

VERZUS 720_{SERIES}

Rockwell | Brinell Hardness Testers

MANUAL & SEMI-AUTOMATIC



VERZUS 720

Quality, durability, accuracy

The VERZUS 720RS(B) is constructed around a rock solid C-frame with supreme rigidity. The closed loop system based on a load cell and precision force actuator guarantees the best GR & R results. The test forces can range from 1kgf to 250kgf and a full test cycle can be as little as 13 seconds (at a dwell time of 10 seconds).

Due to the top quality ultra-precise HEIDENHAIN optical depth measurement system, 0.1 micron depth reading is a standard feature on the VERZUS 720. The optical sensor is positioned exactly on the axis of the indenter shaft. This construction eliminates possible fault readings due to tolerance or inaccuracies in the force actuator system.

A further great beneficial advantage of measuring the indenting depth in such an absolute direct way is that the tester can be easily verified, calibrated and if required adjusted in accordance with the applicable DIN EN ISO, ASTM and JIS standards.

For demanding users the VERZUS 720 can be equipped with a motorized spindle (optional) that lifts your work piece, without any effort, to the required testing position.

COMPLIANT TO ASTM, EN DIN ISO, JIS,
WITH A DIRECT DEPTH-READING SYSTEM

HARDNESS SCALES

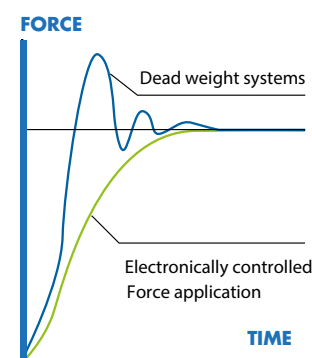


ROCKWELL 3kgf – 150kgf



BRINELL
(Optional) 1kgf – 250kgf

TECHNOLOGY OF TODAY



Load cell, closed loop,
force feedback system

ROCKWELL FORCE RANGE

1kgf	3kgf	VERZUS 720RS	150kgf	250kgf
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HIGHLIGHTS

- 1 Fully automatic, load cell, closed loop, force feedback system
- 2 Direct depth reading system
- 3 Optional BIOS camera for Brinell hardness testing
- 4 Clamp for indenter protection and workpiece fixation
- 5 Full color industrial 6.5" HD capacitive touchscreen
- 6 Real feel rubber buttons for glove operation
- 7 IMPRESSIONS™ advanced workflow software
- 8 Adjustable workpiece illumination
- 9 Robust 1 piece steel C frame (no welding) spindle with bellows
- 10 High-quality ABS covers, avoids machine damage
- 11 Large workpiece accommodation: 315 mm (H) x 200 mm (D)



SENSIBLE INNOVATION



ADVANCED MACHINE CONSTRUCTION, ROBUST, SIMPLE OPERATION

VERZUS stands for versatile unparalleled rigidity. Unique in this class of Rockwell & Brinell hardness testing machines is the electronic Load cell, closed loop, force feedback and direct depth reading system.

“Intuitive operation and workflow control...”

IMPRESSIONS™ is the ultra-modern user interface of all Innovatest hardness testing machines. It offers unparalleled simplicity in operation but yet, includes the most advanced functions found in hardness testing.

With only a minimum of operator skills required, IMPRESSIONS™ leads you through the set up process, in just seconds, not even minutes. Standard features, complex tasks and advanced work flow at your fingertips.

Typical examples are:
Scale setting, Test methods setting, Limits, Conversion to other hardness scales, Graphics, File saving, Test program saving, Zoom function etc. All standardized hardness testing methods have been programmed in the software and can be selected at any time.

EXPERIENCE IMPRESSIONS LT

INNOVATIVE SOFTWARE FUNCTIONS

The 6.5” touchscreen provides easy tester set up and general operation. The soft buttons on the front panel allow tester operation with gloves in a very dirty environment.



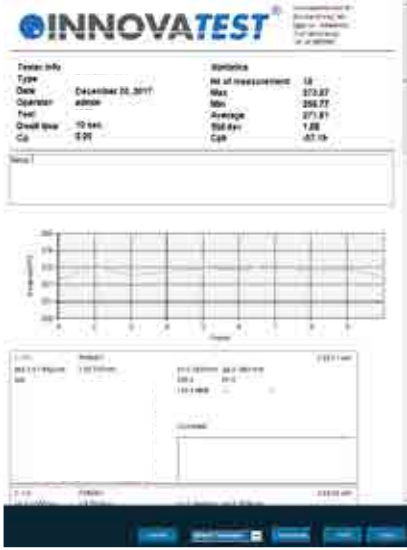
1 GIPE: GRAPHIC INDENT PROCESS EVALUATION



2 INDENT ZOOM MAGNIFICATION



3 REPORT GENERATOR



VARIOUS POSSIBILITIES

The VERZUS 720 Series is a workhorse in the range of Rockwell hardness testers. With a throat depth of 200mm and maximum workpiece height of 315mm, it offers the user a generous workspace. It is designed for 24/7 use and conducts testing at a high speed.

Advantage of measuring the indenting depth in an absolute direct way is the easy process of calibration required in accordance to DIN EN ISO, ASTM and JIS standards.



INDENTER COVER & CLAMP

The VERZUS 720 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

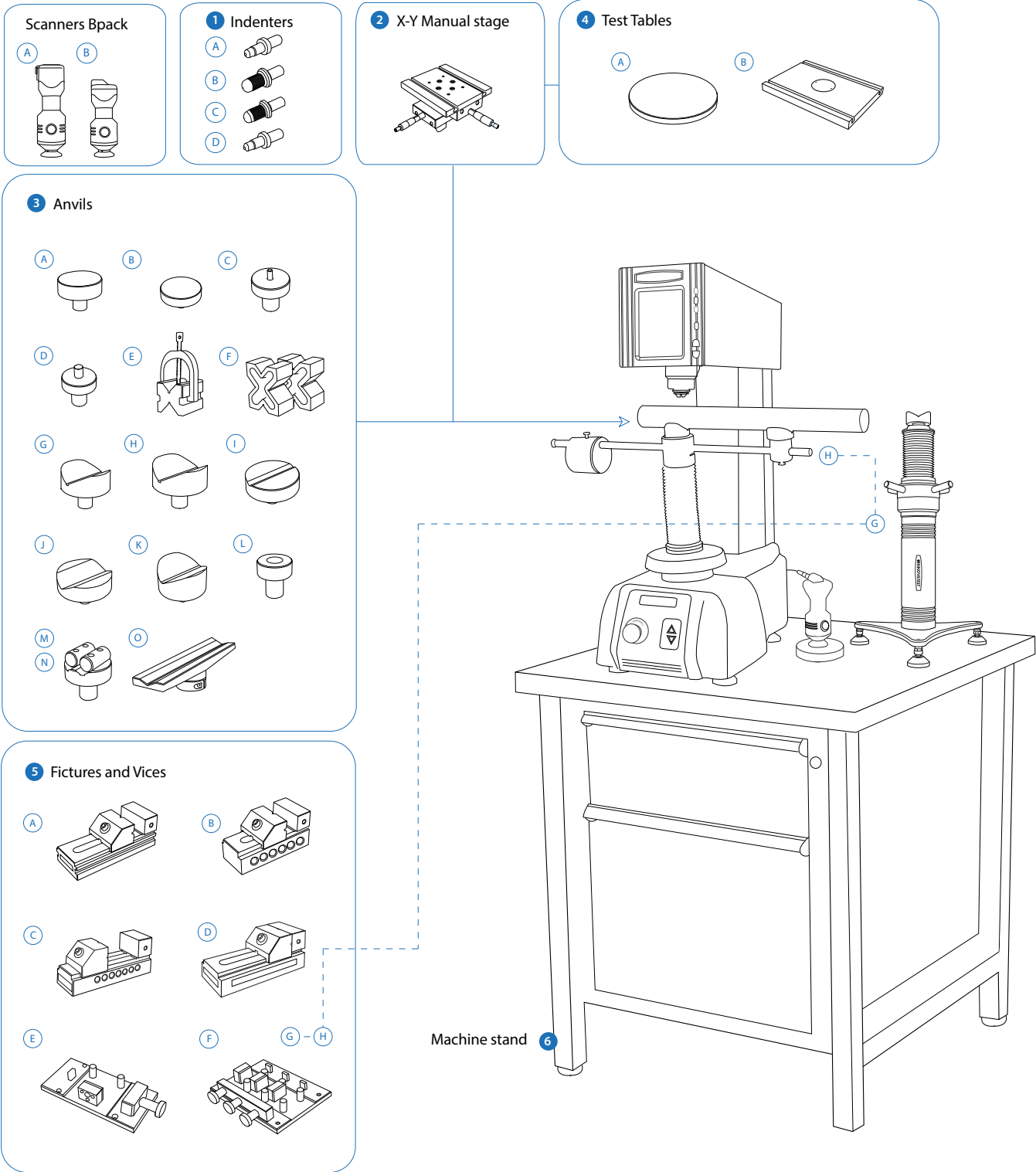


UN-STAND/965 150 x 75 x 80 cm

ACCESSORIES

VERZUS 720

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

VERZUS 720

	Rockwell Twin Scale hardness tester 3kgf - 150kgf, PC Integrated, IMPRESSIONS™	VERZUS 720RS	
	Plug & Play prepared, calibration, sea & airworthy packing in "non coniferous wood" material	P&PSEAPACK100	
	Motorized Z-Axis (optional)	VERZUS 700/010	

ACCESSORIES

1	Indenters	A	Rockwell C Diamond Indenter. Ø6.35mm. ISO & ASTM certified	IN/6005	
		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	
		C	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. Ø3mm. ISO & ASTM certified	IN/7706	
			Rockwell Ball Indenter 1/2". Includes 1 carbide ball. Ø3mm. ISO & ASTM certified	IN/7806	
		D	Macro Vickers Indenter Ø6.35mm, ISO & ASTM certified	IN/8010	
			1.0mm carbide ball, ISO & ASTM certified only for ø6.35mm	IN/2005	
			2.5mm carbide ball, ISO & ASTM certified only for ø6.35mm	IN/2010	
			5.0mm carbide ball, ISO & ASTM certified only for ø6.35mm	IN/2015	
			10.0mm carbide ball, ISO & ASTM certified only for ø6.35mm	IN/2020	
			1/16" carbide ball, ISO & ASTM certified	IN/2507	
			1/8" carbide ball, ISO & ASTM certified	IN/2509	
			1/4" carbide ball, ISO & ASTM certified	IN/2514	
			1/2"carbide ball, ISO & ASTM certified	IN/2519	
2	X-Y Manual Stage		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	
		O	Extra long V-Anvil (Ø10 - Ø100)	CM-08-0186	
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	
			Large flat surface testing table 450x350mm, thickness 35mm with 2 T-slots, for large components	UN-TESTTABLE/016	
	Clamping, Locking & Fixing adapters		Lock flange	ASV700-21-01	
			Lock flange	UN-XYZ BUSH42	
			Mounting plate for lock flange	UN-XYZ30FP40-42	
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	Jack Rest	SA-08-0010	
		H	Adjustable Vari rest	SA-08-0013	
6	Machine Stand		Cabinet test table with drawer for hardness testers 71x75x80cm	UN-STAND/960	
			Cabinet test table with drawer for hardness testers 150x75x80cm	UN-STAND/965	
			Seaworthy packing box for 950/960	PACK/100	
	ISO / ASTM Verification		BRINELL direct and indirect verification/calibration & certification in compliance with ISO & ASTM, NADCAP. Includes direct force and indirect verification report (block readings), GR & R report, flat fee for selected common scales, per scale.	CALCEFRDW/1B	
			ROCKWELL direct and indirect verification/calibration & certification in compliance with ISO & ASTM, NADCAP. Includes direct force and indirect verification report (block readings), GR & R report, flat fee for selected common scales, per scale.	CALCEFRDW/1R	
	Cover		Machine cover 350x550x870mm	UN-COVER2	

ORDER DETAILS

SOFTWARE				
Additional Software	User level management	UN-LEVMAN		STANDARD
	Manual & automatic on-screen measurement	UN-MANM		STANDARD
	Advanced 3-axis communication protocol for robotic systems	UN-REMC		
Connectivity Plus	Blue Tooth connectivity	UN-BTADAPT		
	Utility software; Import test results in MS applications like Excel	UN-SW/905		
	USB to USB null modem cable 2.5M	BE-99-0025		
	Wireless system Keyboard & wireless mouse	UN-SKBSET		STANDARD
Upgrades	Upgrade Rockwell tester RS to RSB, Brinell scales, BIOS 1 for indents 1.6mm to 6mm made with 5mm or 10mm ball indenter, IMPRESSIONS™ Lite - USB3	UN-BPACK06		
	Upgrade Rockwell tester RS to RSB, Brinell scales, BIOS 2 for indents 0.5mm to 1.5mm made with 1mm or 2.5mm ball indenter, IMPRESSIONS™ Lite - USB3	UN-BPACK07		



ACCESSORIES

OPTICAL SCANNERS

BPACK

(A)



UN-BIOS-1
SA-12-0001

(B)



UN-BIOS-2
SA-12-0002

INDENTERS

(A)



Rockwell diamond indenter

(B)



1mm Carbide Ball Indenter Ø6.35mm

(C)



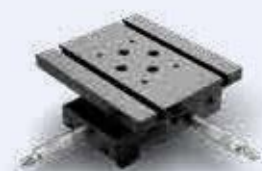
1/16" Carbide Ball Indenter

(D)



Macro Vickers Indenter Ø6.35mm

MANUAL XY-STAGE



UN-TESTTABLE/030

TEST TABLES

(A)



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

(B)



UN-TESTTABLE/015
UN-TESTTABLE/016

ANVILS

(A)



AS3000-19-04

(B)



UN-TESTTABLE/002

(C)



UN-ANVIL/010

(D)



UN-ANVIL/011

(E)



UN-VBLOCK404050

(F)



UN-CROSSBLOCK01

(G)



UN-ANVIL/005

(H)



UN-ANVIL/006

(I)



UN-ANVIL/040

(J)



UN-ANVIL/045

(K)



UN-ANVIL/050

(L)



UN-ANVIL/200

(M)



UN-CVANVIL680
UN-CVANVIL50200

(O)



CM-08-0186

FIXTURES AND VICES

(A)



UN-VICE/210

(B)



UN-VICE/215

(C)



UN-VICE/220

(D)



UN-VICE/230

(E)



UN-JOMFIX1

(F)



UN-JOMFIX3

(G)



SA-08-0010

(H)



SA-08-0013

MACHINE STANDS

(A)

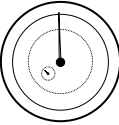


(B)

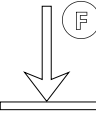


SPECIFICATIONS

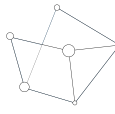
HARDNESS SCALES

	ROCKWELL EN-ISO 6508, ASTM E-18 JIS Z 2245	Regular Rockwell scales; Pre Load 10kgf, Main Load 60kgf 100kgf 150kgf A B C D E F G H K L M P R S V Superficial Rockwell scales; Pre Load 3kgf, Main Load 15kgf 30kgf 45kgf 15N 30N 45N 15T 30T 45T 15W 30W 45W 15X 30X 45X 15Y 30Y 45Y
	BRINELL EN-ISO 6506, ASTM E10 JIS Z 2243	HBW1/1 HBW1/1.25 HBW1/2.5 HBW1/5 HBW1/10 HBW1/30 HBW 2.5/6.25 HBW 2.5/7.8125 HBW2.5/15.625 HBW2.5/31.25 HBW2.5/62.5 HBW2.5/187.5 HBW5/25 HBW5/31.25 HBW5/62.5 HBW5/125 HBW5/250 HBW10/100 HBW10/125 HBW10/250
	HVD (HVT)	HV5 HV10 HV20 HV30 HV50 HV100 HV120
	HBD (HBT)	HBT1/5kgf HBT1/10kgf HBT1/30kgf HBT2.5/6.25kgf HBT2.5/15.625kgf HBT2.5/31.25kgf HBT2.5/62.5kgf HBT2.5/187.5kgf HBT5/25kgf HBT5/31.25kgf HBT5/62.5kgf HBT5/125kgf HBT5/250kgf HBT10/100kgf HBT10/125kgf HBT10/250kgf
	CARBON	HR 2.5/7 HR 5/7 HR 5/15 HR 5/20 HR 5/40 HR 5/60 HR 5/100 HR 5/150 HR 10/20 HR 10/40 HR 10/60 HR 10/100 HR 10/150
	PLASTIC	49N 132N 358N 961N

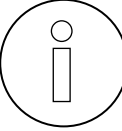
TEST FORCE

	Force application	Load cell, closed loop, force feedback
	Test forces	Rockwell scales : Preload 10kgf , main loads 60, 100, 150kgf Superficial Rockwell scales : Preload 3kgf , main loads 15, 30, 45kgf
	Force range per model	VERZUS 720RS 3kgf – 150kgf VERZUS 720RSB 1kgf – 250kgf
	Test force tolerance	< 0.5%
	Dwell time settings	Default 10 seconds, user defined 1 to 999 seconds

SYSTEM

	Electronic system	Fully integrated Windows Controller, SSD hard disk, Windows 10 operated, IMPRESSIONS™ advanced workflow software, includes automatic measurement, keyboard & mouse
	Screen(s)	6.5" Industrial HD touchscreen, embedded
	Display resolution	0.01 HR, HBW
	Statistics	Total tests, max, min, average, range, standard deviation, all in real time after each test
	Hardness conversion	Rockwell, Vickers, Brinell, Leeb and Tensile, 5 scales simultaneously
	Software	IMPRESSIONS™ LT, work flow system & tester control
	Connectivity	USB (3x), LAN RJ45, WLAN (Optional), Bluetooth (Optional)

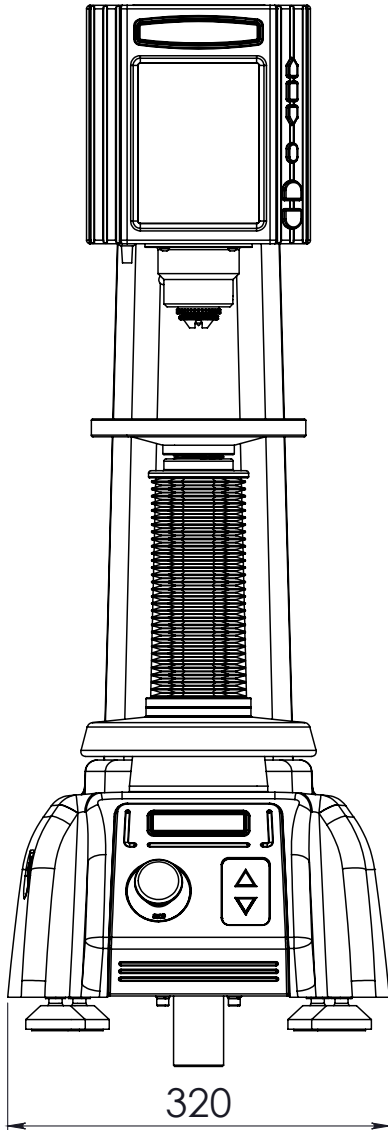
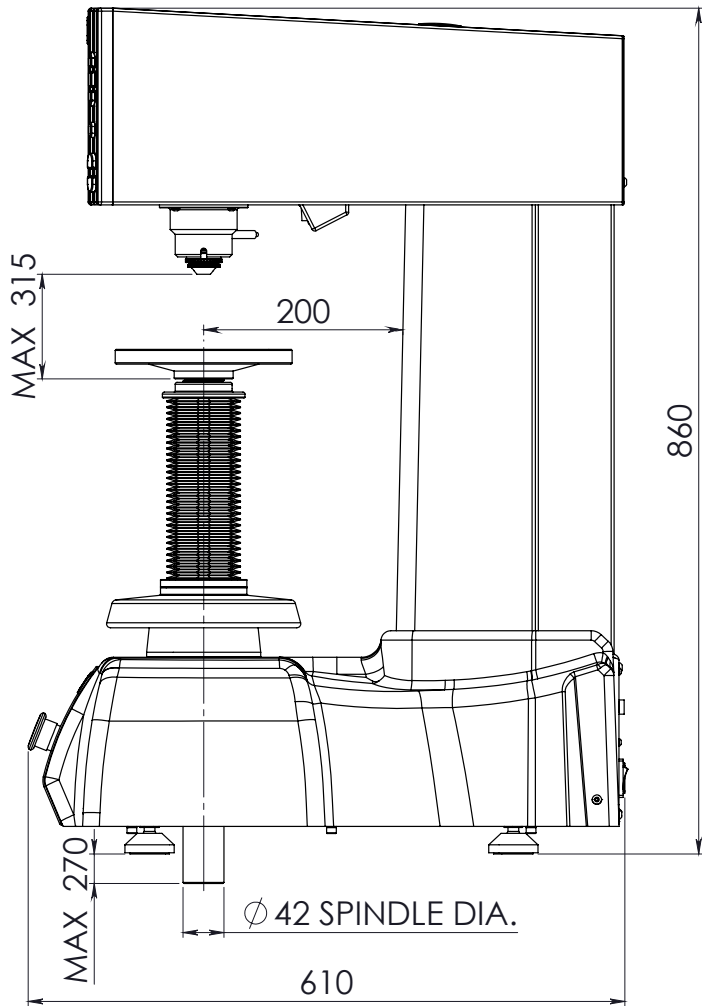
GENERAL

	Machine dimension	320mm x 610mm x 860mm
	Machine weight	91kg
	Workpiece accommodation	315mm (H) x 200mm (D)
	Power supply	100VAC to 240VAC, 50/60Hz, single phase
	Operating temperature	10°C to 35°C
	Power consumption	100W
	Humidity	10% to 90%, non-condensing
	Noise emission	< 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 200ACL

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

See brochure B18F200/XX



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



FENIX 300RS-IMP

Load Cell, closed loop, force feedback, test force application system Rockwell / Brinell hardness tester with IMPRESSIONS™ system.

See brochure B20F300/XX



FENIX 300XL

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

Extra tall working height See brochure B20F300/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



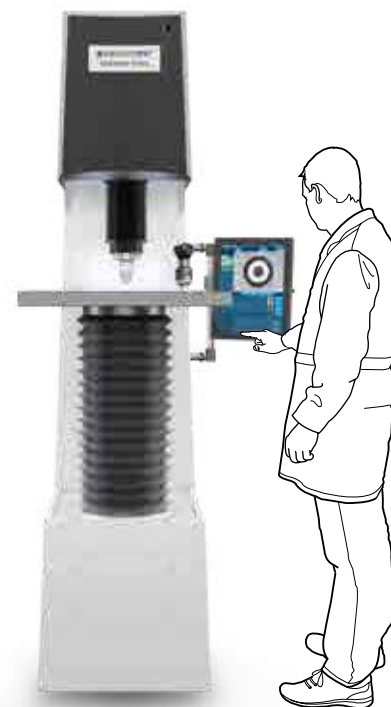
HAWK 652RS-IMP

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

Load Cell, closed loop Brinell, Rockwell, Superficial Rockwell Hardness tester With motorized Z-axis & BIOS Brinell Indent Optical Scanner
See brochure B19N9600/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 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 XY-stage, overview camera and advanced software (IMPRESSIONS™) for automatic pattern testing and fixture recognition.
See brochure B18N6200/XX



NEXUS 8103RSB

Fully automatic, Load Cell, closed loop Brinell, Rockwell, Superficial Rockwell Hardness Testers with manual or motorized Z-Axis & Brinell Indent Optical Scanner.



NEXUS 8103RSB-XLM

Fully automatic, Load Cell, closed loop Brinell, Rockwell, Superficial Rockwell Hardness Testers with manual or motorized Z-Axis & Brinell Indent Optical Scanner.

www.innovatest-europe.com

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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