

# HR-521(L) / 523(L)

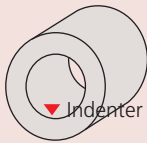
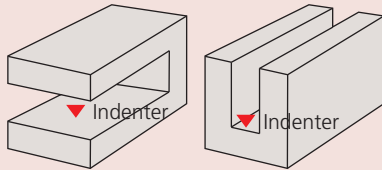
## SERIES 810 — Rockwell Type Hardness Testing Machines

### Technical Data

Preliminary test force: 29.42N, 98.07N  
 Test force  
 Rockwell superficial: 147.1, 294.2, 441.3N  
 Rockwell: 588.4, 980.7, 1471N  
 Brinell\*:  
 Test force setting: By control unit  
 Load control: Automatic (loading, duration, unloading)  
 Load duration: 0s - 120s (1s increments)  
 Max. specimen height: 205mm (for standard flat anvil)  
 Max. specimen depth: 150mm (from the center of indenter shaft)  
 Stage elevation: Manual or power drive  
 Control unit: Sheet-switch type or touch screen type  
 Data output: RS-232C, Digimatic code (SPC) and Centronics  
 Power supply: 120V AC, 50/60Hz  
 Dimensions (W x D x H)  
 Main unit: 250 x 670 x 605mm  
 Control unit: 165 x 260 x 105mm

**Optional Accessories:** See page K-13, 14

**Various shapes of specimen can be measured. (Nose-type indenter axis mechanism has been adopted)**  
 The nose-type indenter mechanism allows measurement of pipe samples as well as the top surface of a flat sample.



### Function: Touch screen type

- Touch screen operation with a back-lit LCD graphic display.
- Remote selection of the test force linked to the hardness scale selection.
- Choice of message language in English, German, French, Spanish, Italian and Japanese for user friendly operation.
- Cylindrical and spherical surface compensation.
- Data offset
- Conversion to other hardness scales.
- Powerful statistical processing with flexible data point editing and 1024 data memory.
- Measured data editing
- OK/±NG tolerance judgment.
- Statistical processing, histogram and x-R chart

### FEATURES

- Multiple test force generation for Rockwell, Rockwell Superficial and Brinell hardness.
- Dolphin-nose indenter arm for easy reach of interior (min.  $\varnothing 40\text{mm}/\varnothing 22\text{mm}^*$ ) and exterior surfaces.  
\*When using an optional diamond indenter (19BAA292).
- Real time electronic test force control for accurate loading. This perfectly eliminates load force overshooting.
- Indenter escape function for continuous testing at fixed table position. This eliminates instability caused by the table retraction.
- Auto-stop elevation table and automatic preliminary test force loading to provide stable test force generation.



### SPECIFICATIONS

Model	HR-521	HR521L	HR-523	HR-523L
Order No.	810-202-03A	810-205-03A	810-204-03A	810-207-03A
Preliminary Test Force	29.42N (3kgf), 98.07N (10kgf)			
Test Force	Rockwell	588.4N (60kgf), 980.7N (100kgf), 1471N (150kgf)		
	Rockwell Superficial	147.1N (15kgf), 294.2N (30kgf), 441.3N (45kgf)		
	Brinell	1839N (187.5kgf) (for use with 2.5mm ball)		
Force Control	Automatic control (unloading/duration/unloading) with closed loop feed back			
Console/Display Unit	Touch screen operation with back-lit LCD graphic display			
Test Force Selection	By touch screen			
Table up/down drive	Manual (w/Auto-brake mechanism)		Power-Drive (for full-automatic measurement)	
Load Duration	0 to 120 sec. (1 sec. step)			
Maximum Specimen Height	8.1" (205mm)	15.5" (395mm)	8.1" (205mm)	15.5" (395mm)
Maximum Specimen Depth	5.9" (150mm)			
Display Indication Functions	Hardness value, Converted hardness value, Test conditions, OK/NG tolerance judgement, statistical processing result Rockwell/Rockwell superficial hardness testing. Continuous testing. Cylindrical/spherical surface compensation, data offset Hardness conversion (HV, HK, HRA/B/C/D/F/G/15T/30T/45T/15N/30N/45N, HS, HB, HBW, tensile strength) OK/±NG tolerance judgement, measured data editing, data memory (max 1024 data) SPC calculation (No. of data, max/min/mean values, range, upper/lower limit values, standard deviation, No. of passing/defective) Histogram, x-R chart			
Data Output	RS-232C, SPC, Centronics			
Dimensions (W x D x H)	9.84" x 26.38" x 23.82" (250 x 670 x 605mm)			
Mass	60kg			