



*AFFRI® introduces
an automatic
hardnesstester system
for the future*



INTEGRAL

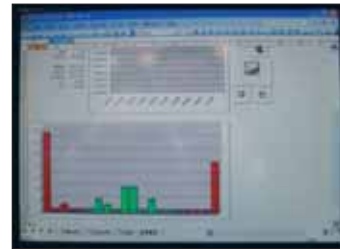
UNIVERSAL
- ROCKWELL
- VICKERS
- BRINELL

- Fully Automatic Universal Hardness Tester
- Automatic Brinell, Vickers, Rockwell measures
- Thanks to the Affri system Closed loop technologies inside the Autofocus for Vickers and Brinell is easy and automatic
- It can measure automatically the case depth surface of heat treatment from 0.15 to 1.5 mm thickness directly up the surface without cutting the sample (HDTL) cycle. It is not a destructive test.
- Color touch screen TFT 17" inclinable 180°
- Large base for heavy parts 400 x 400 mm
- Sliding indenter stroke from 500 to 0 mm self touching surface
- Automatic clamping for Rockwell tests (Brinell at request)
- One single start input to activate without interruption: (self touch surface to be tested, self load -un-load self switching indenter, optic, self focus and self measure, self goes up to free sample)

- Insensible to external vibrations sources
- Insensible to deflections during test cycle
- Insensible to change of temperature (5 to + 50°C)
- It can be operative also if is not leveled or if inclined



Automatic Brinell / Vickers and Auto Focus



Complete statistic and histogram customized text



Scrolling menu on touch screen for easy and simple use



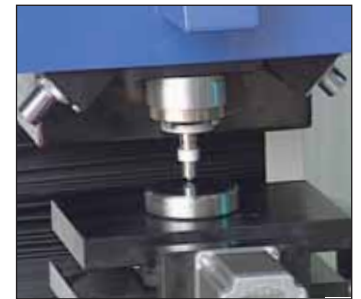
Measure of case depth of hardness treatment without cut sample

OPTION

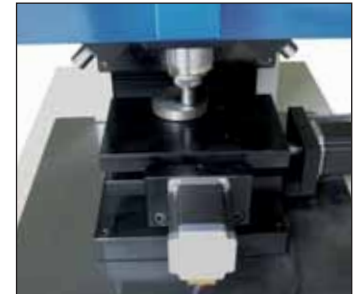
- Large vision filed optic camera for automatic sample border or bar code recognizing.
- HDTL for case depth



- Clamping system combined to the high technology of Affri System assure perfect clamping also on unstable or flexible parts



- Rotating turret at 6 positions for automatic switch to several indenters and objectives



- Motorized X-Y axis table 200 x 100mm division 0,01 mm combined to automatic start test cycle for hardness case depth. The axis are independently or combined programmed

Available models

- INTEGRAL 1 (loads from 15,6 to 3000) Brinell

Brinell 15,6 31,2 62,5 125 187,5 250 500 750 1000 3000.

- INTEGRAL 2 (loads from 1 to 250) Rockwell+Brinell + Vickers + Shore

Brinell 1 5 10 15 15,6 30 31,2 62,5 125 187,5 250 .

Vickers 1 2 3 5 10 15 30 50 60 100

Rockwell 15N/T 30N/T 45N/T 60 100 150 HRC A D B F G L M R S T V X Z

ISO 2039 tests for plastic

- INTEGRAL 3 (loads from 3 to 1000) Brinell + Vickers + Rockwell +Superficial Rockwell + Case depth

Brinell: 3 5 10 15,5 31,2 62,5 125 187,5 250 500 1000; Vickers: 3 5 10 15 30 60 100 120

Rockwell: 60 100 150; Superficial Rockwell: 15 30 45

HDTL case depth automatic HV 525 - 550 - 600 (at request)

- INTEGRAL 4 (loads from 1 to 50) Brinell + Vickers + Shore

Brinell 1 5 10 30 31,2 50, Vickers 1 2 3 5 10 15 30 50, Rockwell 15N/T 30N/T 45N/T ISO 2039 tests for plastic

- INTEGRAL 5 (loads from 10 to 3000) Rockwell + Brinell + Vickers

Brinell 10 30 31,2 62,5 125 187,5 250 500 750 1000 3000.

Vickers 10 15 30 50 60 100 120

Rockwell 60 100 150 HRC A D B F G L M R S T V X Z

HDTL case depth test

- INTEGRAL 6 (loads from 0,3 to 30) Micro Vickers + Superficial Rockwell + Brinell

Micro Vickers 0,3 0,5 1 2 5 10 20 30

Brinell 1 5 10 30 31,2

Superficial Rockwell 15 30 45

Technical characteristics

Measures	Automatic Brinell, Vickers, Rockwell and case depth treatment (depend to the models)		
Focus	Automatic		
HDTL function	Permits checking the case depth of hardness treatment from 0,15 to 1,5 mm at 525 - 550 - 600 HV1		
Test height	max 500 min 50 mm self adjusting acting the Test start input		
Depth	170 mm (other on request)		
Action:	Only one start input moves down head and indenter to reach test surface self touch surface to be tested, self load -un-load self switching indenter, optic, self focus and self measure, self goes up to free sample		
Load forces	controlled by internal load cell and closed loop Affri system patent		
Automatic turret	self switching 1 indenter + 1 objective (optional 5 steps 3 indenters + 2 objectives)		
Resolution	0,1 unit (0,01 mm case depth)		
Net work	wire connection for technical assistance auto diagnosis		
Accuracy: Conformation standards	Brinell EN-ISO 6506-2 Vickers EN-ISO 6507-2	Knoop Rockwell EN-ISO 6508-2	Plastic DIN EN 53456, EN-ISO 2039-2
Operativity	it can work if not levelled, inclined or near to vibration area, without losing accuracy		
Temperature range	+ 5° to + 50° C		
Self aligning to test surface	from 0 to 500 mm		
Max. weight allowed for the specimen to be tested	2000 Kg		
Base	400x400 mm		
Fields of application	For all metals: iron, steel, tempered steel, brass, aluminium and nitriding, cementation, hard facing, plastic		
Size	600x1000x1800h		
Net weight	500 Kg		
Packing weight	600 Kg		
Power supply	220V 50÷60Hz - 200VA - Air compressed 5 ATM		



Headquarter:

AFFRI

Via M. Tagliaferro, 8

I-21056 INDUNO OLONA - CEE - VARESE - ITALIA

Tel. +39 0332 201533 +39 0332 206289 - Fax +39 0332 203621

E-Mail info@affri.com - www.affri.com

Nord Europe: Sales & Service

AFFRI Testing Instruments BVBA Sprl

NIEUWSTRAAT 28 B-3360 KORBEEK-LO

Tel + 32.16.60.66.53 - Fax +32.2.759.90.73

E-Mail affri@skynet.be - www.affri.com