

# FENIX 200 DCL

Rockwell | Brinell Hardness Testers

SEMI-AUTOMATIC



# FENIX 200DCL

## Fully digital Rockwell hardness testing

The FENIX 200DCL, 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 touchscreen. 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



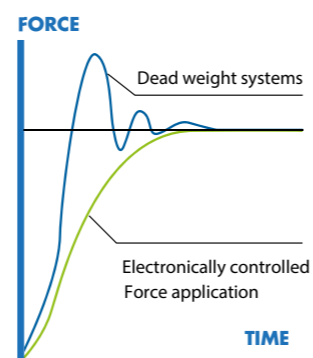
**ROCKWELL** 10kgf – 150kgf



**BRINELL** 10kgf – 187.5kgf



#### TECHNOLOGY OF TODAY



Load cell, closed loop, force feedback system

### ROCKWELL & BRINELL FORCE RANGE

1kgf	10kgf	FENIX 200DCL	187.5kgf
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## 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 | HBW10/100
- 3 5" Industrial touchscreen for scale indication, dwell time countdown etc.
- 4 Start/stop & menu selection buttons.
- 5 Large internal memory of 50 readings
- 6 Throat depth : 150mm
- 7 Working height : 260mm
- 8 Machine weight (net) : 104kg
- 9 Machine dimensions : H765mm / W270mm / D555mm

# SENSIBLE INNOVATION



**200DCL**  
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.

## Innovative software functions

The I-TOUCH™ LT 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 LT

## INNOVATIVE SOFTWARE FUNCTIONS

### 1 ACTIVE UPPER LIMIT



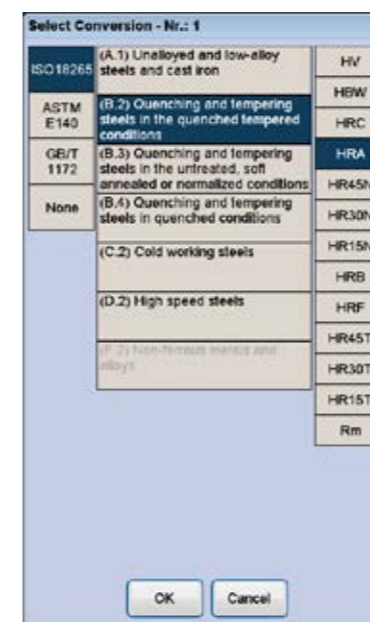
### 2 ACTIVE LOWER LIMIT



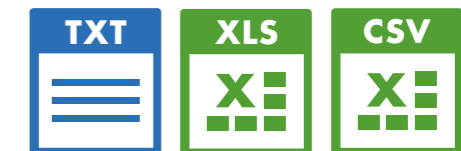
### 3 MEASUREMENT OVERVIEW



### 4 CONVERSION SCREEN



### 5 EXPORT FUNCTIONS





# VARIOUS POSSIBILITIES

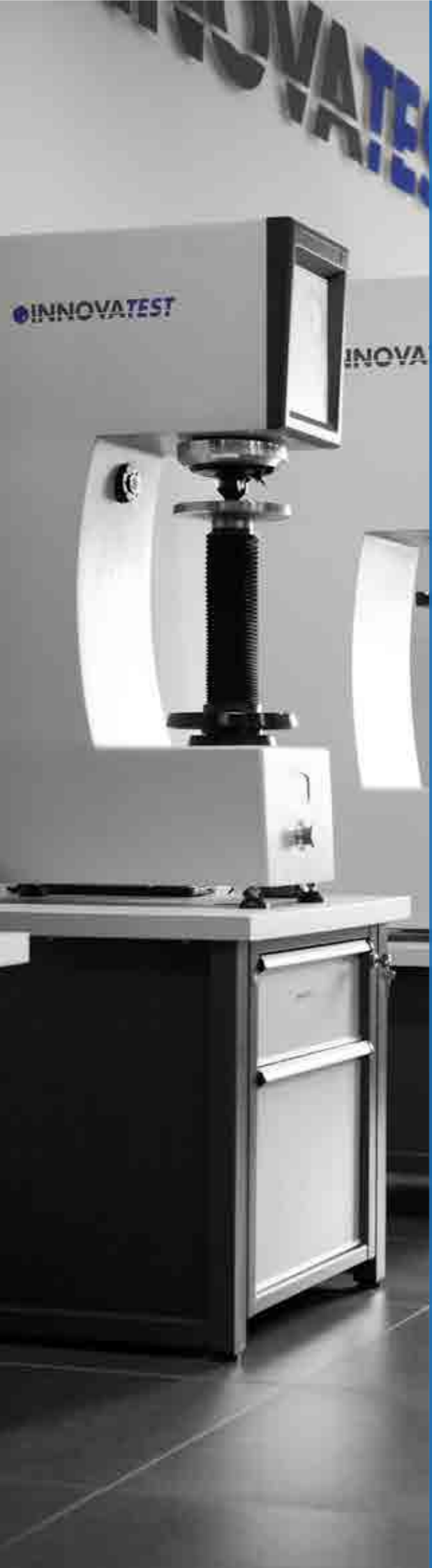
The FENIX 200 is larger than most other machines in its class. With a throat depth of 150mm and maximum workpiece height of 240mm, it offers the user a generous workspace. Moreover the FENIX 200 is super rigid, sturdy and can withstand the harshest environments. Compare these parameters with alternative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



## 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.





# 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.



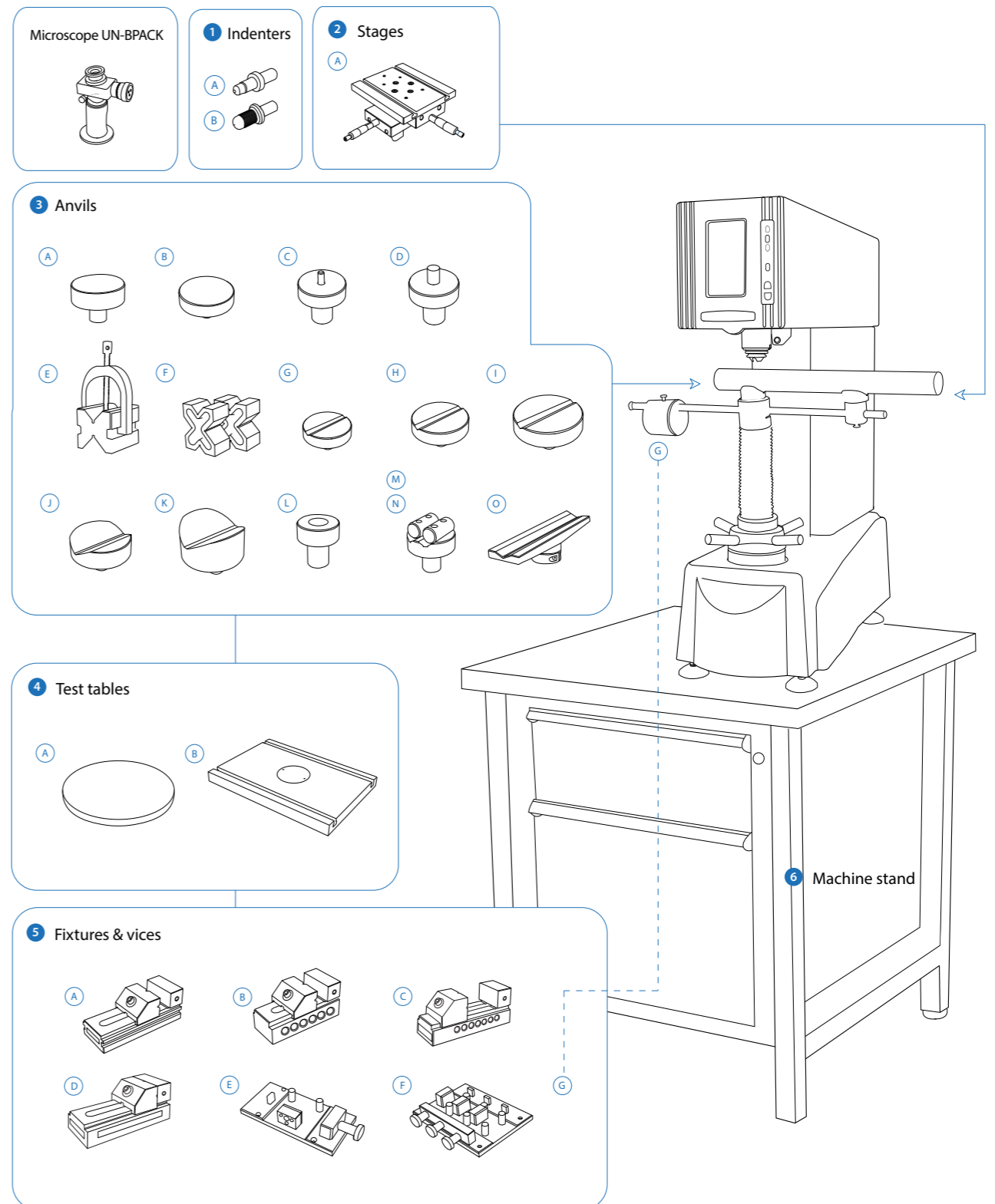
UN-STAND/960 71 x 75 x 80 cm



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



Digital, Load cell Closed loop, Rockwell hardness tester 10kgf - 187.5kgf	FENIX 200DCL
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
2	Stages	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
3	Anvils	A	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-VBLOCK404050
			Steel, cross type, (X) V-block 60x120x100mm 8-90mm pair	UN-CROSSBLOCK01
			V-anvil ø40mm 6-60mm	UN-ANVIL/005
			V-anvil ø63mm 10-100mm	UN-ANVIL/006
			V-Anvil ø80mm 3.3-20mm	UN-ANVIL/040
			V-Anvil ø80mm 15-80mm	UN-ANVIL/045
			V-Anvil ø80mm 23-40mm	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
			Extra long V-Anvil (Ø10 - Ø100)	CM-08-0186
			4	Test Tables
Testing table flat ø180mm, screwfix	ASV700-00-20			
Testing table flat ø235mm, screwfix	UN-TESTTABLE/014			
Large flat surface testing table 350x250mm, thickness 30mm with 2 T-slots, for large components	UN-TESTTABLE/015			

5	Fixtures and Vices	A	Lock flange	UN-XYZ BUSH42	
			Mounting plate for lock flange	UN-XYZ30FP40-42	
			Lock flange	ASV700-21-01	
			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	
6	Machine Stand	B	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	
			Adjustable Vari rest	SA-08-0013	
			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	
Cover	Anti Static machine cover 350x550x770mm	UN-COVER1			

## SOFTWARE

Upgrades	Upgrade Rockwell tester RS to RSB, Brinell scales, analogue microscope 40x	UN-BPACK01
Connectivity Plus	Interface cable for PC	UN-CABLE/910
	Utility software; Import test results in MS applications like Excel	UN-SW/905

# ACCESSORIES

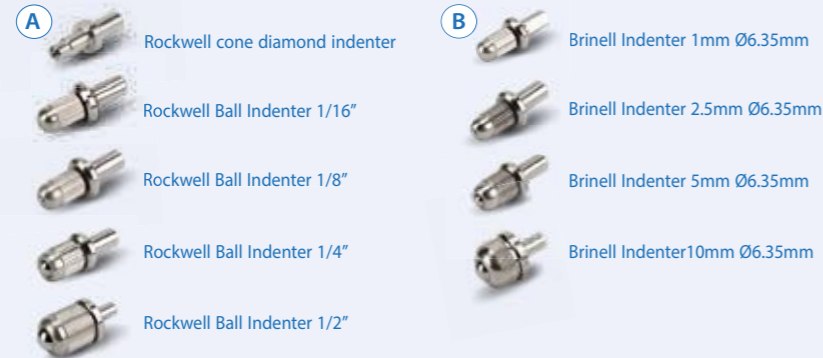
## MICROSCOPES

UN-BPACK

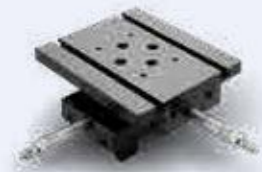


AS3001-MICRO/02

## INDENTERS



## STAGES



UN-TESTTABLE/030

## TEST TABLES



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

**B**  
UN-TESTTABLE/015

## ANVILS



## FIXTURES AND VICES



## MACHINE STAND



UN-STAND/960

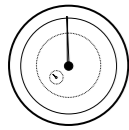
## COVER



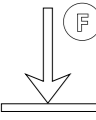
UN-COVER1

# SPECIFICATIONS

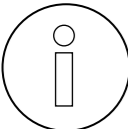
## HARDNESS SCALES

	<b>ROCKWELL</b> EN-ISO 6508, ASTM E-18 JIS Z 2245	A   B   C   D   E   F   G   H   K   L   M   P   R   S   V
	<b>BRINELL</b> 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

## TEST FORCE

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

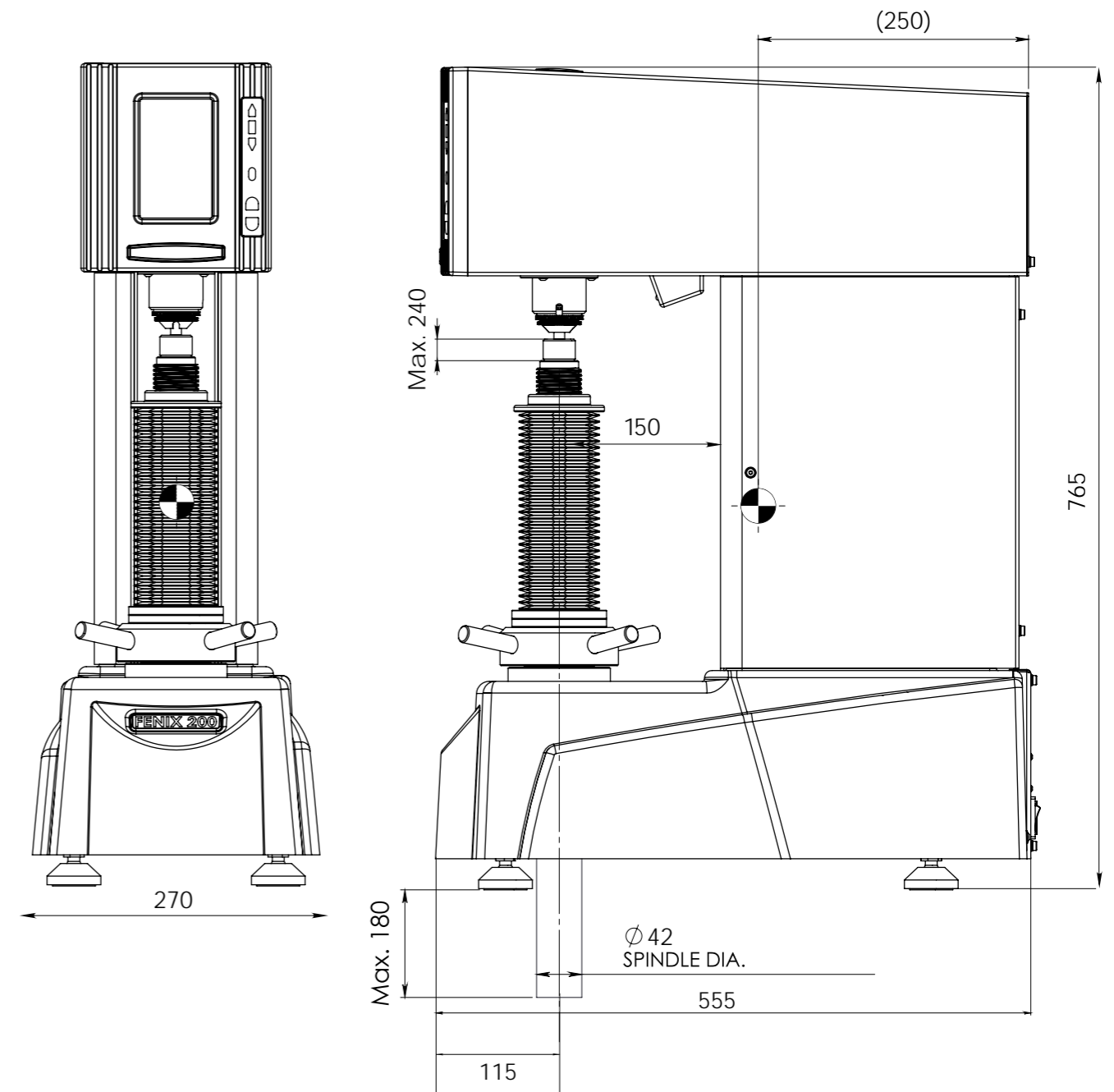
## GENERAL

	<b>Machine dimension</b>	765mm x 270mm x 555mm
	<b>Machine weight</b>	104kg
	<b>Workpiece accommodation</b>	150mm (H) x 240mm (D)
	<b>Power supply</b>	100VAC to 240VAC, 50/60Hz, single phase
	<b>Operating temperature</b>	10°C to 35°C
	<b>Power consumption</b>	10W
	<b>Humidity</b>	10% to 90%, non-condensing
	<b>Noise emission</b>	< 70 db(A)

# 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.



## OTHER MODELS IN THE ROCKWELL RANGE



### FENIX 200AR

Load applied from a dead weight force actuator Rockwell / Brinell hardness tester.

*See brochure B18F200/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*



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

*See brochure B19N6200/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 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*

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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.

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