



An inspection certificate is supplied as standard. Refer to page U-11 for details.

HARDMATIC HH-411 SERIES 810 — Rebound Type Portable Hardness Tester

- Excellent operability that performs hardness tests with the touch of a key and a compact body allows users to measure hardness in the field. This instrument is best suited for on-site hardness tests such as large molds, railroad track, and welded spots in structures.



SPECIFICATIONS

Order No.	810-299-10	810-299-11	810-298-10	810-298-11
Model	HH-411			
Standard	JIS		ASTM	
Detector	Impact hammer with integrated detector and carbide-ball tip (D type)			
Display unit	7-segment LCD			
Hardness display range	Leeb hardness: 1 to 999 HL			
Display range (This display range varies depending on the conversion table used.)	Vickers hardness: 43 to 950 HV Brinell hardness: 20 to 896 HB Rockwell hardness (C scale): 19.3 to 68.2 HRC Rockwell hardness (B scale): 13.5 to 101.7 HRB		Shore hardness: 30.1 to 99.5 HS Tensile strength: 499 to 1999 MPa	
Power supply	Alkaline AA battery 2 pcs. (battery life: 70 hours) or optional AC adapter	Optional AC adapter	Alkaline AA battery 2 pcs. (battery life: 70 hours) or optional AC adapter	Optional AC adapter
External dimensions/Mass	Detector: ø28×175 mm in length, 120 g Display (W×D×H): 70×110×35 mm, 200 g			



Refer to the Hardness Testing Machines Brochure (E17001) for more details.

HARDMATIC HH-300 SERIES 811 — Durometers for Sponge, Rubber, and Plastics

- Hardness measurement by durometer is simply performed by holding the instrument against the surface of a specimen and reading the indicated value. This type of hardness tester is most widely used for hardness testing of sponge, rubber, plastics and other soft materials.



SPECIFICATIONS

Order No.	811-329-10	811-330-10	811-331-10	811-332-10	811-333-10	811-334-10	811-335-10	811-336-10	811-337-10	811-338-10	
Model No.	HH-329*	HH-330	HH-331*	HH-332	HH-333*	HH-334	HH-335*	HH-336	HH-337*	HH-338	
Type	Compact		Long				Compact				
Display specification	Analog	Digital	Analog	Digital	Analog	Digital	Analog	Digital	Analog	Digital	
Measurement target	Soft rubber, sponge, felt, hard film, winder		General rubber, soft plastic		hard rubber, hard plastic, ebonite		General rubber, soft plastic		hard rubber, hard plastic, ebonite		
Classification by specification	Type E		Type A		Type D		Type A		Type D		
Needle shape	Shaft diameter	—		ø1.25 mm							
	Tip shape	Semi-sphere		Circular truncated cone		Cone		Circular truncated cone		Cone	
	Tip angle	—		35°		30°		35°		30°	
	Tip diameter	ø5 mm		ø0.79 mm		—		ø0.79 mm		—	
	Tip curvature	—		—		0.1 mm		—		0.1 mm	
Power supply	—	Button silver oxide battery SR44	—	Button silver oxide battery SR44	—	Button silver oxide battery SR44	—	Button silver oxide battery SR44	—	Button silver oxide battery SR44	
External dimensions (WxD×H)	68×34×146 mm	59×40×147 mm	Analog, long type : 68×35×188 mm Digital, compact type: 59×41×190 mm				Analog, long type : 68×34×146 mm Digital, compact type: 59×40×147 mm				
Mass	300 g	290 g	320 g	310 g	320 g	310 g	300 g	290 g	300 g	290 g	

* Models which can be connected to the MeasurLink measurement data network system are only Digital types.

Optional Accessories for Dual-purpose Stand CTS Series

Order No.	811-019	811-012	811-013
Model	CTS-101	CTS-102	CTS-103
Applicable models	HH-331/32	HH-333/34/37/38	HH-335/36