

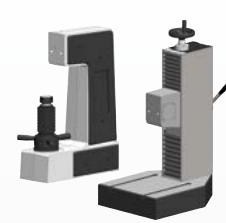
670H / 460L

206RSD / 330RSD

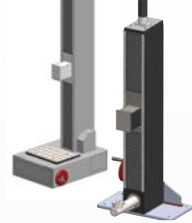
903RSD / 331RSD



Stand support for magnet
670H High stand / stroke 390 mm
460L Regular stand / stroke 180 mm



Stand support for RSDMAG head
206RSD Elevating sciew / stroke 215 mm
330RSD Big base / stroke 300 mm



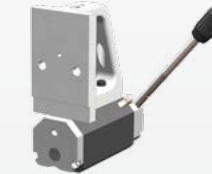
Stand support for RSDMAG head
903RSD Big base / stroke 700mm
330RSD Base for rings / stroke 700 mm

RSDMAG D2 - From 588.4 to 1471 N
(60 - 187.5 kgf)
RSDMAG D4 - From 147.1 to 441.3 N
(15 - 45 kgf)

Combine the RSDMAG head with
the base that better fits the shape
and geometry of your test sample.

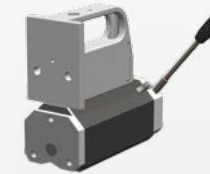


SMX30



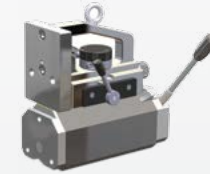
300mm / 11.8" magnetic
base for HR/HB tests
on samples more than
20mm / 0.8" thick

SMX50



500mm / 19.7" magnetic
base for HR/HB tests on
samples less than 20mm
/ 0.8" thick

SMX55



Magnetic base with
10mm / 0.4" horizontal
stroke sliding head for
multi indentation

SMX70



Double magnetic clamping
base for big or small
diameters round shaped
samples

SMX80



Chain clamping base for
non ferrous samples

SMX90



Electromagnetic base
with rechargeable
battery.

RSDMAG D2/30 - D4/30 RSDMAG D2/50 - D4/50 RSDMAG D2/55 - D4/55 RSDMAG D2/70 - D4/70 RSDMAG D2/80 - D4/80 RSDMAG D2/90 - D4/90



FORCE RANGE

	RSDMAG D4	RSDMAG D2
Preload:	29.42 N (3 kgf)	98.07N (10 kgf)
Rockwell:	---	588.4 - 980.7 - 1471 N (60 - 100 - 150 kgf)
Superficial Rockwell:	147.1 - 294.2 - 441.3 N (15 - 30 - 45 kgf)	---
Brinell:	153.2 - 294.2 - 306.5 N (15.625 - 30 - 31.25 kgf)	98.07 - 612.9 - 1226 - 1839 N - as option 2452 N (10 - 62.5 - 125 - 187.5 kgf - as option 250 kgf)
Vickers/Knoop:	29.42 - 147.1 - 294.2 N (3 - 15 - 30 kgf)	98.07 - 588.4 - 980.7 N (10 - 60 - 100 kgf)

FEASIBLE TESTS

	RSDMAG D4	RSDMAG D2
Rockwell:	---	HRA - HRB - HRC - HRD - HRF - HRG - HRL - HRM - HRR
Superficial Rockwell:	HR15N - HR30N - HR45N - HR15T - HR30T - HR45T - HR15W - HR30W - HR45W - HR15X - HR30X - HR45X - HR15Y - HR30Y - HR45Y	---
Brinell HBWT:	1/30 - 2.5/15.6 - 2.5/31.5	5/125(3), 2.5/62.5(2) and 2.5/187.5(6) (Aluminum and its alloys) - 2.5/187.5(5) (Carbon steel) - 2.5/187.5(1) (Cast iron)
Vickers/Knoop:	Generate indentation HV3 - HV15 - HV30	Generate indentation HV10 - HV60 - HV100
Temperature:	Measure test temperature range from - 40.0 to + 80.0 °C	Measure test temperature range from - 40.0 to + 80.0 °C

TECHNICAL DATA

Conformity Standards:	EN-ISO 6506-2 / EN-ISO 6507-2 / EN-ISO 6508-2 / ASTM-E10 / ASTM-E18 / ASTM-E103 / ASTM-E384 / JIS	
Accuracy:	Better than 0.5 %	
Readout Division:	0.1 HR / HBWT	
Indenter Stroke:	50mm / 2"	
Temperature Range:	From 10 °C to 35 °C	
Power Supply - Data Output:	RS 232 C (USB as option) - Battery 6 V + Charger	
Software:	Affri - OMAG	
Principle of Operation:	Dynamometric Load Cell	
Fields Of Use	Tests in laboratory or in loco on tubes, profiles, valves bulky or small pieces. For all metals: iron, steel, tempered steel, cast iron, brass, aluminium, copper and metal alloys with a more than 0.6 mm thickness. Heat treatment, hardening, nitriding, cementation and hardfacing with less than 0.6 mm depth (RSD MAG D4).	
Packing:	50 x 40 x 60 cm / 20 x 18 x 23" - 35kg	

670H (Stand support for RSDMAG)

460L (Stand support for RSDMAG)

Height Capacity:	390 mm / 15.3"	180 mm / 7.1"
Depth Capacity:	232 mm / 9.1"	204 mm / 8.0"

STEELS AND CAST IRON (HS)

TENSILE	VICKERS		F O R C E		R O C K W E L L		S U P E R		S U P E R		S U P E R	
	HV30	HV100	D	SHORE	D	D	RCWLL	RCWLL	RCWLL	RCWLL	RCWLL	
	1719	1863	15	75	60	70	65.5	75.5	65.5	75.5	65.5	
	1471	1625	13	65	50	60	55.5	65.5	55.5	65.5	55.5	
	1226	1478	11	55	40	50	45.5	55.5	45.5	55.5	45.5	
	980.7	1231	9	45	30	40	35.5	45.5	35.5	45.5	35.5	
	735	984	8	35	20	30	25.5	35.5	25.5	35.5	25.5	
	490	637	6	25	10	20	15.5	25.5	15.5	25.5	15.5	
	245	318	4	15	5	10	7.5	12.5	7.5	12.5	7.5	
	122.5	159.5	3	7	2.5	5	3.5	6.5	3.5	6.5	3.5	
	61.25	79.75	2	3.5	1.25	2.5	1.75	3.25	1.75	3.25	1.75	
	30.625	39.875	1	1.75	0.625	1.25	0.875	1.625	0.875	1.625	0.875	
	15.3125	19.9375	0.5	0.875	0.3125	0.625	0.4375	0.8125	0.4375	0.8125	0.4375	
	7.65625	9.96875	0.25	0.4375	0.15625	0.3125	0.21875	0.40625	0.21875	0.40625	0.21875	
	3.828125	4.984375	0.125	0.21875	0.078125	0.15625	0.109375	0.203125	0.109375	0.203125	0.109375	
	1.9140625	2.4921875	0.0625	0.109375	0.0390625	0.078125	0.0546875	0.1015625	0.0546875	0.1015625	0.0546875	
	0.95703125	1.24609375	0.03125	0.0546875	0.01953125	0.0390625	0.02734375	0.05078125	0.02734375	0.05078125	0.02734375	
	0.478515625	0.623046875	0.015625	0.02734375	0.009765625	0.01953125	0.013671875	0.025390625	0.013671875	0.025390625	0.013671875	
	0.2392578125	0.3115234375	0.0078125	0.013671875	0.0048828125	0.009765625	0.0068359375	0.0126953125	0.0068359375	0.0126953125	0.0068359375	
	0.11962890625	0.15576171875	0.00390625	0.0068359375	0.00244140625	0.0048828125	0.00341796875	0.00634765625	0.00341796875	0.00634765625	0.00341796875	
	0.059814453125	0.077880859375	0.001953125	0.00341796875	0.001220703125	0.00244140625	0.001708984375	0.003173828125	0.001708984375	0.003173828125	0.001708984375	
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RSD ONE TESTER, MANY SOLUTIONS

Rockwell, Superficial Rockwell and Brinell
Conform to **ASTM-ISO** standards

RSD Bench Top

206



For very small or medium size samples

330



270 x 330mm (10.6 x 13") working base for bulky samples

903
331



Height capacity of 700mm (27,5"), more on request. Optional base for rings.



- Hardness tester conform to standards **ASTM E18, ASMT E10** and **ISO 6508, ISO 6506**
- Equipped with an advanced calibrated load cell static system for multi load forces management
- The vertical head stroke of 50mm (2") assures absolute accuracy even in case of structural deflection
- Costant high repeatability and accuracy in every test condition and direction, even upside down.
- LCD display for direct double scale results, instant conversion to other hardness scales, tolerance settings, temperature measurement, indentation depth thickness, complete statistic, histogram, memory data.
- RS 232 C and USB outputs for printer.

ROCKWELL

HRA	HRB	HRC	HRD	HRE	HRF	HRG
HRH	HRK	HRL	HRM	HRP	HRR	HRS
HR15 N/T/S/W/X/Y	HR30 N/T/S/W/X/Y	HR45 N/T/S/W/X/Y				

BRINELL HBTW

1/30	2.5/15.6	2.5/31.5	2.5/62.5	2.5/187.5	5/125
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VICKERS (Generate indentation)

HV3	HV10	HV15	HV30	HV60	HV100
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RSD Portable

RSD MAG

Portable tester with magnetic clamping base. The AFFRI RSD MAG has no limits on samples geometry and largeness. It is completely uninfluenced by direction so that it is operative up to 360° positioning, even inverted. The first result is correct with no need for a second test.

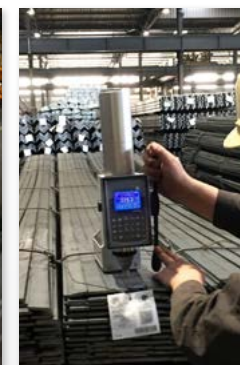


USER FRIENDLY

Pulling one single start lever the measure will appear in few seconds. It is so simple and easy to use that there is no need for any particular preparation by the operator.

1. Identify the test area and place the hardness tester on the test sample
2. locking the magnetic lever the tester will strongly adhere to the test piece for the entire test cycle
3. Start the test and in few seconds the result will appear on the display

Safe clamping on any surface, from round to flat, with self alignment of the indenter with the measurement axis. Highest accuracy and repeatability at every measurement.



AUTOMATIC HARDNESS TEST CYCLE

Just pull the start lever and the head moves down performing the automatic hardness test cycle:

1. Automatic contact with the specimen
2. Automatic clamping and activation of the reference surface point
3. Automatic preloading and loading
4. Automatic measure and automatic return stroke when releasing the lever

The entire test cycle is complete and the result appears on a large display.



AFFRI® CLAMPING SYSTEM

The clamping system assures perfect stability of any test piece throughout the test cycle. Secure contact with the specimen is always maintained, even in the unlikely event of any specimen movement during the operation cycle.

ABSOLUTE BASE

A wide and stable working plate to support masses over 2000 kg (4409.2 lb), eliminate instability problems, maintenance and adjustments. For bulky test pieces which cannot be easily received by regular bench top testers.

THE SOFTWARE

Main control LCD panel in front of the measuring head for setup of test parameters, including powerful software and electronic. Precise test settings. Dynamic results. Touch key pad board IP 64 protection.



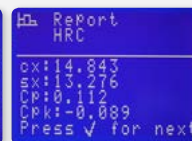
Set of the hardness test method



Measurement settings



Results, averages and conversions



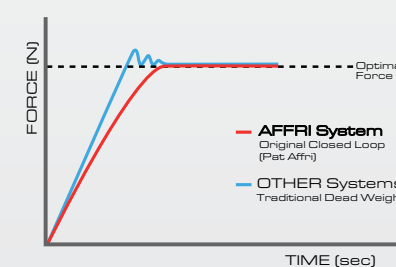
Storable and printable statistics

LOAD CELL TECHNOLOGY

The exclusive Affri latest generation of load cells control load forces assuring perfect linearity in every range eliminating the problems associated with traditional dead weight testers.

The force by load cell assure absolute accuracy at all test conditions without any equal in the world. Results are not affected by any structural deflection, misalignment or vibration. The system can also operate in an inclined position.

The R & R. data is at the top of its class and not surpassed by any other competitor under the same test conditions.



FROM PORTABLE TO BENCH-TOP

Combine the RSD MAG tester with two different size of stand support, 670H or 460L, in order to have a regular bench-top tester.

This system fully conforms to hardness testing standards and allows testing in laboratory on small pieces and prepared samples without the need of buying another hardness tester.



Hardness measurements will result fast and easy as an AFFRI bench tester including the sample clamping system and the deflection auto-compensation system.