



DuraJet

**Rockwell
Hardness Tester**

EMCO·TEST
YOUR FACTOR OF SAFETY.

Design meets technology.

A revolution in Rockwell hardness testing.



Absolute precision hardness testing.

Highlights in detail.

Test unit

The test unit can be manoeuvred at the press of a button (0 – 260 mm). The test force is applied via an electronically regulated load application system.

Nose cone

The work-piece is pressed by the high-precision nose cone. Gauging can be started either manually or automatically. The nose cone can be replaced according to requirements.

Stable base

The sturdy stand is made of grey cast iron.

USB interface

All measurement data can be accessed via the USB interface (i.e. per USB stick). It is also possible to link up a printer and print off the results or to work with a USB RS232 adaptor through a serial interface.

Service interface

This interface facilitates simple diagnosis and maintenance of the device

Display socket

Power socket

Automatically recognises when the device is hooked up to the power supply (230/110V). Manual switching is not necessary.

Start test

Nose cone height adjustment

Integrated touch screen pin

Precision and speed.

Universally applicable, quick and reliable.



For an entire range of tests with a uniquely broad load span

Electronically controlled load application within the main load of 49 N to 1840 N (5 kgf to 187.5 kgf) allows the entire Rockwell range to be covered by a single device.

Furthermore it is also possible to conduct in depth plastics tests, Vickers and Brinell measurement.



Rockwell

According to EN ISO 6508, ASTM E-18

HRA	HRL	HR 15-T	HR 15-Y
HRB	HRM	HR 30-T	HR 30-Y
HRC	HRP	HR 45-T	HR 45-Y
HRD	HRR	HR 15-W	
HRE	HRS	HR 30-W	
HRF	HRV	HR 45-W	
HRG	HR 15-N	HR 15-X	
HRH	HR 30-N	HR 30-X	
HRK	HR 45-N	HR 45-X	



Plastic testing

According to EN ISO 2039

49,03 N 132,9 N 357,9 N 961 N



HVT, HBT

Depth measurement (non-standard)

HVT 5 to HVT 100

HBT 1/5 to 2.5/187.5

Multiple uses.

Quick individual measurements with a fully automated test cycle.



Random sampling on plane anvil

Immense flexibility is offered by the broad choice of standard test methods and conversions programmed into the device, according to DIN EN 50150, EN ISO 18265 and ASTM E140-05, and which can be called up immediately. Testing is conducted using a standard test anvil that can be easily removed.



Testing non-fixed objects

Inaccessible parts of components can also be tested by removing the nose cone. The example above shows Rockwell testing being carried out on a camshaft.



Hardness testing on a paddle wheel

Here we see Rockwell testing being carried out on a paddle wheel which is stably positioned on the optional v-anvil.



Cylindrical work pieces

Built-in diameter correction allows the hardness value to be converted and adapted. The optional v-anvil makes it easy to fix the position of work pieces to be tested.

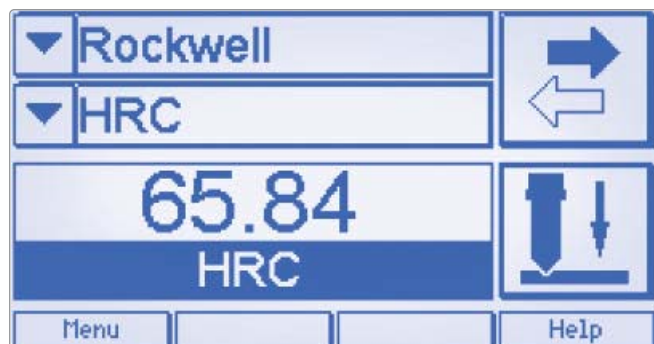
Uncomplicated hardness testing.

Beginners' mode "Quick-Test".



Simple measurement – Quick-Test

The quick test mode is a quick method of testing hardness and can also be easily used by beginners with the help of a norm parameter set in the factory. Users are able to determine the testing method and evaluation scheme for themselves. Test values are transmitted to the serial interface (USB-RS232 adaptor) or via USB and can be stored in an external system (such as Oracle).



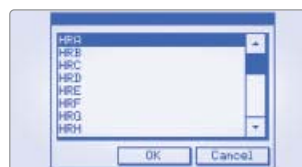
Intuitive control element

The clearly structured and well-lit touch-screen display can be operated using fingers or the screen pin provided.

Test methods, re-evaluation, measurement

The desired Rockwell test method and conversion can be customised in quick test mode and in test mode.

(DIN EN 50150, EN ISO 18265, ASTM E140-05)



Select test method



Help menu



Select the conversion table



Re-evaluation from/to

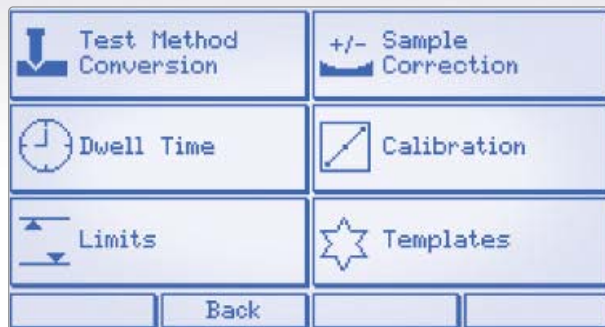
No compromises.

The “Test” mode fulfils all requirements with further adjustments.



Extended measurement – Test

Test mode offers a comprehensive range of settings. Tests carried out in this mode can be statistically evaluated.



Comprehensive settings

There are plenty of means of setting your desired parameters such as test contact time and limits etc.

These can also be stored as parameter templates in order to be able to repeat the same test conditions later.



Auto start on touching the work piece

Just one button is needed to fix the work piece in position and to test it. Testing starts as soon as the work piece has been fixed into position and pressure is released immediately after the test has been completed (pre-set pressure release). This is particularly important when testing an entire series as it saves immense amounts of time.

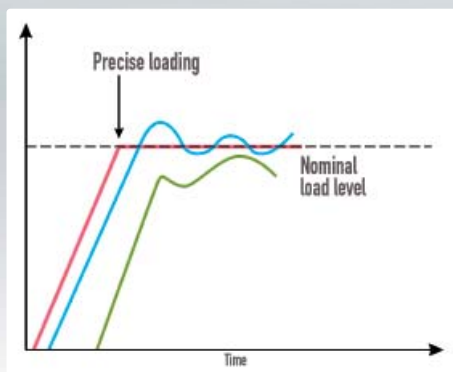
An overview of the benefits.

We raise your profitability.



Unbeatable accuracy

The principle of electronically regulated, continually monitored load application has a number of essential benefits. Moreover, due to the closed circuit the test load is applied directly and the application of too much or too little force is ruled out.



Complete data administration

All hardness test data can be provided in an ASCII format via serial ports and interfaces (USB-RS232 adaptor) and

USB interface port to allow them to be processed, used and archived.

Similarly, A4 test report printouts can be made via the linked-up printer featuring a good overview of all necessary information and statistics.



Automation saves time

All the test methods needed are stored in the software and can be called up via the touch screen display, as required. There is no longer any need waste time changing equipment and test force. It is now also possible to save customised test method templates that can be called up quickly and easily for tests to be repeated in series. This enables valuable time to be saved during test runs.



Maintenance free load application

Friction in the guide system depends on the degree of dirt in the system and on environmental conditions. The electronic testing system recognises and compensates for these conditions automatically. There is no need for the complicated mechanical adjustment of springs and levers to calibrate loads as is required with common commercial solutions.



All Rockwell test methods

The broad range of uses for the DuraJet is due to the equally broad test load range it serves; up to 1840 N (187.5 kg) and all standard-based Rockwell testing methods.

Conventional systems usually necessitate the use of at least two hardness testers to cover such a broad spectrum of testing.



User friendly

Developed by EMCO-TEST, our software enables you to benefit from all the possible forms of standard-based hardness testing. Quick test even enables beginners to conduct tests.



Absolute safety

As a European manufacturer we have to ensure the DuraJet conforms to the obligatory CE conformity standard. It also satisfies the highest international standards. The use of superior quality components and materials (control module - UL-listed, highest standard of fire resistance for plastic covers) also ensures we satisfy the strict North American safety standards.

Exemplary service.

Expertise and design make the difference.



Servicing

EMCO-TEST service provision certainly doesn't stop after the point of sale. The proven EMCO-TEST quality continues in the standard of our after-sales support. We offer service assistance in over 40 countries. See our website to find the nearest service team for you: www.emcotest.com

Service-friendly design

In order to ensure our customers are provided with perfect quality, every EMCO-TEST hardness testing machine is given a thorough check-up before leaving the factory. Maintenance friendliness is considered from the very beginning at the design phase onwards. The results include a menu-based error report system, integrated self diagnosis and exchangeable modular electronic components to ensure an error can be resolved in the shortest possible time span. Furthermore, the intelligent control system guarantees the successful functioning of the automatic self installation of software updates that can be made available via a USB stick. This ensures security for your investment if deadlines or standard change in the future (i.e. conversion tables etc.).

Certified service technician

It is our goal to guarantee you and your equipment the best possible service support. To this end every service technician receives regular training at the EMCO-TEST headquarters to ensure they are familiar with the very latest standards. This is the only way to guarantee good service!

Accessories.

The entire catalogue of accessories: www.emcotest.com

At www.emcotest.com you'll find all our accessories for the DuraJet hardness tester, including the various indentors, special nose cones, flat and V-anvils, data cable, test blocks and more



Indentors



Test anvils

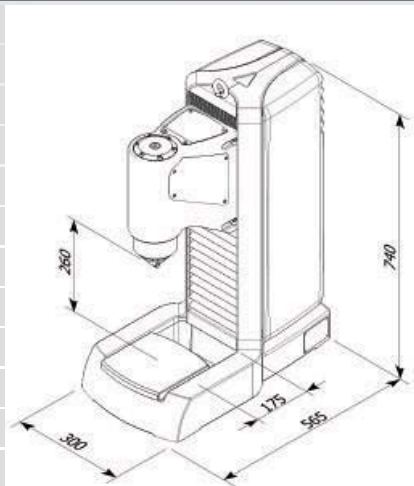


Nose cones

Technical data.

All key facts at a glance.

DuraJet 10	
Dimensions W x H x L	300 x 740 x 565 mm
Weight of basic device	110 kg
Test load range	49 - 1840 N (5 kgf - 187.5 kgf)
Nose cone height adjustment	via DC-Motor
Nose cone support diameter (standard)	Ø 15 mm
Nose cone drilling	Ø 8 mm
Test anvil standard support acc. to DIN	Ø 25H7
Test anvil (standard)	180 x 185 mm
Max. test height	260 mm
Throat depth	175 mm
Max. weight of work piece	100 kg
Data interfaces	USB (RS232 via USB adaptor)
Power supply	110/230~1/N/PE, 50-60 Hz
Type of protector EN 60529	IP20
Variation in current	+6/-10 %
Max. power consumption	120 W
Main fuse (110/230 V)	T 6,3 A
Environmental temperature	5 - 40 °C
Relative humidity	up to 90 % (without condensation)
LC graphics display (touch screen)	4.7" (240 x 128 pixels)





A vision of things to come – www.emcotest.com



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