WIKI 90

Vickers, Brinell, Knoop

All advantages of automatic cycles
on eco-friendly hardness testers.

AFFRI®

WIKI 90

Speed, precision and infinite functions in a semi-automatic solution.

UNLIMITED SCANNING WITH 1µ / m div.

Each movement of table is scanned in real time for a complete mapping at very high resolution 1µ/m on a 100x100 mm surface. (larger at request)

SMART TURRET

The exclusive structure and software entirely designed and built by yhe engigners in the Affri research laboratories allows excellent precise constant and repetitive focusing of all 4 objectives. Each indentation will always be automatically in perfect focus. It automatically recognizes the focus position to reduce measurement times a great advantage for multiple measurements.

CONTINUOUS FLOW CHD SEAMS

The intelligent digital table follows your movements to create the desired path and there is no need to stop at any precise position. A hardness-displacement (CHD) curve with absolute definition is thus obtained.

Every point to be examinated is reached thanks to the scanning mapp with very high definition 1µ / m and it is possible paste programs at each desired point with the same excellent precision.

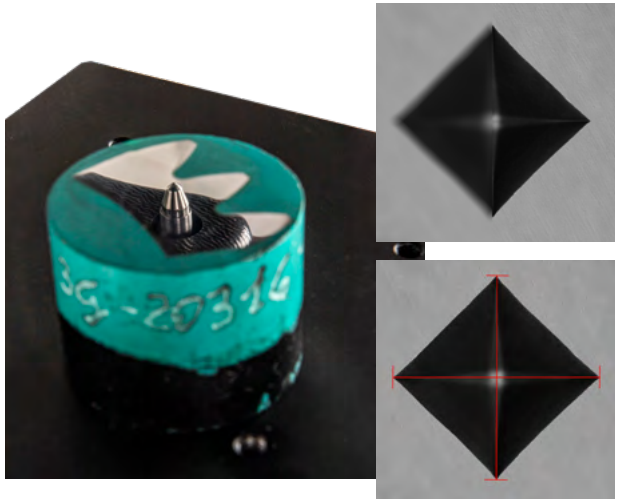
6 selections automatic turret for 2 HV - HK indenter and 4 objectives 2,5x 5x 10x 20x 40x 50x , combinale at request.
The turret with horizontal rotation protects each lens against dust and shock.

AFFRI®

THE MASTER OF IMAGES ALWAYS CLEAR AT 360°

The first in the world to develop this technology and improve it beyond all expectations and still unrivaled.
We apply the same technology adopted for the manufacture of reference sample machines in primary laboratories.
Our continuous research and development offers the most modern scientific solutions for viewing and analyzing images without shadows or reflections on the vertices of the high contrast impression for Brinell, Vickers and Knoop measurements.
The combination of different lighting methods with sophisticated algorithms achieve the perfection of measurement analysis with an accuracy of 0.0001 mm 10 times higher than normal standards.

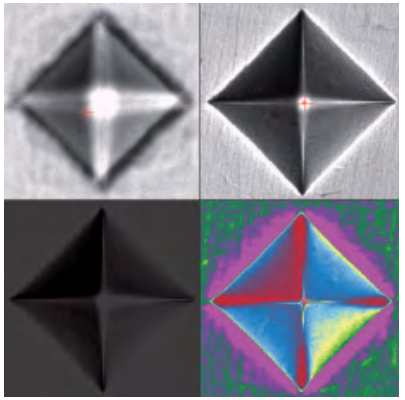
The 360 ° with 1 Millisecond of feedback offers absolute precision measurements even on light surfaces and soft metals.
The exclusive Affri technology for the lighting control. with infinite values combined with exclusive design lenses with infinite magnification and definition, are managed with intelligent software with a reactivity lower than 1 KHz (1 millisecond), they allow to obtain super sharp images and of precise measurement in any visual and surface conditions, both small impressions and on soft materials.
Infinite pixel camera to choose from 1.3 Mp to 20 Mp and beyond according to the evolution of science up to infinite values and infinite colors for images of absolute sharpness.



SEMI-AUTOMATIC SOLUTION

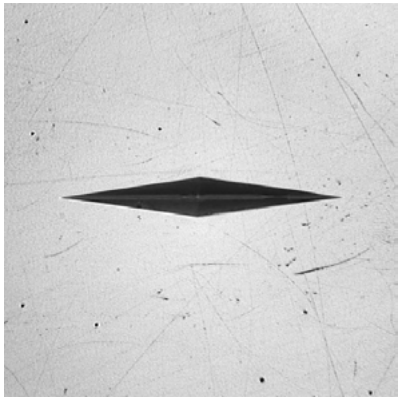
Affri's semi-automatic solution is perfect if don't need a fully automatic system.
You can control the pattern through the manully XY table.
Positions of indenters will be twice checked by software to make alway perfect measurements.
WIKI 90 is able to make perfect indentations in any conditions, even if it's not on an orizontal stable or any other surface.

IMAGE AUTO-ANALISYS



With software controlled focus, image cleaning, shading correction and regulated light source, reproducible results are obtained regardless of the number of indents measured. From perfectly polished to rough and etched samples, the auto-detection capabilities of WIKI 90 allow measurements on a variety of sample surfaces.

OPTIONAL TESTS



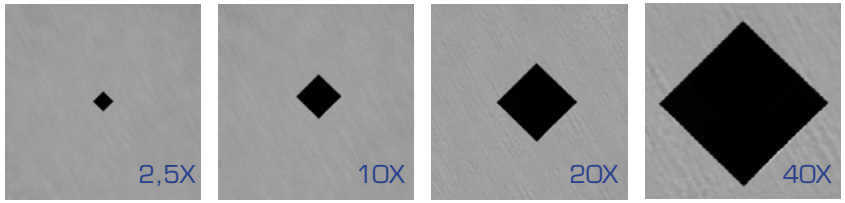
The hardness tester can be upgraded with Rockwell, Brinell and Knoop test methods.
Thanks to the double indenter turret it is possible to use two different indenters and mix multi-scale patterns.

SMART SOFTWARE

The AFFRI Vickers measuring software has been studied to fulfill any client need and to be accessible to every operator.
This smart software results extremely easy to be used and can be customized to display only needed testing procedures.

MAGNIFICATION

Real magnification thanks to the motorized turret, different lenses can be selected with a simple click. Digital zoom is also available.

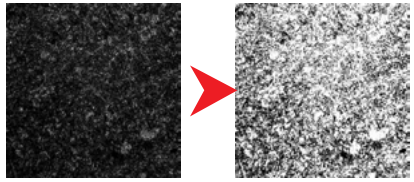


TEST METHOD SELECTION

Only one window for the selection of everything you need for the test.

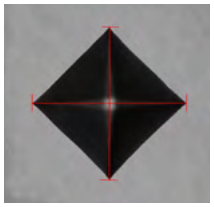
AUTO-LIGHTING

Automatic light regulation on any surface.



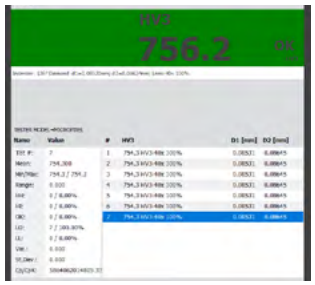
MANUAL MEASURE

Manual indent evaluation.



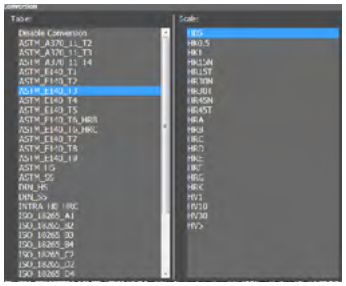
DYNAMIC RESULTS

Color highlighted results and live statistics.
Watch result list and edit or modify single tests.



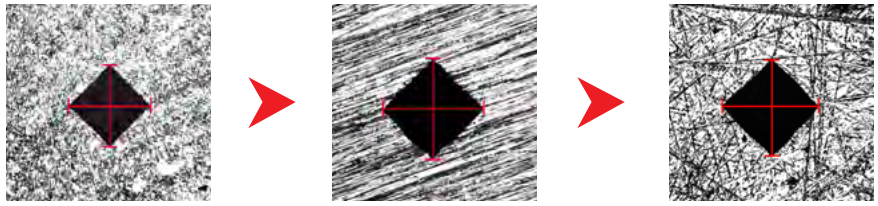
AUTOMATIC CONVERSION

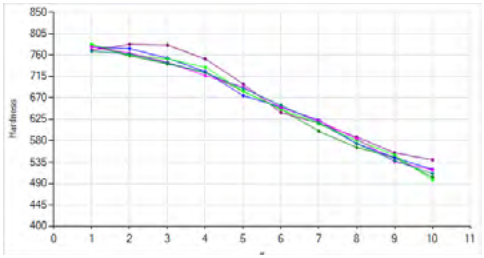
From standards to hardness scale.



MEASURE ON CRITICAL SURFACES

From perfectly polished to rough e etched samples, the software will automatically measure indents on any sample surface.





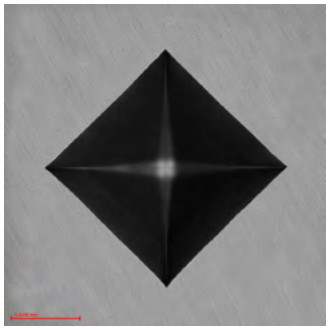
LIVE GRAPHS

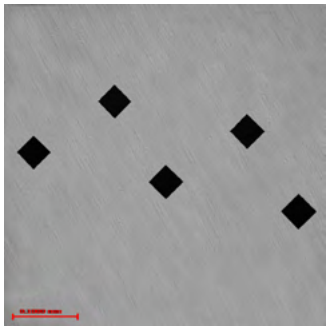
Choose between 4 graphs.
Print results from template or save and import test cycles from archive.

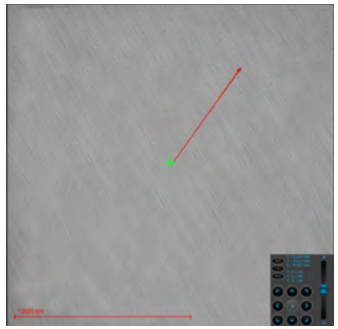
AFFRI®

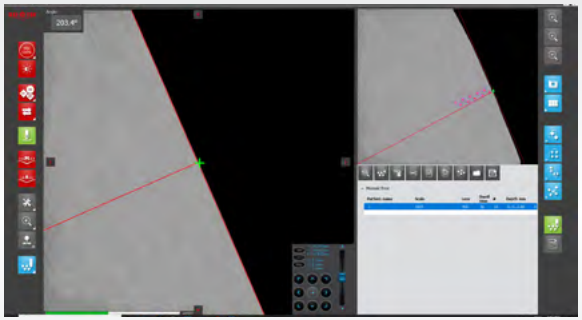
SMART PATTERNS

The patterns can be configured as you want through XY manually controled. The double check of the position of test block and indentation is made as manually as automatically by our software.
Indentations and measurements are always perfect. Patterns can be squared or round as customer needs and he can check the entire test-cycle in data chronology and export data in a statistic schedule.
With WIKI 90 JS make many perfect measurements becomes easy and quick.







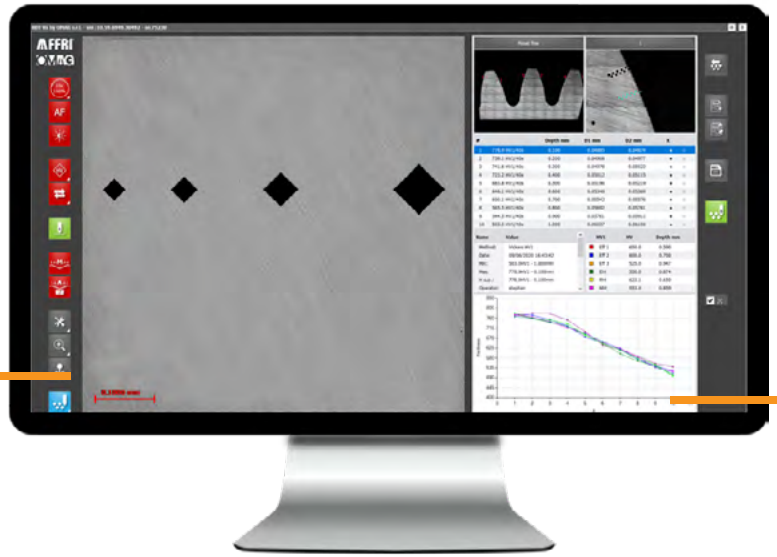


EASY CONTROL

The T Bar guide you on any direction.
No errors and accurate positioning.

SMART FUNCTIONS

- Clean vision of the indentation.
- Get real and detailed images of each sample.
- Visual control of each sample and patterns.



- Visual control of all results and live statistics.
- Patterns/traverses can be rapidly crated using templates.
- See a list of each sample and each pattern.
  Save or import traverses, edit, move, copy and paste.

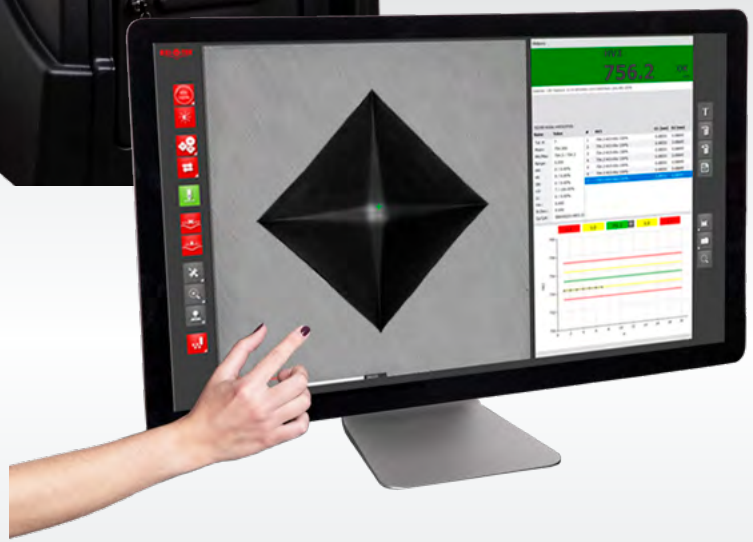
The manual knob allows you to manually control the focus.

TEST DATA IMPORT AND EXPORT

File import and export is freely configurable and therefore individually adaptable. USB and LAN outputs.
Connect to database networks, PCs and printers. Other upon request, output RS232, 2 USB, W-LAN, Bluetooth, Wireless, HDMI, Mouse, Keyboard.

RESULTS INSTANTANEOUS DATA REVIEW

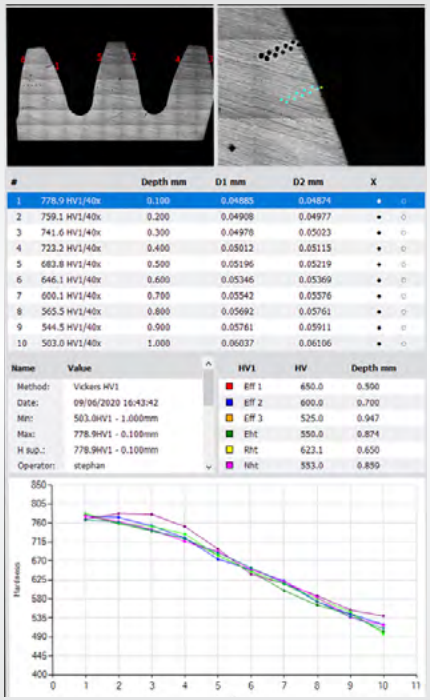
Following an automated run, individual indents can be tracked by clicking on the numbered impression.
Intelligent software accurately remembers where the impression was made ansd moves the stage to the chose indent.
The statistic data will appeare in the display with the story. Instant graphical view of Effective Case Depth.
You can also print the results directly from the software or export data to the spreadsheet program of your choice for further statistical analysis.



SMART SCREEN

- with a finger you can move the image even in full screen for excellent details in manual mode
- with two fingers you can zoom in to obtain perfectly sharp images

And many more



Direct conversion in HR, HB, HK and any other hardness scale.

Customizable test report with client logo, specimen information, statistics and graphs or export as CSV file.

Print results from template or save/import tests cycles from archive.

ACCESSORIES

Affri provides a large variety of accessories to fulfill any purpose of test.
Customized solution based on your needs can be made for perfect tests on rough pieces.
A series of different anvils is available to test every size of test piece. Variety of accessories to facilitate testing on small or oddly shaped items.
All AFFRI's accessories are customizable according to customers specifications, depending on dimensions and geometry of the samples and finished products.

INDENTERS
Vickers Art. 700.1.5.027
Knoop Art. 700.1.5.028
Dual indenter shaft Art. 700.1.5.029

OBJECTIVES
2,5X W001.0.006 / 5X W001.0.000 /
10X W001.0.001 / 20X W001.0.002 /
40X W001.0.003 / 50X W001.0.004 /
100X W001.0.005

MANUAL TABLE 135x135mm
Travel 50x50mm with 1µm step.
Art. A009.0.007

MANUAL TABLE 100x100mm
Travel 25x25mm with 10µm step
Art. A009.0.001

TEST BLOCKS
Micro Vickers Art. A004.0.008
Knoop Art. A004.0.010
Test blocks with specific values are available.

CLAMPING VICE
Adjustable from 0 to 50mm
Art. A049.1.001

SINGLE SAMPLE HOLDER
Self level sample holder
Art. A.055.0.006 (Insert ring is needed)
Art. A.055.0.014 (All sample diameter)

BENCH SUPPORT TABLE
Side table suitable right or left
Art. A010.0.024

	WIKI 90 A	WIKI 90 B	WIKI 90 C	WIKI 90 CNC
Height capacity:	142 mm	165 mm	165 mm	110 mm motorized
Depth capacity:	163.5 mm	163.5 mm	163.5 mm	163.5 mm
Elevating spindle:	Standard	Ultra-precise	Ultra-precise	Motorized
Turret (motorized):	3 positions	6 positions	6 positions	6 positions
Objectives positions:	2	4	4	4
Indenters positions:	1	2	2	2
Automatic reading:	Yes	Yes	Yes	Yes
Autofocus:	No	No	No	Yes
XY table:	Manual (option)	Manual (option)	Digital encoders	Motorized
Standard load range:	100gf - **31.25Kgf**	10gf - **31.25Kgf**	10gf - **62.5Kgf**	10gf - **62.5Kgf**
Feasible tests:	HV / HK / HB	HV / HK / HB	HV / HK / HB	HV / HK / HB
Software for CHD:	No	Manual	Semi-automatic	Fully-automatic
Objective types:	210	210 / Infinite	210 / Infinite	210 / Infinite

TECHNICAL DATA

Operation:	Only one start command per test cycle
Loading forces:	Dual load cells and closed Affri system originator at high sensitivity 1000step per second 1 KHz)
Accuracy:	Better than 0.1% on each load
Division:	1 µ/m scan over the entire stroke of the XY table
Test load:	100 gr - 50 kg
Test achivable:	Vickers Knoop Brinell
Reference standards:	ISO 6506 - 6507 - ASTM E 384 - E10
Lenses to choose from :	2.5x 5x 10x 20x 40x 50x
Penetrators max:	2 slots
Step turret:	6 slots
Turret:	Horizontal revolver turret pneumatic action including protection for objective against dust
Light:	Super diffused XLED
Camera vision:	1/2 "anti-glare CCD camera; 1.2 Mpixel (expandable on request)
Measurement software:	In automatic and manual mode and scanning
Screen:	24" monitor with infinite colors and Super HD tones
Dwell time:	1 to 99.9 sec. programmable
Useful height:	199 mm (excluding table)
Useful reach	160 mm
Focus:	Infinite definition
Power supply:	220 - 110V; 50 - 60 Hz; 400 VA
Out data:	RS 232 C - USB - Ethernet data output (others on request)
Sample Bearable weight:	100 kg
Instrument mass:	45 kg
Dimensions:	65 x 42 x 87 cm
Computer:	Operative system Windows 10 (64 bit)

Made by:
OMAG di AFFRI D. S.r.l.
Via M. Tagliaferro, 8, I-21056 INDUNO OLONA
Tel. +39 0332 200546
Fax +39 0332 203704
info@omagaffri.com

Europe/Asia:
AFFRI®
Via M. Tagliaferro, 8, I-21056 INDUNO OLONA
Tel. +39 0332 201533
Fax +39 0332 203621
info@affri.com - www.affri.com

America:
AFFRI Inc.
850 Dillon Dr.
Wood Dale, IL 60191
Tel. 224 374 0931 - 630 303 1588
sales@affriusa.com - www.affri.com

AFFRI®