DYNATEST SC portable electronic hardness tester



The proper solution for any hardness control issue

CRACE

# DYNATEST SC

Portable heavy load hardness tester 100kp (980,6N), allows testing results comparable to those of a bench hardness tester. Tests from flat to cylindrical surfaces. Works in horizontal and vertical position. Storage memory of 1000 test results. Optional statistics software compatible with standard pc programs.



## **DYNATEST SC – THE PRINCIPLE**

The purpose in studying and developing this instrument was to realize a portable hardness tester applying a heavy load, comparable to standard Rockwell loads.

Also very important was the fact that testing would not be influenced by any deflection, elasticity or mass of the work piece.

All this has been reached by developing a new dynamic system, which radically differs from the known ones where the test load, being given by an impact, is not precise but depends on the reaction it meets; for this reason, these systems can be used only for testing considerable masses free of deflection.

In DYNATEST SC, on the contrary, the load acts progressively on the indenter in a very short time and without any impact.



resting position (the indenter edge (a) stretches out from the penetrator shroud (b)

the indenter draws back with a resistance equivalent to the preload value

the load is applied

the load is removed, the penetrator displacement is readable from (a) to (b)

This new system makes use of the characteristics of an elastic component, which from load at zero progressively reaches the maximum load and then returns to zero. This component is previously compressed, and then during testing it acts on the penetrator. Thanks to this method, the test load is definite, as it is not produced by an impact but given by the characteristics of the elastic component. In this way, the test result is not influenced by any deflection of the work piece.

DYNATEST SC is not influenced by the conditions of the surface to be tested and can be used simply by pressing it on the test surface.

DYNATEST SC works according to the Rockwell principle with preload of 68 N (7 kp) and test load of more than 980 N (100 kp).

The difference of penetration between preload and load is processed by a microprocessor and displayed directly in Rockwell C hardness scale or in equivalent Brinell scale compared with test blocks.

# **DYNATEST SC - FUNCTION KEYS**











### DYNATEST SC

Dynatest SC can work in different positions and is provided with different supports, easy interchangeable and adaptable to different test situations. Dynatest SC is particularly suited for use in foundries, in the building industry and in heat treatment plants. Suitable for cast iron, forged steel, roundbar-reinforced concrete and many other applications.



### DATAVIEW32 (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.

### **DYNATEST - TECHNICAL DATA**

Type: Working principle: Reading: Test load: Preload: Hardness scales:

Electronics: Memory size: Functions availability: Output: Power supply: or eight-hour continuous operation rechargeable battery, included Operation temperature: Gross weight of the instrument with wooden case: Dimensions of the case: Mechanical unit: Electronic box: portable hardness tester DYNATEST SC Rockwell on LCD backlit display 80x30mm more than 980 N (100 kp) 68 N (7 kp) HRC, 1 HB30 (diamond), 2 HB30 (1/16" ball) N/mm2, kp/mm2, DPTH (depth) Other scales on request 16 bit microprocessor, possibility to connect to peripherals up to 1000 values can be saved in 8 different files scales, tolerances, language selection and statistics RS 232 230 VAC, 50/60 Hz (on request 115 VAC, 50/60 Hz)

0-50° C

kg 10.650 cm 44x40x16 kg 1.900 kg 0.780

#### **CE conformity**

**DIN 50157 conformity** 

#### STANDARD ACCESSORIES

battery charger diamond indenter hard metal ball penetrator test block (HRC, HB30) 3 anvils for flat surfaces anvil for cylindrical surfaces template

#### ACCESSORIES ON REQUEST

software Dataview 32 for data processing on PC, statistics and certificates. 80-column printer Additional hardness scales: HB10/HB5 for light alloys, HB30 for cast iron, HV/HRB SHORE/D special anvils can be studied on request



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