with auto-reload impact body feature. It provides one-hand test experience and constant indentation energy in all directions. D06 measures the hardness in Leeb scale and converts the results to the most popular hardness scales such as Rockwell, Brinell, Vickers, and Shore. The user can separately calibrate the hardness measurement for different materials in three hardness ranges, i.e., low, medium, and high.



Unique features

KOOPA

- Auto-reload impact device mechanism
- One-hand test experience
- Software user calibration
- High accuracy in magnetic-radiated environments

Features

- 3000 tests with fully-charged battery
- Plug and play impact device D
- · Auto power-off
- USB port
- 1500 built-in memory

- Same indentation energy in all directions
- Hardness testing of 8 widely-used materials, i.e., LS, HS, GG, 3G, AL, BS, BG, and CU
- Automatic conversion to Brinell, Vickers, Rockwell, Superficial Rockwell, Shore, and tensile strength
- Designed based on ISO 16859 and ASTM A956 standards
- Hardness testing conversion using DIN 50150 and ASTM E140 standards
- Automatic statistical calculation such as maximum, average, minimum, and range
- Auto angle compensation function



Auto-reload impact device mechanism

With auto-reload mechanism, the user can repeatedly perform the test without manually loading the impact device. This patented force mechanism provides an easy hardness testing experience. It benefits from steady indentation energy for the entire device lifetime.



One-hand test experience

The impact device is automatically loaded after each test and does not need the user to manually load it with two hands after each test. It provides more flexibility for the user to perform the hardness testing on non-easily accessible surfaces.



Software user calibration

The user can calibrate the device for each test material through the menu on three hardness ranges, i.e., low, medium, and high. This feature provides flexibility and accuracy for the user to calibrate the device based on a specific application.

High accuracy in electromagnetic-radiated environments

The impact device is designed with a very robust and accurate velocity measurement system by which very accurate hardness testing can be performed. This measuring system is accurate even in the environments where electromagnetic radiation is very high.

Technical Specifications		
Accuracy	± 0.5 % (referred to Leeb 800)	
Repeatability accuracy	± 4 HL	
Measuring range	200-960 HL	
Battery type	5 AA rechargeable NiCd	
Operating temperature	32-122 °F (0-50 °C)	
Dimensions	7.5×39.5×20 in (190×100×40 mm)	
Weight	15.9 oz (450 g)	



Accessories



Convex support ring



Concave support ring

Coupling paste



Standard hardness test block

Standard package

D06 controller

Impactor device D

User manual

Battery charger

Standard hardness test block

Coupling paste

Cleaning brush

Impact body wrench

1500 memory for data storage

The device has a built-in memory in which 1500 hardness tests with all their statistical calculations can be stored. The statistical data for the test are hardness scale, number of tests, minimum, average, maximum, range, code, and serial number.

Data transfer

Measured hardnesses and their calculated statistical data can be transferred to an external USB flash memory. The device stores the data as a text file that can be retrieved on a computer in any text editor software such as Excel.

Hardness testing in all directions

The test can be done in any of the 0°, 45°, 90°, 135°, and 180° directions. The user only needs to select the test direction in the menu and all other calculations will be performed by the device, automatically.

Same impact energy in all directions

Using the patented impact mechanism, the impact energy and velocity are the same in all directions. It results the same hardness value measurement without any need to hardness compensation.

Hardness testing on flat, concave, and convex surfaces

Using three different support rings, hardness testing of almost any surface is possible. These support rings have been designed in such a way that they fit in majority of industrial applications.





Applicable materials		
LS	Low Alloy Steel	
HS	High Alloy Steel	
GG	Grey Cast Iron	
3G	Ductile Cast Iron	
AL	Aluminum	
BS	Brass	
BZ	Bronze	
CU	Copper	

Methods		
HRA	Rockwell A	
HRB	Rockwell B	
HRC	Rockwell C	
HR15N	Superficial Rockwell	
HV	Vickers	
НВ	Brinell	
HSc	Shore Scleroscope	
MPa	Tensile Strength	

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www.persix.ca info@persix.ca +1 (778) 237-8075 206-312 Hospital St., New Westminster British Columbia, Canada

© +982165565901

C +982144584619

3 +989034119385

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