

# LD 3000 AF

Non destructive case hardness depth test CHD  
Vickers, Brinell, Rockwell



## ADVANTAGES:

- Non-destructive CHD test
- No need to prepare the sample or to separate materials types
- Reduce testing costs up to 70% compared to traditional polished cross section as Vickers method
- No need for sample preparation equipment and consumable supplies
- Increase your product quality, 100% inspection testing on production floor department
- Reduce your testing time by 90%, just 60 seconds analysis time
- Not only CHD! LD3000AF is a universal hardness tester for Rockwell, Superficial-Rockwell, Brinell HBT and Vickers (only indentation)

# LD 3000 AF

## EASY AND FAST AUTOMATIC MEASUREMENTS

Spin the leveling screw's handle and bring your sample to make contact with the clamping hood blocking the piece. Press the START button and the measuring head approaches the sample, applies the load to perform the indentation and goes back upward; all in automatic succession without breaching a phase.

Direct auto-reading of Rockwell, Superficial-Rockwell, Brinell HBT and Vickers (only indentation).

## SELF COMPENSATING AND CLAMPING SYSTEM (Pat. AFFRI)

When testing unstable samples or deflexive parts, the AFFRI System will follow the sample and not lose contact, compensating any frame deflection during the test cycle. Accurate results are assured even with oiled, dusty or dirty pieces.

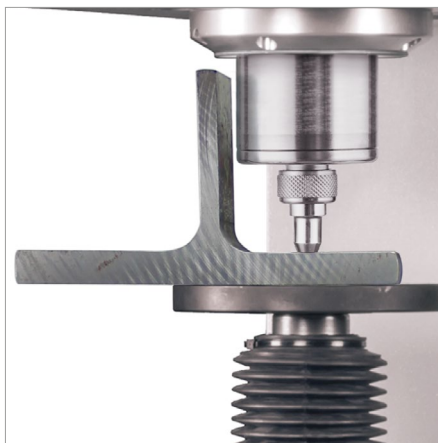
The indenter head retracts into a protective cylinder at the end of the measurement cycle. Total indenter head travel of 30mm max. With a total sample height accommodation of 300mm.

## ACCURATE MEASUREMENT

Excellent measurement precision & accuracy on the first test. No need to obtain an average hardness value. Unlike competitive systems.

## BLUETOOTH OR USB

Connect to database networks, PC's and printers, to download data or for final custom reports.



## CONFORMS TO:

ISO 6508 - ASTM E18 / ISO 6506 - ASTM E10 / ISO 6507 - ASTM E384  
LD 3000 AF meets all the worldwide rigorous hardness testing standards

## LD 3000 AF WILL DETERMINE THE CASE HARDNESS DEPTH (CHD), WITH GREAT PRECISION AND MINIMAL OPERATOR INTERVENTION.

Testing can be performed on a non-metallographic prepared specimen. The system will determine the superficial hardness and its effective depth (CHD), from 0.12 to 2 mm, without destroying the specimen and testing rather than random sampling of manufactured products. Great precision and minimal operator intervention on finished products: there's no need for sample preparation, no need to separate material types or to polish the cross section as Vickers method. In just one minute the tester generates the report with the CHD graph.

HTDTL software version, supplies the Hardness and hardness depth values at HV2 525-550-600-650. The HTDTL Plus version in addition, offers the complete report and graph, assisting in displaying the complete sample decarbonized zone.

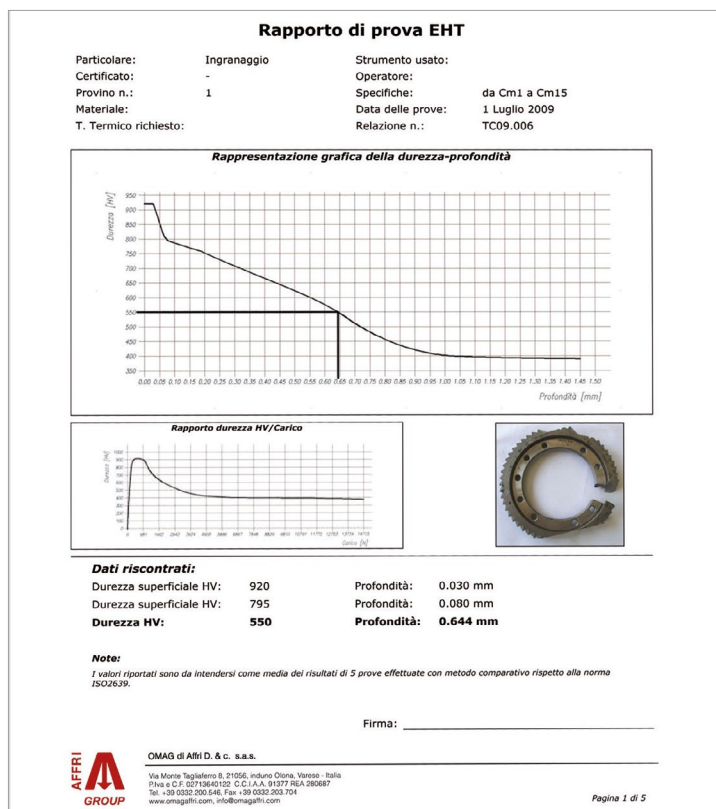
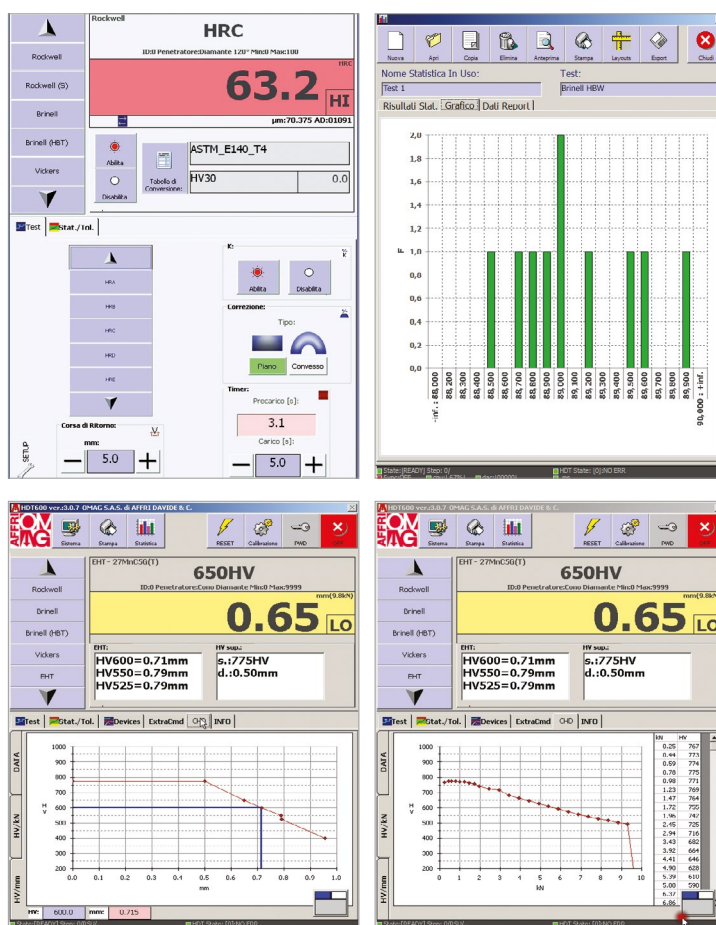
LD3000AF performs every hardness scale for universal use in your own laboratory.

## CLOSED LOOP TECHNOLOGY (Pat. AFFRI)

Load forces are applied through load cells and electronically controlled in "Closed Loop" with a frequency of 1 khz, assuring perfect linearity in every range. Results are not affected by any structural deflection, misalignment, vibration or problems associated with dead weight systems on traditional testers. The tester can also run in an inclined position. The system is completely software menu driven employing a high resolution Touch Screen technology running within the Windows XP Professional operating system, shortening the operator learning curve.

## TOUCHSCREEN AND SOFTWARE

Wide touchscreen for easiness in test planning and a clear view of results. User friendly Windows® interface with conversion tables and round correction values for tests on convex cylindrical surfaces or various diameters. Statistics and CHD charts are automatically generated. Standard and custom reports can be generated at a touch of a button. All results and testing sessions can be stored on the large archive using the on board software database.



# LD 3000 AF

TECHNICAL DATA	
Accuracy	Better than 0.5 %
Temperature Range	From 10 °C to 35 °C
Data Output	Bluetooth, RS 232 C, USB (as option)
Power Supply	110 o 220 V / 50-60 Hz
Software	Affri - OMAG
Principle of Operation	Load Cell and Closed Loop (Pat. AFFRI)
Force Range	HDTL CHD coating hardness range from 0.12 to 2 mm at 525 - 550 - 650 HV Rockwell 588.4 - 980.7 - 1471 <b>N</b> (60 - 100 - 150 <b>kgf</b> ) Brinell 98.07 - 153.2 - 294.2 - 306.5 - 612.9 - 1839 - 2450 - 4900 - 7350 - 9807 <b>N</b> (29403 <b>N</b> on request) (10 - 15.6 - 30 - 31.2 - 62.5 - 187.5 - 250 - 500 - 750 - 1000 <b>kgf</b> ) (3000 <b>kgf</b> on request) Vickers 98.07 - 147.1 - 294.2 - 490.3 - 980.7 <b>N</b> (10 - 15 - 30 - 50 - 100 <b>kgf</b> )
Feasible Tests	HDTL - CHD: 525 - 550 - 600 - 650 (More as optional) Rockwell HRA - HRB - HRC - HRD - HRE - HRF - HRG - HRH - HRK - HRN - HRT Brinell HBWT 2.5/62.5 - 2.5/187.5 - 5/125 - 5/250 - 5/750 - 10/500 - 10/1000 - 10/1500 - 10/3000 Brinell HBW 1/10 - 1/30 - 2.5/62.5 - 2.5/187.5 - 5/25 - 5/62.5 - 5/125 - 5/250 - 5/750 - 10/100 - 10/250 - 10/500 - 10/1000 - 10/1500 - (10/3000 Optional) Vickers HV 3 - HV 5 - HV 10 - HV 20 - HV 30 - HV 50 - HV 100
Standards	EN-ISO 6508 / EN-ISO 14577 / ASTM E-18 / ASTM E103
Dwell Time	From 5 to 60 seconds programmable
Vertical Stroke	150 mm
Indenter/Clamping-Hood Stroke	30 mm
Depth Capacity	190 mm
Fields Of Use	For case depth HDTL with a not destructive method as well Rockwell test.
Packing Weight	350 kg
Packaging Measurements	140x 100 x 65 cm



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