

Hardmatic HH-411

SERIES 810 — Impact Type Hardness Testing Unit

Technical Data

Impactor:	Impact hammer with integrated detector and carbide-ball tip (D type: conforming to ASTM A 956)
Display unit:	7-segment LCD
Functions:	Auto angle compensation, Offset, OK/NG judgment, Hardness scale conversion Data storage (1800 data entries) Statistical analysis (Average, Maximum, Minimum, Dispersion) Auto sleep function Impact counter display function
Testable workpiece	
Thickness:	Minimum 5mm or more
Mass:	5kg or more in mass
Test points:	5mm or more from the edge of the sample, 3mm or more to each of the tested points.
Surface roughness:	Ra 10µm or less
Power supply:	Alkaline AA battery 2pcs or optional AC adapter (battery life: 70 hours)

Standard Accessories

19BAA265	Test Block HLD800
810-291	Display Unit
810-287	Detector
19BAA460	Cable Battery AA (Alkaline) 2pcs.

Optional Accessories

264-504-5A:	Digimatic Mini-Processor DP-1VR
937387:	Connecting cable for
09EAA082:	Printer paper (10 rolls/set)
810-622A:	Thermal printer DUP-414
19BAA262:	Thermal printer connecting cable
19BAA157:	Thermal printer paper
19BAA238:	RS-232C connecting cable for PC
06AEG302JA:	AC adapter of display unit
19BAA243:	Hardness test block (880HLD)
19BAA244:	Hardness test block (830HLD)
19BAA245:	Hardness test block (730HLD)
19BAA246:	Hardness test block (620HLD)
19BAA247:	Hardness test block (520HLD)
19BAA248:	Support ring for convex surface of cylinder (R10 - R20)
19BAA249:	Support ring for convex surface of cylinder (R14 - R20)
19BAA250:	Support ring for convex surface of sphere (R10 - R27.5)
19BAA251:	Support ring for concave surface of sphere (R13.5 - R20)
19BAA457:	Carbide ball for D, DC, D+15 type impactors
19BAA458:	Ball shaft for DL type impactor
810-287:	D type impactor UD-411
810-288:	DC type impactor UD-412
810-289:	D+15 type impactor UD-413
810-290:	DL type impactor UD-414

HH-411 is a rebound type portable hardness tester for metal with a compact body and high operability. It allows anyone to perform hardness testing easily at the touch of a key, so it can be used widely on various components in the field.



810-298: ASTM standard
Including the display unit, D type impactor (810-287) and carbide ball (19BAA457).

SPECIFICATIONS

Model	HH-411		
Order No.	810-298		
Hardness Range	L-Value (ASTM A956)		
Detector	Input device D (carbide ball)		
Display	Hardness	Range	Resolution
	HL	1-999 HL	1 HL
	HV	43-950 HV	1 HV
	HB	20-894 HB	1 HB
	HRC	19.3-68.2 HRC	0.1 HRC
	HRB	13.5 - 101.7 HRB	0.1 HRB
	HS	13.2 - 99.3 HS	0.1 HS
	HTN	499 - 1996 Mpa	1 Mpa
Functions	Conversions: HL, HV, HB, HRC, HRB, HS, HTN Judgment: OK/NG Offsetting Memory: 1,800 data		
Indentation Direction	Any direction		
Output	RS-232C, SPC		
Power supply	Alkaline AA Battery 2pcs.		
Dimensions	Detector: (Dia. X H) 1.10" x 6.89" (28 x 175mm) Display: (W x D x H) 2.76" x 4.33" x 1.38" (70 x 110 x 35mm)		
Mass	Detector: .26lbs (120g) Display: .44lbs (200g)		

Impactors (Optional accessories)

Various impactors can be connected to the display unit.



810-288
Use for inner walls of cylinders. The grip is short to allow easy positioning within a cylinder.



810-290
Use for gear teeth, welded corners, etc.



810-289
Use for concave workpieces such as gear teeth, ball bearing races, etc.