

LCR-500, LR Series Rockwell-Type Hardness Testers

Specification Sheet



Model	LR110RD (863-790-291) LR110SD (863-790-292)	LR310TD (863-790-293)	LCR-500 (863-396)
Type	Digital Rockwell/Digital Superficial		Digital Twin; Load Cell
Start Method	Manual setting with LED meter and audible indicator		Automatic
Load Control	Weight Select Knob, weights enclosed		Touch-screen; Load cell
Start Operation	Automatic or Manual Start		Fully automatic load application
Loading Speed	200 $\mu\text{m}/\text{second}$		User Selectable: 40 to 200 $\mu\text{m}/\text{second}$; Factory Setting: 120 $\mu\text{m}/\text{second}$
Dwell Time	1 to 99 seconds (Key entry in units of 1 second; Factory Setting: 5 seconds)		LCR-500 gives the user total control of the loading and unloading cycle
Plastic Measurement Mode	Standard function on panel; Time adjustable: 1 to 99 seconds		
Hardness Conversion	Hardness conversion in compliance with ASTM E-140 and SAE J-417b		
Compliant Standards	ASTM E-18, ASTM D-785, ISO 6508, ISO 2039-2, and JIS B-7726		
OK/NG Criteria	Upper and lower limit setting, and OK/NG display		
Available Scales	RD: All regular Rockwell scales SD: All superficial Rockwell scales	All regular and superficial Rockwell scales	All regular and superficial Rockwell scales, plus two user-defined scales*
Output Signal	RS-232		RS-232 (2 channels)
RS-232C Output and Printout Mode	<ul style="list-style-type: none"> • Measurement data only • Measurement data and evaluation results (Max. value, min. value, and OK/NG) • Measurement data and conversion data • Measurement data, conversion data, and evaluation results (Max. value, min. value, and OK/NG) • Measurement Data and Mean Value 		11 options
Max. Specimen Height	RD/SD: 10.04 in (255 mm)	TD: 8.85 in (225 mm)	10.04 in (255 mm)
Max. Specimen Depth	6.49 (165 mm)		6.69 in (170 mm)
Dimensions	RD/SD: 7.72 in W x 18.82 in D x 32.28 in H (196 mm W x 487 mm D x 820 mm H)		9 in W x 18 in D x 32 in H (220 mm x 465 mm x 810 mm)
Weight	RD: approx. 181 lb (82 kg) SD: approx. 176 lb (80 kg)	TD: approx. 183 lb (83 kg)	Approx. 220.5 lb (100 kg)
Power Supply	AC 100 to 240V; 50/60 Hz		AC 100 to 240V; 50/60 Hz

*LCR-500 ONLY: Manual setup of any load between 3 and 200 kg

RD - Regular Rockwell-Type Digital | SD - Superficial Rockwell-Type Digital | TD - Twin Digital

Test Loads

Model Number	Unit of	Minor Load	Major Loads		
LR110RD	Newtons	98.07	588.4	980.7	1471
	Kgf	10	60	100	150
LR110SD	Newtons	29.42	14.1	294.2	441.3
	Kgf	3	15	30	45
LR310TD	All listed loads				
LCR500	All listed loads, plus two customizable loads				

LCR-500 (Digital Twin, Load Cell)

- State-of-the-art, closed loop, self-compensating load cell technology
- All regular and superficial Rockwell scales are available
- Customizable Rockwell-type test using minor/major load combinations between 3 and 200 kg
- Better repeatability
- Advanced touch-screen display
- Less chance for human error
- Reduced operator influence on test results



LR310 (Digital Twin model) LR110 Series (Digital models)

- LR110 Series is for users who require **either** regular **or** superficial Rockwell scales; LR310 offers both.
- Strengthened body and improved precision
- Stable measurements of cylindrical parts due to the implementation of ball guides on the load shaft
- Multi-information display shows results and hardness conversion
- LED illumination of sample aids in indent placement
- User-friendly operation panel
- Convenient one-touch plastic measurement mode
- OK/NG indicators
- Automatic start
- Multiple conversion scales
- All weights enclosed inside system
- Ideal for high-throughput testing
- Small footprint



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

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