



NR3D
Rockwell principle bench hardness tester



The proper solution for any hardness control issue

 **Quality Solutions**
Ernst Representative in USA & Canada
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ERNST

NR3D

Operates according to Rockwell principle
Superficial Rockwell test head on request
Possibility of direct reading of Brinell points on display
Ideal for tests on a wide range of materials
Robust and easy to maintain



NR3D

The hardness tester NR3D works according to the Rockwell principle with standard preload and load. It has also been designed to carry out Brinell testing with direct reading on digital display, thereby achieving in a few seconds the kind of control which would normally take a considerable amount of time.



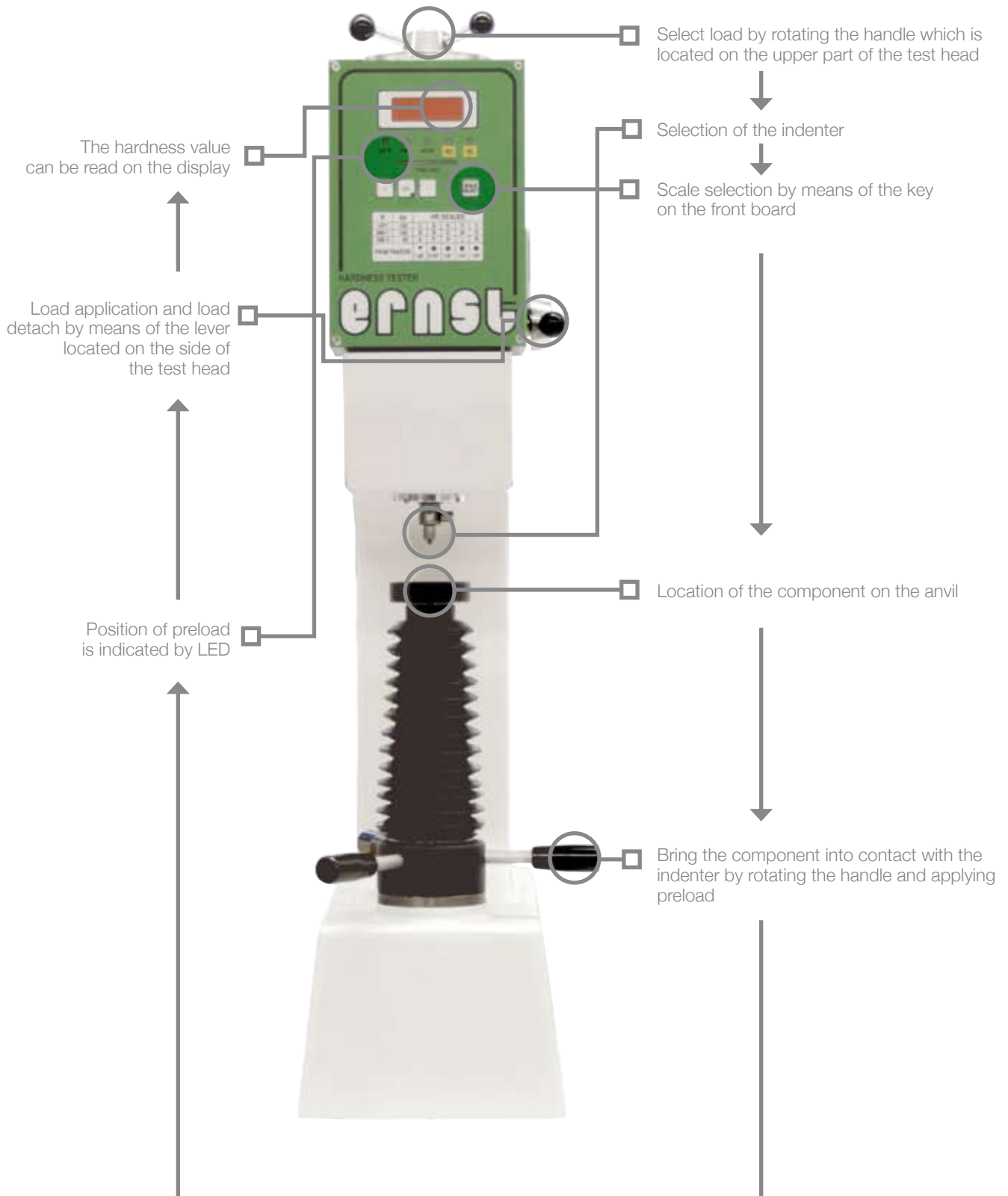
The NR3D hardness tester has a diversified application field. With the different available combinations of standard loads and indenters, it is possible to test very hard materials as well as soft and plastic ones, of different shapes and dimensions.

This is why the NR3D is the ideal hardness tester for those industries who need to test many different materials, before and after processing and heat treatment.

If testing at 15kp, 30kp and 45kp is required, it is only necessary to add the Superficial Rockwell head to the existing stand and accessories, thereby avoiding the necessity to purchase a complete new instrument.

NR3D - WORKING PRINCIPLES AND MAIN CHARACTERISTICS

The NR3D hardness tester works according to the Rockwell principle with load application achieved by a preload spring system, set in such a way that the load is constant and does not require periodic calibration or special adjustment. NR3D can be certified by any licensed certifying body.



NR3D

Ideal for the testing of plastic materials, from rubber to plexiglass, according to the prescribed norms



DATAVIEW32 - SOFTWARE

(Optional)

Captures and stores hardness testing data on a computer and generates files, which are compatible with standard pc programs. Provides tolerance indicators, generates control limits and average values, generates X-bar and R charts, histograms, CPk, etc. Provides scale conversion, minimum thickness values and round correction; builds historical data files with descriptive information for true process control

NR3D

(Optional)

The C-form extension, designed according to customers specific needs, allows easy measurement of internal surfaces



NR3D

Is a very robust instrument and requires very little service, since the load application and testing system is contained in the test head

NR3D - TECHNICAL DATA

Conforms to DIN, ISO and ASTM Standards

TEST HEAD TYPE DR (Rockwell standard load)

preload	10kp (98N)
Rockwell loads	60kp (588N) 100kp (980N) 150kp (1471N)
Brinell loads	62.5kp (612N) 125kp (1226N) 187.5kp (1839N)
scales to select	HRA - HRB - HRC - HRD HRE - HRF - HRG - HRH HRK - Brinell HB30
scales on request	HB2.5 - HB5 - HB10 HV60 - HV100 SHORE D

TEST HEAD TYPE DSR (Rockwell superficial load)

preload	3kp (29.4N)
Rockwell loads	15kp (147N) 30kp (294N) 45kp (441N)
Brinell loads	10kp (98N) 15.6kp (153N) 31.2kp (306N)
scales to select	HR15N - HR30N- HR45N HR15T - HR30T - HR45T HR15W - HR30W - HR45W HR15X
scales on request	HB2.5 - HB5 HV10 - HV15 - HV30

CE Conformity

NR3D STANDARD ACCESSORIES

In polished wooden box

- 1 Rockwell conical diamond indenter
- 1 Rockwell ball indenter 1/16
- 1 Brinell ball indenter 2.5mm*
- 1 Rockwell test block
- 1 Brinell* test block
- 1 Flat anvil Ø 60mm
- 1 Flat anvil Ø 10mm
- 1 Large V anvil
- 1 small V anvil
- 1 Plastic cover
- Spare balls Ø 1/16 *
- Printer output

* accessories not included for the NR3D SR version
(Superficial Rockwell)

NR3D ACCESSORIES ON REQUEST

- Flat anvil Ø 200mm
- V-anvil for rounds max Ø 150mm
- Rockwell ball indenters 1/8", 1/4", 1/2"
- Brinell ball indenters 1mm, 5mm
- C-form extension for measuring internal parts

(See accessories catalogue code n° 801-120EN01)



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