

## KOOPA

## 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**

- 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.

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### 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



Coupling paste



Concave support ring



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
HB	Brinell
HSc	Shore Scleroscope
MPa	Tensile Strength

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