FENIX 200 DCL
Rockwell | Brinell Hardness Testers

SEMI-AUTOMATIC

INNOVATEST®
Advanced Hardness Testing Solutions
Fully digital Rockwell hardness testing

The FENIX 200 DCL, constructed around a rock solid C-frame, is equipped with a load cell, closed loop, force feedback test force application system. Perform your hardness test, by easily pressing the START button on the 5” industrial touch screen. Test results can be simply stored up to 50 readings.

The DCL version performs both on Rockwell as Brinell, one of the advantages of the closed loop system. The internal system can be easily serviced by removing the side and top covers, no need to turn the machine upside down.

HARDNESS SCALES

- **ROCKWELL**: 10kgf – 150kgf
- **BRINELL**: 10kgf – 187.5kgf

ROCKWELL & BRINELL FORCE RANGE

<table>
<thead>
<tr>
<th>Force Range</th>
<th>1kgf</th>
<th>10kgf</th>
<th>FENIX 200 DCL</th>
<th>187.5kgf</th>
</tr>
</thead>
</table>

HIGHLIGHTS

1. Load cell, closed loop, force feedback, force application system, error <0.25%
2. Rockwell scales: A | B | C | D | E | F | G | H | K | L | M | P | R | S | V
   - Brinell scales: HBW1/10 | HBW1/30 | HBW2.5/31.25 | HBW2.5/62.5 | HBW2.5/187.5 | HBW5/25 | HBW5/62.5 | HBW5/125 | HBW5/187.5 | HBW10/100
3. 5” Industrial touch screen for scale indication, dwell time countdown
5. Large internal memory of 50 readings
6. Throat depth: 150mm
7. Working height: 260mm
9. Machine dimensions: H765mm/W270mm/D555mm
Unparalleled in this class of Rockwell hardness testing machines is the electronic Load cell, closed loop, force feedback, force application system. Absolute maintenance free, automatic setting of test forces by choosing the Rockwell hardness scale. Error free operation, due to an automatic test cycle, applying the main load and correct pre-set dwell time.
Innovative software functions

The I-Touch™ software provides clever multi-function keys for testing, set-up, storing and uploading of test programs, statistic control and more, making tester operation as easy as it can be.

Data export, single or batch readings, with a single press on a button, or just fully automatic over an USB connection to a PC and imported or evaluated in EXCEL. Further advanced features include extended statistics, shape correction for convex, concave or ball shaped specimens, hardness conversion to Rockwell, Brinell or Tensile strength according to ASTM E140 and ISO 18625 with different material tables.

OPERATING COMFORT WITH I-TOUCH

INNOVATIVE SOFTWARE FUNCTIONS

1. ACTIVE UPPER LIMIT
2. ACTIVE LOWER LIMIT
3. MEASUREMENT OVERVIEW
4. CONVERSION SCREEN
5. EXPORT FUNCTIONS
The FENIX 200 series is standard equipped with an indenter protection cover that includes an integrated spring loaded workpiece clamp pressing the workpiece firmly on the anvil and eliminating possible workpiece and spindle hysteresis. Adjustable clamp force, to avoid impressions on softer materials.

VARIOUS POSSIBILITIES

The FENIX 200 is larger than most other machines in its class. With a throat depth of 150mm and maximum workpiece height of 240mm, it offers the user a generous workspace. Moreover the FENIX 200 is super rigid, sturdy and can withstand the harshest environments. Compare these parameters with alternative products and find that FENIX is leading in its class.
SUPPORT YOUR BEST TESTING RESULTS

With our rigid designed Bench stands

- Rock solid bench stands
- 100% retractable drawer, bearing guidance, max 100kg load. Rubber anti-slip bottom
- Lockable cabinet, 300mm high
- Adjustable feet, ± 50mm height adjustable to reach ergonomic working position
- Made of corrosion resistant zinc plated steel with RAL powder coating
- Carrying capacity of 400kg
- Top surface made of 50mm Plywood with 1.5mm chemical resistant plastic plating, edges made of shock resistant 3mm ABS side liner
- Industrial quality, for workshop or laboratory

Designed for hardness testing instruments, painted in INNOVATEST® RAL colors matching our testers.

ACCESSORIES FENIX 200

Schematic overview of the configuration options, standard and optional accessories

Not all accessories are displayed on this page. Full details can be found on the Order details page.
**ORDER DETAILS**

**FENIX 200**

Digital, Load Cell Closed Loop, Rockwell hardness tester 10kgf - 150kgf FENIX 200DCL

Plug & Play prepared, calibration, sea & airworthy packing in "non coniferous wood" material

**ACCESSORIES**

1. **Indenters**
   - Rockwell diamond indenter
     - IN/6005
   - 1mm Carbide Ball Indenter Ø6.35mm
     - IN/7000
   - 2.5mm Carbide Ball Indenter Ø6.35mm
     - IN/7005
   - 5mm Carbide Ball Indenter Ø6.35mm
     - IN/7010
   - 10mm Carbide Ball Indenter Ø6.35mm
     - IN/7015
   - 1/16" Carbide Ball Indenter
     - IN/7506
   - 1/8" Carbide Ball Indenter
     - IN/7606
   - 1/4" Carbide Ball Indenter
     - IN/7706
   - 1/2" Carbide Ball Indenter
     - IN/7806

2. **Stages**
   - Manual X Y stage with analogue metric micrometers, 180x160mm
     - UN-TESTTABLE/030
   - Lock flange
     - UN-XYZ BUS/42
   - Mounting plate for lock flange
     - UN-YZ300PA/42

3. **Anvils**
   - Flat anvil 60mm
     - AS3000-19-04
   - Flat anvil 80mm
     - UN-TESTTABLE/002
   - Spot anvil 5mm
     - UN-ANVIL/010
   - Spot anvil 10mm
     - UN-ANVIL/011
   - V block with bracket 40x40x50mm (LxBxH)
     - UN-VBLOCK4050
   - Steel, cross type, V block 60 x 120 x 100mm 8-90mm pair
     - UN-CROSSBLOCK01
   - V-anvil ø40mm 6-60mm
     - UN-ANVIL/005
   - V-anvil ø53mm 6-60mm
     - UN-ANVIL/006
   - V-Anvil ø80mm 3.3-20mm
     - UN-ANVIL/040
   - V-Anvil ø80mm 12-80mm
     - UN-ANVIL/045
   - V-Anvil ø80mm 20-140mm
     - UN-ANVIL/050
   - Anvil for round specimen dia. 6-25,4mm
     - UN-ANVIL/200
   - Cylindrical V anvil 6-80mm
     - UN-CVANVIL680
   - Cylindrical V anvil 50-200mm
     - UN-CVANVIL50200
   - Test table 100x100mm, V groove 20mm wide, 10mm deep
     - UN-TESTTABLE/040
   - Testing table flat ø180mm, screwfix
     - ASV700-00-20
   - Testing table flat ø235mm, screwfix
     - ASV700-014
   - Large flat surface testing table 350x250mm, thickness 30mm with 2 T-slots, for large components
     - UN-TESTTABLE/015
   - Lock flange
     - ASV700-21-01

4. **Test Tables**

5. **Fixtures and Vices**
   - Polished precision vice with lock down system, jaw width 25mm, opens 20mm
     - UN-VICE/210
   - Polished precision vice with lock down system, jaw width 36mm, opens 42mm
     - UN-VICE/215
   - Polished precision vice with lock down system, jaw width 48mm, opens 75mm
     - UN-VICE/220
   - Polished precision vice with lock down system, jaw width 75mm, opens 100mm
     - UN-VICE/230
   - JOMINY Fixture, for 1 quench end test sample, quick release function
     - UN-JOMFIX1
   - JOMINY Fixture, for 3 quench end test sample, quick release function
     - UN-JOMFIX3

6. **Machine Stand**
   - Cabinet test table with drawer for hardness testers 71x75x80cm
     - UN-STAND/960
   - Seaworthy packing box for 950/960
     - PACK/100
   - Direct and Indirect Verification/Calibration & BRINELL Certification in compliance with ISO & ASTM, NADCAP.
     - CALCEFRDW/1B
   - Direct and Indirect Verification/Calibration & ROCKWELL Certification in compliance with ISO & ASTM, NADCAP.
     - CALCEFRDW/1R
   - Cover Anti Static machine cover 320x550x800mm
     - UN-TESTERCOVER05

**SOFTWARE**

- Connectivity Plus Interface cable for PC
  - UN-CABLE/910
- Utility software; Import test results in MS applications like Excel
  - UN-SW/905
**SPECIFICATIONS**

### HARDNESS SCALES

<table>
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<th>ROCKWELL</th>
<th>BRINELL</th>
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<tr>
<td>EN ISO 6508, ASTM E-18</td>
<td>EN ISO 6506, ASTM E92</td>
</tr>
<tr>
<td>JIS Z 2245</td>
<td>JIS Z 2243</td>
</tr>
</tbody>
</table>

#### ROCKWELL

- A | B | C | D | E | F | G | H | K | L | M | P | R | S | V

#### BRINELL

- HBW1/30 | HBW2.5/31.25 | HBW2.5/62.5 | HBW2.5/187.5 | HBW5/25 | HBW5/62.5 | HBW5/125 | HBW10/100

### TEST FORCE

- **Force application**: Load cell, closed loop, force feedback system
- **Test forces**: Preload: 10kgf, main loads: 15.625 | 25 | 30 | 31.25 | 60 | 62.5 | 100 | 125 | 150 | 187.5kgf
- **Force range**: FENIX 200DCL: 10kgf – 187.5kgf
- **Test force tolerance**: < 0.25% for test force 10kgf to 187.5kgf
- **Dwell time settings**: Default 10 seconds, user defined. Up to 999 seconds

### GENERAL

- **Machine dimension**: 765mm x 270mm x 555mm
- **Machine weight**: 104kg
- **Power supply**: 100VAC to 240VAC, 50/60Hz, single phase
- **Operating temperature**: 10°C to 35°C, non-condensing
- **Power consumption**: 10W
- **Humidity**: 10% to 90%, non-condensing

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**TECHNICAL DRAWINGS**

All dimensions in these drawings are in mm, approximate. Working heights and or workpiece accommodation varies depending on the stages and stage accessories used.

Please contact our sales department for more details.

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**FENIX 200DCL**

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OTHER MODELS IN THE ROCKWELL RANGE

**NEXUS 605**
Load Cell, closed loop
Rockwell/Superficial Rockwell/Brinell hardness tester, with full color touch screen.
See brochure B18N605/XX

**NEXUS 610**
Load Cell, closed loop
Rockwell/Superficial Rockwell/Brinell hardness tester, with integrated PC, Windows 10, wifi etc. full color touch screen.
See brochure B18N610/XX

**VERZUS 720**
Load Cell, closed loop
Rockwell/Superficial Rockwell/Brinell hardness tester, with direct depth measuring system, integrated PC, Windows 10, wifi, full color touch screen.
See brochure B18V720/XX

**NEMESIS 6100**
Load Cell, Closed loop
Fully automatic Rockwell/Superficial Rockwell (Brinell) hardness tester with descending test head & fixed workpiece position, full color touch screen operation.
See brochure B18N6100/XX

**NEMESIS 6200**
Load Cell, Closed loop
Fully automatic Rockwell/Superficial Rockwell (Brinell) hardness tester with descending test head & fixed workpiece position, integrated PC, Windows 10, Wifi, full color 15" industrial capacitive touch screen.
Includes CNC motorized X-Y stage, overview camera and advanced software (IMPRESSIONS) for automatic pattern testing and fixture recognition.
See brochure B18N6200/XX

Changes in products and/or product specifications can emerge due to new technologies and continuous development.
We reserve the right to change or modify specifications of the products without prior notice. We recommend you to contact our sales office for up-to-date information.

Brochure B18V200DCL/02/EN
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