

# LD 3000 AX

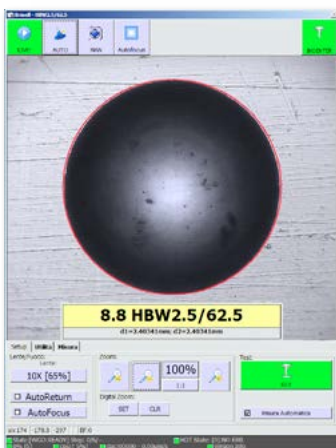
AUTOMATIC HARDNESS TESTER

Rockwell, Superficial Rockwell, Brinell HBTW, Brinell HBW, Vickers

ASTM E18 / ISO 6508

ASTM E10 / ISO 6506

ASTM E384 / ISO 6507



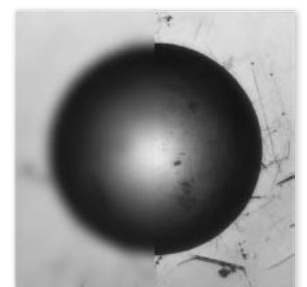
AUTOMATIC HBW / HBTW



AUTOMATIC HV

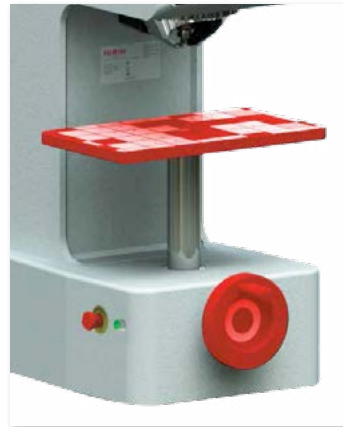


AUTOMATIC HR



AUTOFOCUS

# LD 3000 AX



**AUTOMATIC TEST CYCLE:** The hardness tester's head moves down until contact is made, clamps the piece, applies the force and make the indentation. The software will move to the camera view mode where the indent is automatically measured.

**AUTOFOCUS:** The Auto Focus performs an automatic focus adjustment for the selected optic with precise positioning at any magnification by mean of real image brightness scanning. This system assures high reading accuracy and reduces reading time.

**SWIVELLING TURRET:** Automatic turret with one indenter and one interchangeable objective as standard. Auto-rotating, auto-tool-switching and auto-centring for a completely automatic measurement cycle. Each tool can be easily changed with manual screwing.

**LOAD CELL AND CLOSED LOOP:** Load forces are applied through load cells and electronically controlled in "Closed Loop" (Pat. AFFRI) with a frequency of 1 kHz. Each load force is automatically programmed and controlled assuring perfect linearity in every range.

**TOUCHSCREEN:** Wide touchscreen for easy test planning and a clear view of results. Statistics charts and custom reports can be generated at a touch of a button. All results and testing sessions can be stored on the archive, USB stick, printed or exported to network database.

**FORCE RANGE** from 3 to 3000 kgf / from 1 to 250 kgf

Preload:	29.4 - 98.1 N (3 - 10 kgf)
Rockwell / Superficial R.:	588.4 - 980.7 - 1471 N (60 - 100 - 150 kgf) / 147.1 - 294.2 - 441.3 N (15 - 30 - 45 kgf)
Brinell:	9.807 - 24.52 - 49.03 - 61.29 - 98.07 - 153.2 - 245.2 - 294.2 - 306.5 - 612.9 - 1226 - 1839 - 2452 - 4903 - 7355 - 9870 - 29421 N (1 - 2.5 - 5 - 6.25 - 10 - 15.625 - 25 - 30 - 31.2 - 62.5 - 125 - 187.5 - 250 - 500 - 750 - 1000 - 3000 kgf)
Vickers/Knoop:	9.807 - 19.60 - 29.42 - 49.03 - 98.07 - 196.14 - 294.2 - 490.3 - 980.7 N (1 - 2 - 3 - 5 - 10 - 20 - 30 - 50 - 100 kgf)
Optional tests:	49 - 132 - 358 - 961 N (for plastic and rubber as per EN-ISO 2039)

**FEASIBLE TESTS** (Depending on the models)

Rockwell / Superficial R.:	HRA - HRB - HRC - HRD - HRE - HRF - HRG - HRH - HRK - HRL - HRM - HRP - HRR - HRS - HRV - HR15N/T/S/W/X/Y - HR30N/T/S/W/X/Y - HR45N/T/S/W/X/Y
Brinell HBW:	1/1 - 1/2.5 - 1/5 - 1/10 - 1/30 - 2.5/6.25 - 2.5/15.625 - 2.5/31.25 - 2.5/62.5 - 2.5/187.5 - 5/25 - 5/31.25 - 5/62.5 - 5/125 - 5/250 - 5/750 - 10/100 - 10/125 - 10/250 - 10/500 - 10/1000 - 10/1500 - 10/3000
Brinell HBWT:	1/30 - 2.5/15.6 - 2.5/31.5 - 5/125(3) (Aluminum and alloys) - 2.5/62.5(2) (Aluminum and alloys) - 2.5/187.5(6) (Aluminum and alloys) - 2.5/187.5(5) (Carbon steel) - 2.5/187.5(1) (Cast iron) - 5/125 - 5/250 - 5/750 - 10/500 - 10/1000 - 10/1500 - 10/3000
Vickers:	HV 1 - HV 2 - HV 3 - HV 5 - HV 10 - HV 20 - HV 30 - HV 50 - HV 100
Shore (As Option):	ISO 2039, Shore A and D hardness scales for plastic
CHD (As Option):	Automatic Case Hardness Depth tests with automatic graph

## 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
Temperature Range:	From 5 °C to 40 °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)
Height Capacity:	240 mm
Depth Capacity:	190 mm
Tolerable Weight:	Up to 2000 kg
Fields Of Use:	For all metals: iron, steel, tempered steel, cast iron, brass, aluminum, 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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