TMTECK

Barcol Hardness Tester

TM934-1 Barcol Impressor

Features：

A portable indentation hardness tester.

Single hand operation; no operating experience required; can test any workpiece which is reachable in any site.

Wide valid testing range equivalent to Brinell hardness 25-150HBW. Used to test the hardness of all kinds of aluminum, from very soft aluminum to very hard aluminum alloys.

Extended application. Model 934-1 is applied to test the hardness of aluminum, aluminum alloys, copper, copper alloys, fiber reinforced plastics and rigid plastics etc. The improved model of it is available to test very soft metals such as lead and tin and other soft materials such as soft plastics, rubber, felt and leather etc.

High sensitivity. Featured with 100 scales, much more sensitive than Webster hardness testers applied in aluminum alloys industry.

No supporting required. Can test from only one side of the workpiece. No need to move or support the workpiece. Used to test super large and thick worpieces and assembly parts.

Comply to standard ASTM B648-2000.

Easy conversion. The test results can be converted to HB, HR, HV and HW easily through conversion table.

Technical Parameters：

Indenter:	26°panhead cone, head face diameter 0.176mm
Testing Range:	0~100HBa，equivalent to 25~150HBW
Resolution:	0.5HBa
Indication error:	hardness range 42~52HBa, ±2HBa
	hardness range 84~88HBa ±1HBa
Repeatability error:	hardness range 42~52HBa, ±2HBa
	hardness range 84~88HBa ±1HBa
Net weight:	0.5kg

Application：

Barcol Impressor is mainly applied to test aluminum and aluminum alloys. Webster is used to test aluminum alloy extrusions, sheet and tubings. Barcol Impressor is suitable to test pure aluminum, soft aluminum alloys, super thick aluminum alloys, aluminum alloys bars and assembled aluminum alloys parts (e.g. al-alloy door &window, scaling ladder etc.)

Relevant Standard: ASTM B648 (Test Method for Indentation Hardness of Aluminum Alloys by Means of a Barcol Impressor)

Barcol Impressor is also used to test fiber reinforced plastics and rigid plastics etc.

Relevant Standard: ASTM D2583-07(Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor)

The improved models of Barcol Impressor are available to test softer plastics, very soft metals, rubber and leather etc.

Disadvantage:

The surfaces of work pieces need to be broad and flat. It is inconvenient to test the hardness of strips, small-sized pieces or work pieces with curved surfaces.

There will be conversion error. When testing the hardness of aluminum section materials, the Barcol hardness need to be changed into Webster hardness, but there is 2.7 HW discrepancy between Barcol conversion table and GB Standard YS/T420-2000, so the Barcol conversion table should be used cautiously.

Standard package

Tester
Spare indenters (2 pcs)
High value Standard hardness block (1 pc)
Low value Standard hardness block (1 pc)
Calibration wrench
Supporting foot
Carrying case

Digital Barcol Hardness Tester TM937-1

Introduction

TM937-1 can be used to test aluminum and aluminum alloys, copper and copper alloys, GFRP, hard plastic, etc.
The sensitivity is much higher than that of the commonly used Wechsler Hardness Tester and the pointer type Barcol Hardness tester In Aluminum processing industry; There is no need to support or move workpiece, easy to operate; Suitable for super large and thick workpieces and assemblies.

Product features

A) the digital display Barcol Hardness Tester is more intuitive, the reading resolution is 0.1HBa, which is much higher than that of the traditional pointer type Barcol Hardness Tester.
B). Pressing needle is easy to replace . When testing the full scale, if the instruction is not in 100HBa, press the needle back to the pressure cylinder, press the Reset reset button to adjust to 100HBa.

C) . External calibration mode: except for the pressure needle, all adjustments do not need to disassemble the casing, adjusting the screws and screen buttons on the instrument is ok.

Technical Parameters

End face diameter	0.157mm
Effective testing range	0-100HBa, equivalent to 25-135HBW
Resolution	0.1HBa
The indication error	81-88 HBa + 1 HBa 42-48 HBa + 2 HBa
Repeatability error	81-88 HBa + 1.5 HBa 42-48 HBa + 2.5HBa
Weight	1 kg (Batteries are not included)

Standard Configuration

Host
Foot
2 hardness blocks
2 pressing needles
Wrench
Bolt driver
Instrument box

Digital Barcol Hardness Tester TM937-1s

Introduction

TMTeck Digital Barcol Hardness Tester is a portable indentation hardness tester developed on base of Barcol impressor.

Standard Conformance

Comply to standard JJG610-2013 and ASTM B648-10(2015).

Theory

The theory of digital Barcol hardness tester is to apply with specific shape steel indentor to press in workpieces surface through test force caused by load spring. When supporting foot is closed to the workpieces surface, measure the extension length of the indentor.

Application

Digital Barcol Hardness Tester is applied to test the hardness of Aluminum, Aluminum alloys, Fiber Reinforced Plastics and rigid plastics etc. wide valid testing range equivalent to Brinell hardness 25-150HBW.

Technical Parameters

Testing Range	0~100HBa,
Effective testing range	35-92HBa, equivalently to 25~150HBW
Resolution	0.1HBa
Indication error	hardness range 42~48HBa, ±2HBa hardness range 81~88HBa ±1HBa
Repeatability error	hardness range 42~48HBa, ±2HBa hardness range 81~88HBa ±1HBa
Power Supply	3 AAA battery
Net weight	1kg

Features

Single hand operation, easy to take, die-casting alloy shell, comfortable to hold.

Digital display, more directly reading; Low-configuration can directly display Barcol hardness reading results; High-Configuration can converted Barcol hardness to HW, HV, HBW and HRE easily through conversion button.

Easily to change indenter; when testing full scale, if it does not point at 100HBa, just to press the full-scale adjustment button is ok, solve the problem on hard full-scale calibration of Barcol impressor.

External calibration mode, after finishing full-scale calibration, no need to take off the shell, only to adjust the screw reserved on the instrument, then can adjust the hardness value.

Standard Packages

Tester	1unit
Spare indenters	2 unit
High value Standard hardness block	1 unit
Low value Standard hardness block	1 unit
Calibration wrench	1 unit
Supporting foot	1 unit
Carrying case	1 unit