

LV Series Vickers* Hardness Testers

Specification Sheet



Model	LV110 863-790-222 LV110L 863-790-224	LV110AT 863-790-226 LV110ATL 863-790-228	LV810 863-790-244 LV810L 863-790-245	LV810AT 863-790-246 LV810ATL 863-790-247
Turret Mechanism	Manual	Automatic	Manual	Automatic
Loading Mechanism	Automatic loading and unloading			
Load Application Speed	Initial speed: 120 $\mu\text{m/s}$; automatically changes to 60 $\mu\text{m/s}$ after contact			
Dwell Time	5 to 40 s		5 to 99 s	
Objectives	Three positions: 10X standard on LV-Series; two additional objective lenses are optional 10X and 20X standard on LVL-Series; one additional objective lens is optional			
Total Magnification	LV-Series: 100X (Objective 10X; Eyepiece 10X) "L" Model: 100X and 200X (Objective 10X or 20X; Eyepiece 10X) All objectives are calibrated for measuring			
Measuring Microscope	Manual		Digital	
Max. Measuring Length	800 μm (100X)		400 μm (200X)	
Min. Resolution	0.5 μm (user estimate to 0.1 μm)		0.1 μm	
Color LCD-type Display and Touch Control Panel	Loading start, status LEDs		Pictured on back	
Max. Height of Specimen	8.27 in (210 mm)			
Max. Depth of Specimen	6.50 in (165 mm)			
Available Tests	HV, HK, HBW*		HV, HK, HBW*, and Kc (Fracture Toughness Value)	
Brinell Hardness* (optional)	Requires optional carbide ball indenter, custom weight set, and manual calculation of Brinell number		Light load Brinell; requires optional carbide ball indenter, and custom weight set	
Fracture Toughness Value (Kc)	N/A		Conforms to JIS R1607/IF method	
Case Depth Measurement Mode	N/A		Manually assign distances to calculate case depth	
Hardness Conversion	N/A		Conforms to ASTM E-140 and SAE J417b	
Data Output	N/A		USB and RS232C	
OK/NG Criteria	N/A		Upper and lower limits setting and HI/OK/LO display	
Self Diagnosis	N/A		Displays motor and switch areas requiring attention	
Light Source	LED		LED: Automatic brightness reduction during loading	
Conforms To	ASTM E-384, JIS B7725, and ISO 6507			
Video Port	Standard			
Dimensions	27.19 in H x 20.37 in D x 7.68 in W (690 mm x 517 mm x 195 mm)			
Weight	Approximately 121.25 lb (55 kg)—including standard accessories			
Power Supply	100 V~ to 220 V~, switchable 50/60 Hz			

*Knoop Indentor available as an option

Test Loads	Std. Model:	Newtons	9.807	19.61	29.42	49.03	98.07	196.1	294.2	490.3
		Kgf	1	2	3	5	10	20	30	50
	"L" Model:	Newtons	2.942	4.903	9.807	29.42	49.03	98.07	196.1	294.2
		Kgf	0.3	0.5	1	3	5	10	20	30

LV810 Series

- Advanced touch-screen display
- Hardness conversion
- LED illumination
- Automatic light dimming during test
- OK/NG criteria
- Data editing capabilities
- Auto or manual turret
- Case depth measurement mode
- Video port is standard



LV810 Color LCD Touch Panel

LV110 Series

- Straightforward analog operation
- LED illumination
- Manual light intensity adjustment
- Auto or manual turret
- Video port is standard
- Accuracy and precision without the automation



LV110 Touch Panel

*Specifications and part numbers may change.
Consult LECO for latest information.*

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