

AFFRI[®]



SERIE **WK** FOR OPTICAL UNIVERSAL
HARDNESS MEASUREMENTS

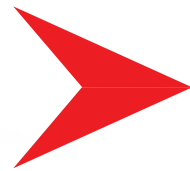
Automatic Rockwell, Vickers and Brinell measurements

 **AFFRI**[®]

SERIE WK

Universal WK series is for Brinell, Vickers and Rockwell measurements. It can measure any kind of component thanks to the automatic scanning of indentation by optic probe and the direct view of result on the LCD touch-screen. Data report can be created and exported.

- Camera HD 1.2MP
- Objectives 25x or 50x with 50x or 100x zoom according to objectives
- Autofocus
- Autolighting LED
- Autorecognition of indentations with auto measuring
- Automatic and manual Brinell and Vickers measures
- HD touchscreen
- LCD colored touchscreen 12"
- Software multilanguages Windows 10
- USB, Ethernet and 484 outputs
- Archive for data, images and statistic datas
- Removable LCD screen for portable use





OPTICAL PROBE AND LCD READER APPLICABLE TO ALL HARDNESS TESTERS

206 EX

- Rockwel, Brinell and Vickers measurements
- Direct digital Brinell readings HR-HBTW
- Dual load cells, no need to be levelled. It's not affected by vibration
- It measures even temperature
- Easy to use thanks to the single lever
- Possibility to have clamping hood
- Test force from 10 to 150 kgf (WK: N 98,1-1839 ;WKS: N 2943 - 4415)



The visible indenter allows to reach extreme points and small details. It is possible to apply a C shape indenter (art. 604) to reach difficult points as inside of tubes and near to hollows.

206 EX 2

- Rockwel, Superficial Rockwel plus Brinell and Vickers
- Direct digital Brinell readings HR-HBTW
- Dual load cells, no need to be levelled. It's not affected by vibration
- It measures even temperature
- Easy to use thanks to single lever
- Possibility to have clamping hood
- Test force (3-187,5 kgf - N 29,43-1839)



Load forces are applied directly on the measuring axis through the incremental dynamometric load cell.

The sturdy piece-holder column assures an exact measurement on any details. It is able of bearing masses up to 2000 kg which allows for steady hardness measurements on bulky or irregular pieces.

206 MX

- Automatic Rockwell, Brinell and Vickers measurements
- Automatic loading-unloading
- Direct digital Brinell readings HR-HBTW
- Dual load cells, no need to be levelled. It's not affected by vibration
- It measures even temperature
- Easy to use thanks to single lever
- Motorized load-unloading
- Possibility to have clamping hood
- Test force EX MX: kg 10-187,5 (N 98,1-1839)
- Test force EX MXS: kg 3-45 (N29,43-441,5)

The visible indenter allows to reach extreme points like Round samples, cutting tools edges, blades and small details. Different anvils are provided to accommodate any type of sample.



250 DRM C

- Universal and automatic Rockwell, Superficial Rockwell, Brinell and Vickers measurements
- The preload and loading are controlled in closed loop at ratio of 1 millisecond sensibility
- Dual load cells, no need to be levelled. It's not affected by vibration
- Direct digital Brinell readings HR-HBTW
- Motorized load-unloading
- Loads and preloads set from the keyboard
- Possibility to have clamping hood - 400kg force
- Test force: kg 3-187,5 (N 2943-1839)

Load forces are applied directly on the measuring axis through load cells and electronically controlled in "Closed Loop" (Pat. AFFRI) with a frequency of 1 kHz (1000 input per second).

There are no ratio load forces nor lever, eliminating problems associated with dead weight systems on traditional testers. It is not affected by any structural deflection, misalignment or vibration and can also operate in an inclined position. It doesn't need to be levelled.



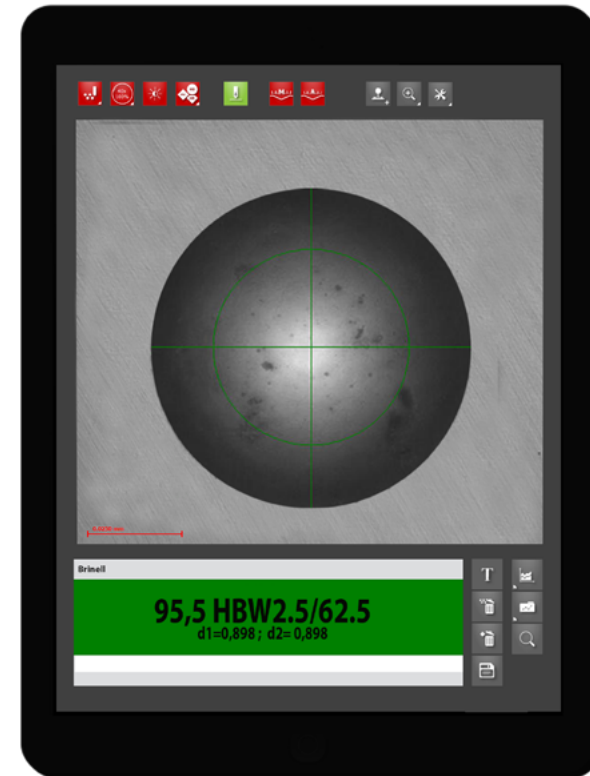
MANY FEATURES TO FIND THE RIGHT SOLUTION FOR YOUR NEEDS



THE HEART OF AFFRI SYSTEM

Affri System assures easy and fast measurements in any conditions.

To perform the test just act on the elevating screw and bring the specimen to make contact with the indenter. The hardness tester applies preload and load in automatic succession; within seconds the result appears.



Measurement cycle is automatic and manual for Brinell and Vickers scale. The automatic focus, the zoom and the 25x and 50x of magnification give you perfect measurements.

Check results and data on the touch LCD display and import/export other data through Windows 10 multilanguage software.

Fast and easy with Affri System.

ACCESSORIES



The visible indenter allows to reach extreme points and small details. Different anvils are provided to accommodate any type of sample.

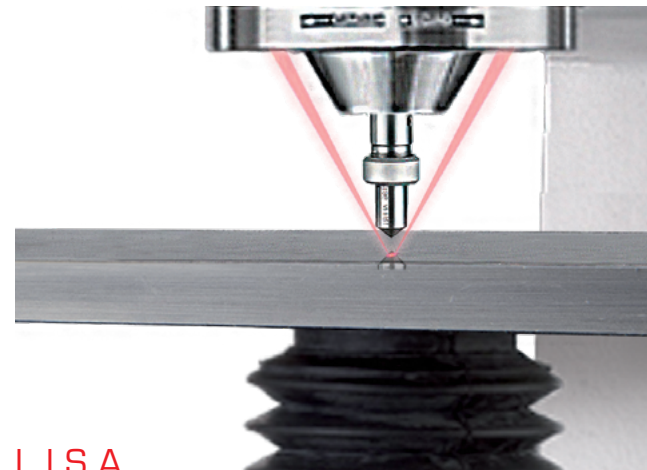


ANVILS

From large plane tables to V shaped anvils. All AFFRI's accessories are customizable according to customers specifications.



Data output via RS 232 C for connection to printer and computer for diagram plotting and statistics. Hyperterminal is needed. Available USB adapter.



L.I.S.A.

Laser pointing system (Pat. AFFRI) allows for a precise test position pointing before the contact between the indenter and the sample. Excellent solution for gear teeth and blade and cutting tools edges.



CLAMPING HOOD

It assures a perfect locking of the specimen through the whole test cycle. No need of additional supports when testing long samples.

206 EX2 - 250 DRM C	
250 DRM	
206 EX - MX	206 EXS

WK SERIE

LOAD FORCE RANGE

PRELOAD:	10 kg (98,1 N)	3 kg (29,4 N)
ROCKWELL:	60-100-150 kg	
SUPERFICIAL ROCKWELL:		15-30-45kg (147.1-294.2-441.3 N)
BRINELL:	62.5-125-187.5kg (612.9-1226-1839N)	15.6-25-30-31.2kg (153.2-245.2-294.2-306.5 N)
	All before plus 5-6,25-250 kg (4,9-19,6-2452 N)	
VICKERS/KNOOP:	10-60-100 kg (98.07-588-980,7 N)	3-15-30 kg (29,42-147,1-294,2 N)

All our hardness testers can have the probe and touch display for the upgrade.

FEASIBLE TESTS

ROCKWELL:	HRA-HRB-HRC-HRD-HRE-HRF-HRG-HRH-HRK-HRL-HRM-HRP-HRS-HRV	
SUPERFICIAL ROCKWELL:	HR15N-30N-45N-15T-30T-45T-15S-30S-45S-15W-30W-45W-15X-30X-HR45X-15Y-30Y-45Y	
BRINELL HBTW:	Aluminum and its allowys:5/125(3)-2.5/62.5(2)-2.5/187.5(6) Carbon steel:2.5/187.5(5) Cast iron:2.5/187.5(1)	1/30-2.5/15.6-2.5/31.5
BRINELL HBW:	generate indentation:HB1/10 - HB2.5/62.5 - HB5/125 - HB2.5/187.5	generate indentation HB1/30 - HB2.5/15.625 - HB2.5/31.25
	generate indentation HB1/10-hb1/30-HB2.5/15.625-HB2.5/31.25-HB2.5/62.5-HB2.5/187.5-HB5/125	
VICKERS/KNOOP:	generate indentation HV10-HV60-HV100	generate indentation HV3-HV15-HV30
TEMPERATURE:	measure range from -40.0 to +80.0°C	
READOUT DIVISION:	0,1	
ACCURACY/CONFORM:	ASTM - E18 - E10 - E387 - ISO 6508 - 6507 - 6506	
POWER:	110 / 220 V	
DEFT CAPACITY:	200 mm	
HIGH CAPACITY:	220 mm	

- 206 MX is the motorized version of 206 EX, with the same characteristics
- 206 EX and 206 EXS have different characteristics
- 250 DRM is complete (206 EX / MX and 206 EXS together)
- 250 DRM C and 206 EX2 are the 250 DRM with the addition of Brinell HBW scales

MEASURE:	Automatic / manual Brinell and Vickers
FOCUS:	Automatic
MAGNIFICATION:	25x or 50x and Zoom
CAMERA:	1.2MP color SHD
LCD:	Touch monitor 12"
SOFTWARE:	Windows 10 multilanguage
OUT PUT:	USB 2 Ethernet WF



TECHNICAL DATA

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
TEMPERATURE RANGE:	From 10 °C to 35 °C
DATA OUTPUT:	RS232 C Standard / USB Optional
POWER SUPPLY:	110 or 220 V / 50±60 Hz
SOFTWARE:	Affri - OMAG
PRINCIPLE OF OPERATION:	Load Cell and Closed Loop (Affri patent) for 250 DRM - Dynamometric load cell for 206 EX serie
HEIGHT CAPACITY:	215 mm / 8.5" (As option 300 mm / 12")
DEPTH CAPACITY:	190 mm / 7.5" (As option 220 mm / 8.5")
TOLERABLE WEIGHT:	Up to 2000 kg for 250 DRM/DRMC - up to 1000 kg for 206 EX serie
FIELDS OF USE:	For all metals: iron, steel, tempered steel, cast iron, brass, aluminium, copper and metal alloys. Heat treatment, hardening, nitriding, cementation and hardfacing. hard and soft plastics.
PACKING WEIGHT:	85 kg
PACKAGING MEASURES:	50 x 60 x 100 cm / 20 x 23 x 40



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