

FENIX 200 SERIES

Rockwell | Brinell Hardness Testers

MANUAL & SEMI-AUTOMATIC



FENIX 200AR

Fast & affordable Rockwell testing...

Quality long life mechanics, readings from a precision analogue indicator. Load applied from a dead weight force actuator, with solid test load selector design. The newly designed C frame made out of steel (no casting) provides 100% more rigidity compared to traditional casted designs and assures excellent results, even after years of use.

The internal system can be easily serviced by removing the side and top covers, no need to turn the machine around.



HARDNESS SCALES



ROCKWELL 10kgf – 150kgf



ROCKWELL FORCE RANGE

| | | | | |
|------|-------|-------------|--------|----------|
| 1kgf | 10kgf | FENIX 200AR | 150kgf | 187.5kgf |
|------|-------|-------------|--------|----------|

HIGHLIGHTS

- 1 Rockwell scales : A | B | C | D | E | F | G | H | K | L | M | P | R | S | V
- 2 Test loads: pre-load : 10kgf, main-load : 60 | 100 | 150kgf
- 3 Adjustable hydraulic force speed damper
- 4 Adjustable dial indicator with 0.5 HR Rockwell units
- 5 Throat depth : 150mm
- 6 Working height : 260mm
- 7 Rockwell ISO 6508, ASTM E18
- 8 Machine weight (net) : 122kg
- 9 Machine dimensions : H765mm / W270mm / D555mm

FENIX 200ACL

Affordable Rockwell testing, re-invented...

A load cell, closed loop, force feedback, test force application system that is absolutely unique in this class of instruments. Limited mechanical structure, without weights or weight selection. Hardness scales can be selected on the digital display. Conduct Rockwell hardness testing with great force precision and without the disadvantage of a relative complex mechanical dead weight system.

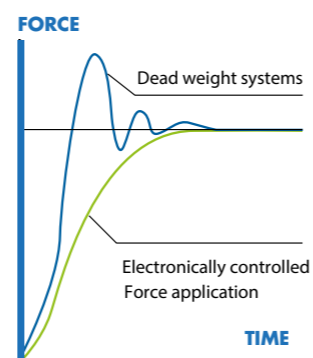
The internal system can be serviced by removing the side and top covers, no need to turn the machine around.



| HARDNESS SCALES | |
|-------------------------------------------------------------------------------------|---------------------------------|
|  | ROCKWELL 10kgf – 150kgf |
|  | BRINELL 10kgf – 187.5kgf |



TECHNOLOGY OF TODAY



Load cell, closed loop, force feedback system

ROCKWELL & BRINELL FORCE RANGE

| | | | |
|------|-------|--------------|----------|
| 1kgf | 10kgf | FENIX 200ACL | 187.5kgf |
|------|-------|--------------|----------|

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 : HBW1/30 | HBW2.5/31.25 | HBW2.5/62.5 | HBW2.5/187.5 HBW5/25
HBW5/62.5 | HBW5/125 | HBW10/100
- 3 Digital display for scale indication, dwell time count down.
- 4 Start/stop & menu selection buttons.
- 5 Adjustable dial indicator with 0.5 HR Rockwell units
- 6 Throat depth : 150mm
- 7 Working height : 260mm
- 8 Machine weight (net) : 104kg
- 9 Machine dimensions : H765mm / W270mm / D555mm

SENSIBLE

INNOVATION



200ACL
Multi loadcell,
ball bearing,
force actuator



STANDARD
Force
adjustable
workpiece clamp

Observe, Think, Try, Change...

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.



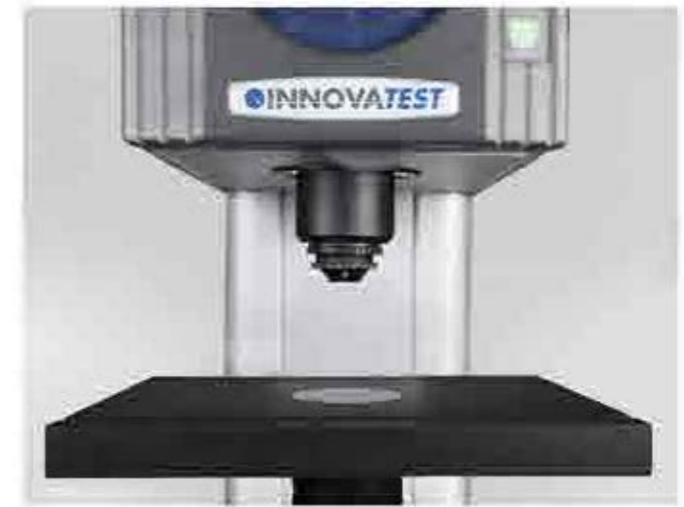
VARIOUS

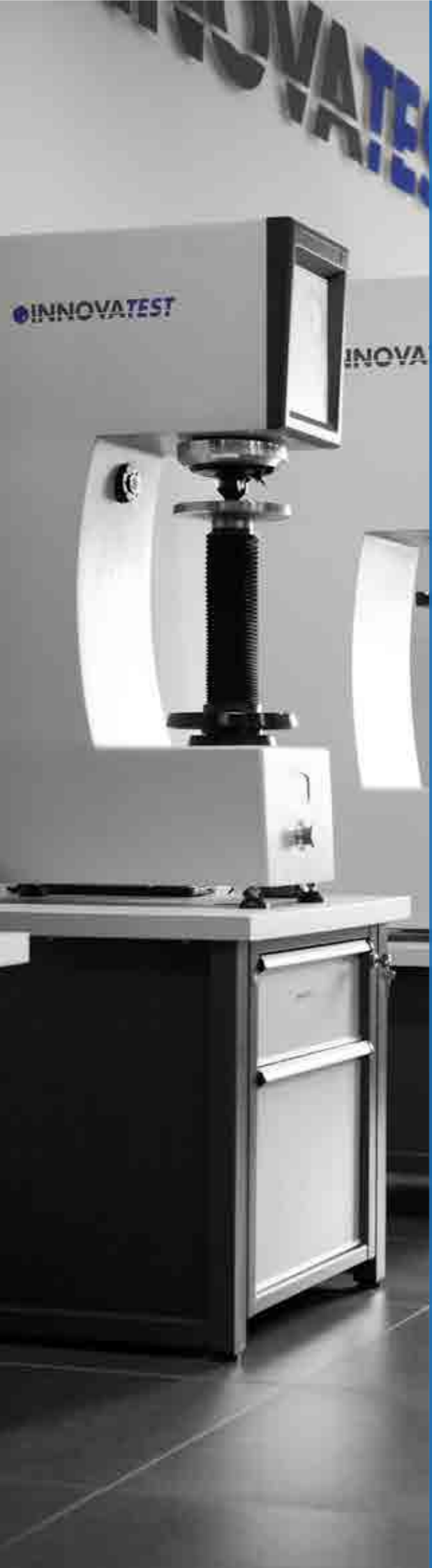
POSSIBILITIES

INDENTER COVER & CLAMP

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.

The FENIX 200 is larger than most other machines in its class. With a throat depth of 150mm and maximum workpiece height of 260mm, 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.



UN-STAND/960 71 x 75 x 80 cm

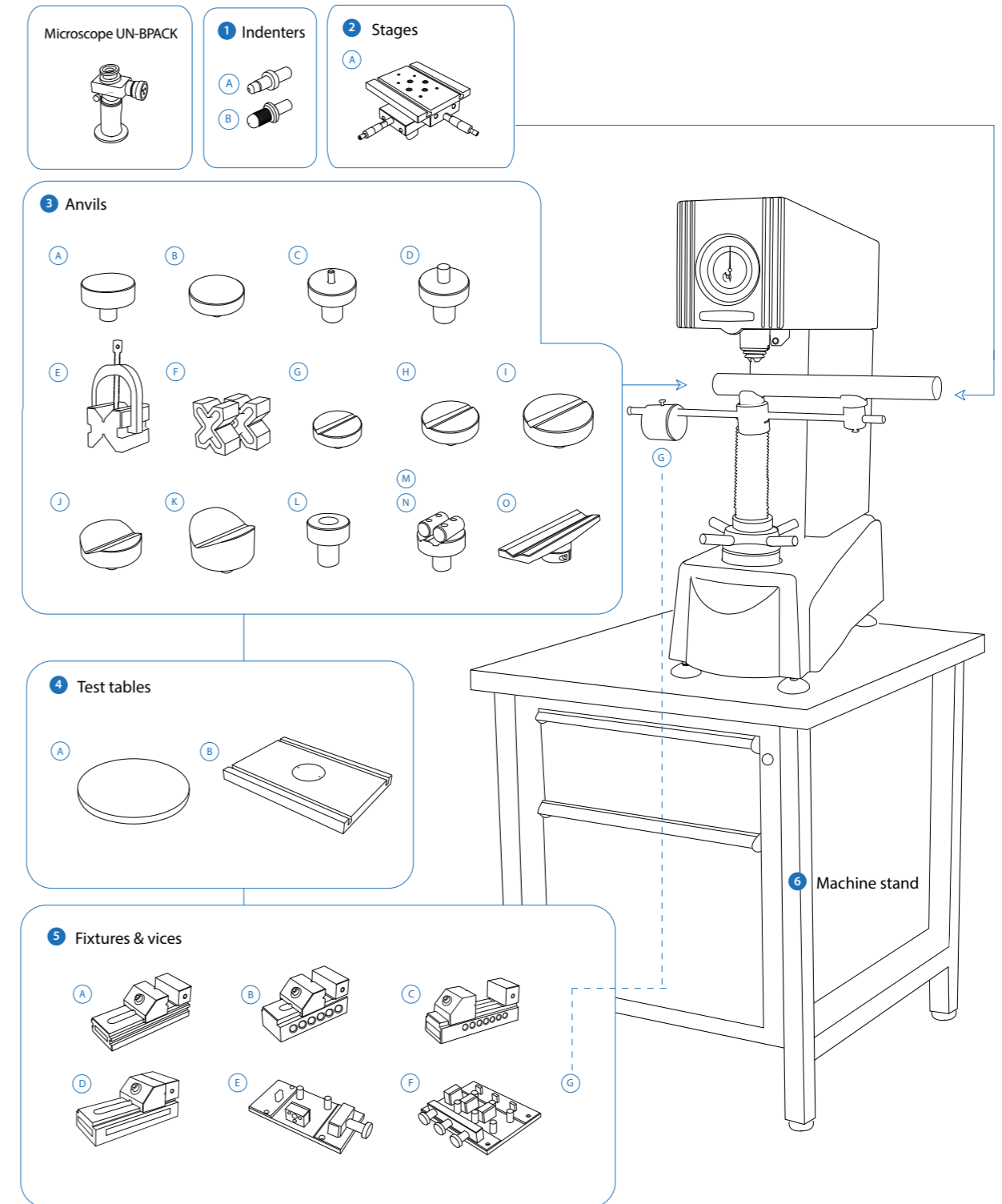


UN-STAND/965 150 x 75 x 80 cm

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



| | | |
|----------------------------------------------------------------------------------------------|--------------|--|
| Analogue, manual, Rockwell hardness tester 10kgf - 150kgf | FENIX 200AR | |
| Analogue, Load Cell Closed Loop, Rockwell hardness tester 10kgf - 187.5kgf | FENIX 200ACL | |
| Plug & Play prepared, calibration, sea & airworthy packing in "non coniferous wood" material | P&PSEAPACK60 | |

ACCESSORIES

| | | | | | | | | |
|-------------------------------------|-------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------|------------------|--|
| 1 | Indenters | A | Rockwell C Diamond Indenter. Ø6.35mm. ISO & ASTM certified | IN/6005 | | | | |
| | | | Rockwell Ball Indenter 1/16". Includes 1 carbide ball. Ø6.35mm. ISO & ASTM certified | IN/7506 | | | | |
| | | | Rockwell Ball Indenter 1/8". Includes 1 carbide ball. Ø6.35mm. ISO & ASTM certified | IN/7606 | | | | |
| | | | Rockwell Ball Indenter 1/4". Includes 1 carbide ball. Ø6.35mm. ISO & ASTM certified | IN/7706 | | | | |
| | | | Rockwell Ball Indenter 1/2". Includes 1 carbide ball, Ø6.35mm. ISO & ASTM certified | IN/7806 | | | | |
| | | | B | Brinell Indenter 1mm. Includes 1 carbide ball. Ø6.35mm. ISO & ASTM certified | IN/7000 | | | |
| | | | Brinell Indenter 2.5mm. Includes 1 carbide ball. Ø6.35mm. ISO & ASTM certified | IN/7005 | | | | |
| | | | Brinell Indenter 5mm. Includes 1 carbide ball. Ø6.35mm. ISO & ASTM certified | IN/7010 | | | | |
| | | | Brinell Indenter 10mm. Includes 1 carbide ball. Ø6.35mm. ISO & ASTM certified | IN/7015 | | | | |
| | | | 2 | Stages | | Manual X-Y stage with analogue metric micrometers, 180x160mm Displacement: 25x25mm, scale 0.01mm, max load 300kg | UN-TESTTABLE/030 | |
| 3 | Anvils | A | Flat anvil 60mm | AS3000-19-04 | | | | |
| | | | B | Flat anvil 80mm | UN-TESTTABLE/002 | | | |
| | | | C | Spot anvil 5mm | UN-ANVIL/010 | | | |
| | | | D | Spot anvil 10mm | UN-ANVIL/011 | | | |
| | | | E | V block with bracket 40x40x50mm (LxBxH) | UN-VBLOCK404050 | | | |
| | | | F | Steel, cross type, (X) V-block 60x120x100mm 8-90mm pair | UN-CROSSBLOCK01 | | | |
| | | | G | V-anvil ø40mm 6-60mm | UN-ANVIL/005 | | | |
| | | | H | V-anvil ø63mm 10-100mm | UN-ANVIL/006 | | | |
| | | | I | V-Anvil ø80mm 3.3-20mm | UN-ANVIL/040 | | | |
| | | | J | V-Anvil ø80mm 15-80mm | UN-ANVIL/045 | | | |
| | | | K | V-Anvil ø80mm 23-40mm | UN-ANVIL/050 | | | |
| | | | L | Anvil for round specimen dia. 6-25,4mm | UN-ANVIL/200 | | | |
| | | | M | Cylindrical V anvil 6-80mm | UN-CVANVIL680 | | | |
| | | | N | Cylindrical V anvil 50-200mm | UN-CVANVIL50200 | | | |
| | | | | | | Test table 100x100mm, V groove 20mm wide, 10mm deep | UN-TESTTABLE/040 | |
| | | | 4 | Test Tables | A | Testing table Ø200mm (61 - 65HRC) requires lock flange | CM-08-0194 | |
| Testing table flat ø180mm, screwfix | ASV700-00-20 | | | | | | | |
| Testing table flat ø235mm, screwfix | UN-TESTTABLE/014 | | | | | | | |
| B | Large flat surface testing table 350x250mm, thickness 30mm with 2 T-slots, for large components | UN-TESTTABLE/015 | | | | | | |

| | | | | |
|---|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------|
| | Clamping, locking & fixing adapters | Lock flange | UN-XYZ BUSH42 | |
| | | Mounting plate for lock flange | UN-XYZ30FP40-42 | |
| | | Lock flange | ASV700-21-01 | |
| 5 | Fixtures and Vices | A | Polished precision vice with lock down system, jaw width 25mm, opens 20mm | UN-VICE/210 |
| | | B | Polished precision vice with lock down system, jaw width 36mm, opens 42mm | UN-VICE/215 |
| | | C | Polished precision vice with lock down system, jaw width 48mm, opens 75mm | UN-VICE/220 |
| | | D | Polished precision vice with lock down system, jaw width 75mm, opens 100mm | UN-VICE/230 |
| | | E | JOMINY Fixture, for 1 quench end test sample, quick release function | UN-JOMFIX1 |
| | | F | JOMINY Fixture, for 3 quench end test sample, quick release function | UN-JOMFIX3 |
| | | G | Adjustable Vari rest | SA-08-0013 |
| 6 | Machine Stand | Cabinet test table with drawer for hardness testers 71x75x80cm | UN-STAND/960 | |
| | | Seaworthy packing box for 950/960 | PACK/100 | |
| | ISO/ASTM verification | Direct and Indirect Verification/Calibration & BRINELL Certification in compliance with ISO & ASTM, NADCAP. Includes Direct force and depth verification report, machine hysteresis report, indirect verification report (block readings), GR & R report, flat fee for selected common scales, per scale | CALCEFRDW/1B | |
| | | Direct and Indirect Verification/Calibration & ROCKWELL Certification in compliance with ISO & ASTM, NADCAP. Includes Direct force and depth verification report, machine hysteresis report, indirect verification report (block readings), GR & R report, flat fee for selected common scales, per scale | CALCEFRDW/1R | |

SOFTWARE

| | | | | |
|--|----------|-----------------------------------------------------------------------------------------|------------|--|
| | Upgrades | Upgrade Rockwell tester RS to RSB, Brinell scales, analogue microscope 40x (for 200ACL) | UN-BPACK01 | |
|--|----------|-----------------------------------------------------------------------------------------|------------|--|

ACCESSORIES

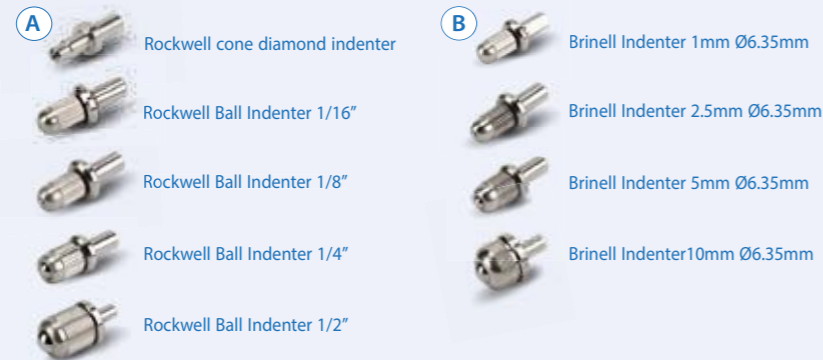
MICROSCOPES

UN-BPACK



AS3001-MICRO/02

INDENTERS



STAGES



UN-TESTTABLE/030

TEST TABLES



CM-08-0194
ASV700-00-20
UN-TESTTABLE/014

UN-TESTTABLE/015

ANVILS



AS3000-19-04

UN-TESTTABLE/002

UN-ANVIL/010

UN-ANVIL/011

UN-VBLOCK404050

UN-CROSSBLOCK01

UN-ANVIL/005

UN-ANVIL/006

UN-ANVIL/040

UN-ANVIL/045

UN-ANVIL/050

UN-ANVIL/200

UN-CVANVIL680
UN-CVANVIL50200

CM-08-0186

FIXTURES AND VICES



UN-VICE/210

UN-VICE/215

UN-VICE/220

UN-VICE/230

UN-JOMFIX1

UN-JOMFIX3

SA-08-0013

MACHINE STAND



UN-STAND/960

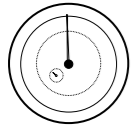
COVER



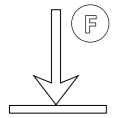
UN-COVER1

SPECIFICATIONS

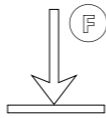
HARDNESS SCALES

| | | |
|-----------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|  | ROCKWELL ISO 6508, ASTM E18 JIS Z 2245 | A B C D E F G H K L M P R S V |
| | BRINELL* EN-ISO 6506, ASTM E92 JIS Z 2243 | HBW1/30 HBW2.5/31.25 HBW2.5/62.5 HBW2.5/187.5 HBW5/25 HBW5/62.5 HBW5/125 HBW10/100 * FENIX 200ACL only |

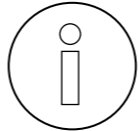
TEST FORCE 200AR

| | | |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------|
|  | Force application | Dead weight system via load selector |
| | Test forces | Preload : 10kgf, main loads : 60 100 150kgf |
| | Force range | FENIX 200AR 10kgf – 150kgf |
| | Test force tolerance | < 1% for test force 10kgf to 150kgf |
| | Dwell time settings | User defined |

TEST FORCE 200ACL

| | | |
|-------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------|
|  | Force application | Load cell, closed loop, force feedback system |
| | Test forces | Preload : 10kgf, main loads : 25 30 31.25 60 62.5 100 125 150 187.5kgf |
| | Force range | FENIX 200ACL 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 | FENIX 200ACL: 104kg FENIX 200AR : 122kg |
| | Workpiece accommodation | 150mm (H) x 240mm (D) |
| | Power supply | FENIX 200ACL: 100VAC to 240VAC, 50/60Hz, single phase |
| | Operating temperature | 10°C to 35°C |
| | Power consumption | FENIX 200ACL: 10W |
| | Humidity | 10% to 90%, non-condensing |

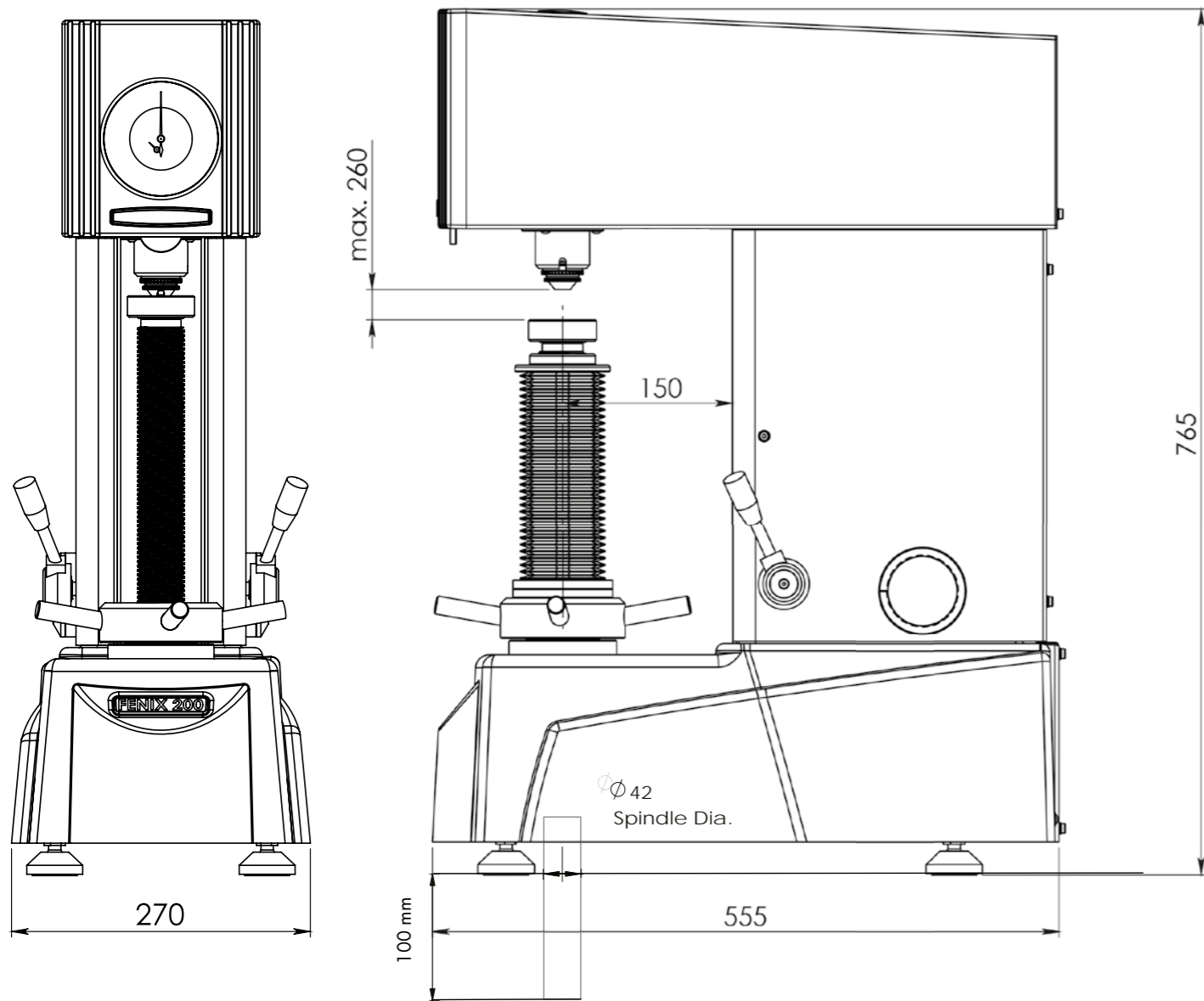


TECHNICAL DRAWINGS

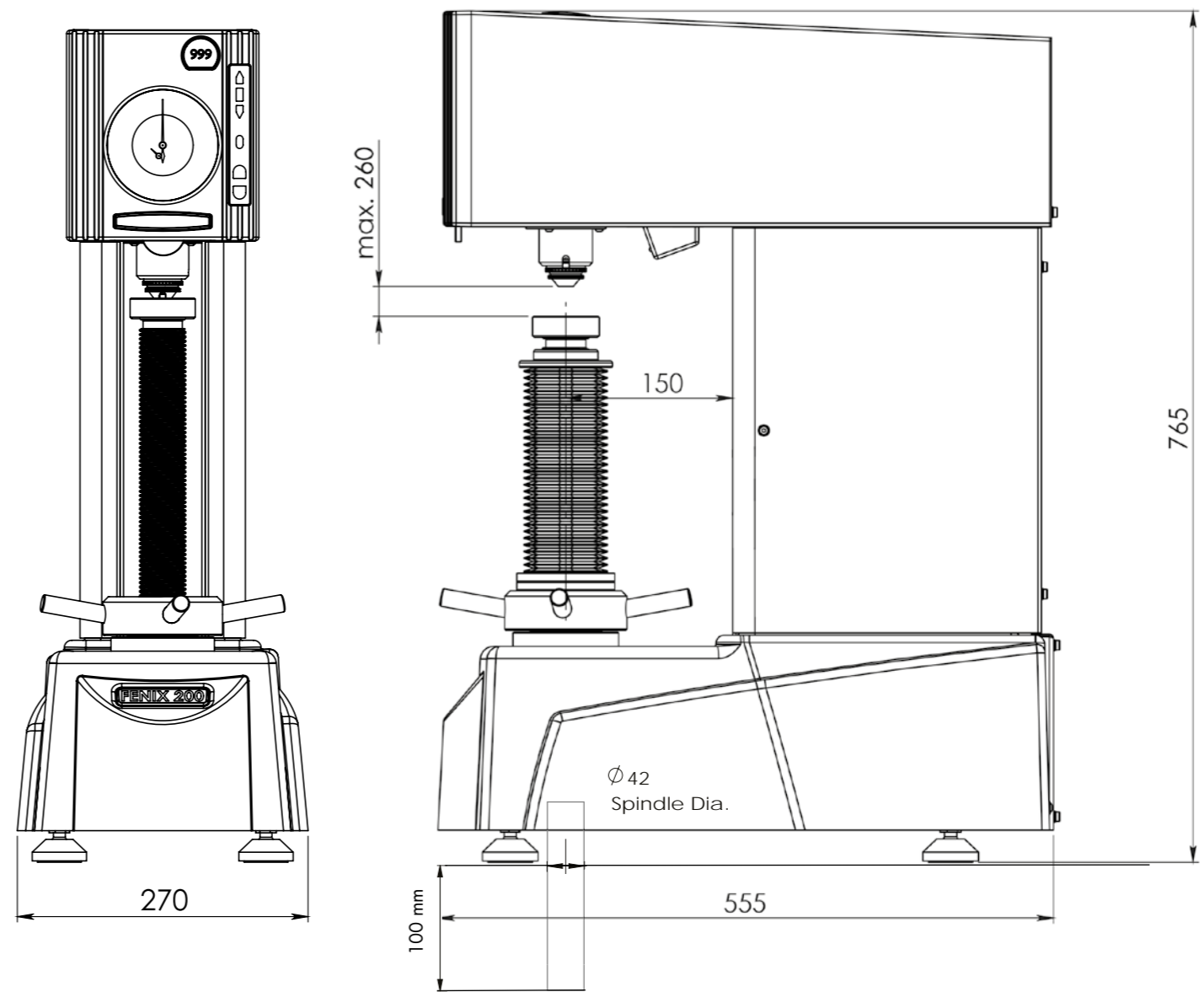
All dimensions in these drawings are in mm, approximate. Working heights and or workpiece accommodation varies depending on the stages and stage accessories used.

Please contact our sales department for more details.

FENIX 200AR



FENIX 200ACL





**FAST & AFFORDABLE
ROCKWELL TESTING**

OTHER MODELS IN THE ROCKWELL RANGE



FENIX 200DCL

Load Cell, closed loop, force feedback, test force application system Rockwell / Brinell hardness tester.
See brochure B18F200DCL/XX



FENIX 300RS

Load Cell, closed loop, force feedback, test force application system Rockwell / Brinell hardness tester with I-TOUCH™ system.
See brochure B20F300/XX



VERZUS 720

Load Cell, closed loop Rockwell/Super Rockwell/ Brinell hardness tester, with direct depth measuring system, integrated PC, Windows 10,WiFi, full color touchscreen.
See brochure B19V720/XX



HAWK 250RS/400RS

Load Cell, closed loop Rockwell/ Superficial Rockwell hardness tester, with direct depth measuring system, Graphic User Interface, 6.5" Full color touchscreen.
See brochure B20HSERIES/XX



HAWK 652RS-IMP

Load Cell, Closed loop Fully automatic Rockwell/ Superficial Rockwell hardness tester with dual motorized Z-Axis, IMPRESSIONS™ software, 15" industrial capacitive touchscreen.
See brochure B20HSERIES/XX



NEMESIS 6100

Load Cell, Closed loop
Fully automatic Rockwell/
Superficial Rockwell
(Brinell) hardness tester
with descending test head
& fixed workpiece position.
full color touchscreen
operation.
See brochure B19N6100/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
touchscreen.

Includes CNC motorized
X-Y stage, overview camera
and advanced software
(IMPRESSIONS™) for automatic
pattern testing and fixture
recognition.
See brochure B19N6200/XX



NEMESIS 9100RS

Load Cell, closed loop
Rockwell/Superficial Rockwell
Brinell hardness tester,
with integrated PC,
Windows 10, WiFi etc.
full color touchscreen.
See brochure B18N9100/XX



NEMESIS 9600RSB

Floor type, Load Cell,
closed loop.
Brinell, Rockwell/Superficial Rockwell
hardness tester
With motorized Z-axis & BIOS Brinell
Indent Optical Scanner
See brochure B19N9600/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
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Brochure B18F200/16/EN

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