

Hardness testing

Rocky



Portable hardness tester

- measures in most hardness scales:  
Rockwell C (HRC), Rockwell B (HRB)  
Vickers (HV), Brinell (HB), Shore (HS)  
Leeb (HL)
- conversion to U.T.S.
- tests at any angle, even up-side-down
- integral/removable printer

## Application

The portable hardness tester Rocky is designed for the universal use in the laboratory or in workshops.

It is easy to use with a very low tolerance of  $\pm 0.8\%$ .

The measuring principle uses the difference between the impact and rebound speed of a small impact body.

This impact body bounds on the surface of a metal piece by the force of a spring.

There are different impact devices available for different materials and geometries.

Besides hardness testing the gauge can measure the U.T.S..

A statistical program shows the mean value, the standard deviation, number of readings, max. and min. value.

## Typical application

- Heavy individual parts or machine parts
- Testing in a production line
- Material identification
- Mould surface of a die

## Preconditions to measure

- Minimum measuring area 10 mm x 10 mm.
- Minimum curvature radius 30 mm (without adapter). With adapter the minimum curvature is 11 mm.
- Parts of less than 5 kg and very thin parts must be placed on a solid base.
- Parts of less than 2 kg have to be placed on a solid base using the coupling liquid.

## Measuring range

- HRC 20 to 68, HRB 13 to 100
- HB 30 to 650, HV 80 to 980
- HSD 32 to 100, HL 200 to 900

## Delivery

- Gauge including printer, measuring standard (steel block)
- Mains unit, plastic carrying case

## Technical data

- Dimension of the gauge incl. printer: length x width x height = 270 mm x 86 mm x 47 mm
- Weight incl. printer: 650 g
- Tolerance:  $\pm 0.8\%$
- Statistics: mean value, standard deviation min. and max. reading, number of readings
- Print-out of readings
- Operating temperature:  
Electronics:  $-10^{\circ}\text{C}$  to  $+45^{\circ}\text{C}$   
Impact device:  $-20^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$   
Measuring range for the U.T.S. of metallic material: 370 to 2,000 Mpa (1 Mpa = 106 N/m<sup>2</sup>)  
U.T.S. measurement for e.g. steel, stainless steel etc.
- Impact device D standard version to measure hardness of metals, e.g.: steel, casting steel, cold-work tool steel, stainless steel, cast iron (gray cast iron, nodular cast iron), aluminium cast alloy, brass, bronze, copper forging

## Special impact devices

- DC: extremely short to use in holes, cylinders etc.
- D+15: to measure in grooves and on recessed surfaces
- C: reduced impact energy (appr. 25%) for e.g. coatings
- G: increased impact energy (appr. 9 times) for e.g. heavy castings and forgings
- E: for very hard pieces up to 1200 HV