



An inspection certificate is supplied as standard.
Refer to page X for details.

- 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, plastic and other soft materials.

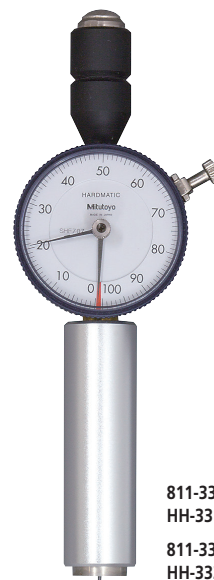
HARDMATIC HH-300 (Analog type) SERIES 811 — Durometers for Sponge, Rubber, and Plastics

Compact type



811-329-10 HH-329
811-335-10 HH-335
811-337-10 HH-337
811-335-11 HH-335-01
811-337-11 HH-337-01

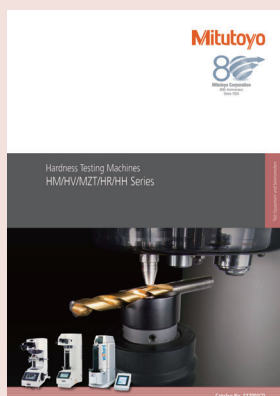
Long type



811-331-10
HH-331
811-333-10
HH-333

SPECIFICATIONS

Order No.	811-329-10	811-331-10	811-333-10	811-335-10	811-335-11	811-337-10	811-337-11
Model No.	HH-329	HH-331	HH-333	HH-335	HH-335-01	HH-337	HH-337-01
Type	Compact	Long		Compact			
Measurement target	Soft rubber, sponge, felt, hard film	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	—		ø1.25mm			
	Tip shape	Semi-sphere	Circular truncated cone	Cone	Circular truncated cone		Cone
	Tip angle	—	35°	30°	35°		30°
	Tip diameter	ø5mm	ø0.79mm	—	ø0.79mm		—
	Tip curvature	—	—	0.1mm	—		0.1mm
Needle platform	44x18mm	ø18mm		44x18mm	ø18mm	44x18mm	ø18mm
Protrusion of needle from platform	—			2.5mm			
Graduation	1						
Loading device W _E , W _A , W _D : spring force (mN) H _E , H _A , H _D : hardness	Coil spring W _E =550+75H _E (10 degrees 1300mN, 90 degrees 7300mN)	Coil spring W _A =550+75H _A (H _A : 10 - 90) (10 degrees 1300mN, 90 degrees 7300mN)	Coil spring W _D =444.5H _D (H _D : 20 to 90) (20 degrees 8890mN, 90 degrees 40005mN)	Coil spring W _A =550+75H _A (H _A : 10 - 90) (10 degrees 1300mN, 90 degrees 7300mN)		Coil spring W _D =444.5H _D (H _D : 20 to 90) (20 degrees 8890mN, 90 degrees 40005mN)	
Function	Peak hold						
External dimensions (WxDxH)	68x34x146mm	68x35x188mm		68x34x146mm			
Mass	300g	320g		300g	270g	300g	270g



Refer to the Hardness Testing Machines
(Catalog No. E17001) for more details.

Hardness Testing Machines

Start quality control from the material — Mitutoyo's hardness testing machines can handle it

HARDMATIC HH-300 (Digital type)

SERIES 811 — Durometers for Sponge, Rubber, and Plastics

Compact type



811-330-10 HH-330
811-336-10 HH-336
811-338-10 HH-338
811-336-11 HH-336-01
811-338-11 HH-338-01

Long type



811-332-10
HH-332
811-334-10
HH-334

SPECIFICATIONS

Order No.	811-330-10	811-332-10	811-334-10	811-336-10	811-336-11	811-338-10	811-338-11
Model No.	HH-330	HH-332	HH-334	HH-336	HH-336-01	HH-338	HH-338-01
Type	Compact	Long		Compact			
Measurement target	Soft rubber, sponge, felt, hard film	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	—	—	ø1.25mm			
	Tip shape	Semi-sphere	Circular truncated cone	Cone	Circular truncated cone		Cone
	Tip angle	—	35°	30°	35°		30°
	Tip diameter	ø5mm	ø0.79mm	—	ø0.79mm		—
	Tip curvature	—	—	0.1mm	—		0.1mm
Needle platform	44x18mm	ø18mm		44x18mm	ø18mm	44x18mm	ø18mm
Protrusion of needle from platform	2.5mm						
Graduation	0.1						
Loading device W _E , W _A , W _D : spring force (mN) H _E , H _A , H _D : hardness	Coil spring W _E =550+75H _E (10 degrees 1300mN, 90 degrees 7300mN)	Coil spring W _A =550+75H _A (H _A : 10-90) (10 degrees 1300mN, 90 degrees 7300mN)	Coil spring W _D =444.5H _D (H _D : 20 to 90) (20 degrees 8890mN, 90 degrees 40005mN)	Coil spring W _A =550+75H _A (H _A : 10-90) (10 degrees 1300mN, 90 degrees 7300mN)		Coil spring W _D =444.5H _D (H _D : 20 to 90) (20 degrees 8890mN, 90 degrees 40005mN)	
Function	Hold function, Output function: Digimatic interface for printer, Tolerance judgment, Function lock						
Power supply	Button silver oxide battery SR44						
External dimensions (WxDxH)	59x40x147mm	59x41x190mm		59x40x147mm			
Mass	290g	310g		290g	260g	290g	260g

Optional Accessories for Dual-purpose Stand CTS Series

The CTS Series can be combined with the HH-300 Series for (1) hardness measurement, and (2) spring force testing of the HH-300 Series hardness tester main unit.

(3) By connecting the attached weight directly to the hardness tester to perform hardness measurement results in better repeatability than can be obtained compared to hardness measurement made by directly pressing the hardness tester against the workpiece by hand. This measurement method with a weight directly connected to the hardness tester is useful for measuring the hardness of large samples for which the stand cannot be used, as well as hardness measurement in the field.

The CTS Series includes 3 models for different hardness tester types. All 3 models can be used for (1), (2), and (3) above with one stand by adding a separately available accessory.

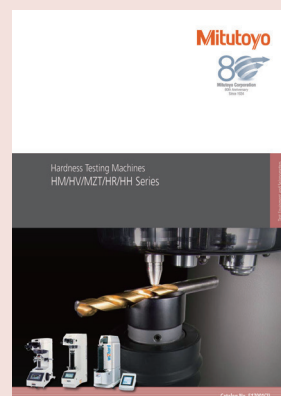
811-019
CTS-101



811-013
CTS-103



Order No.	811-019	811-012	811-013
Model	CTS-101	CTS-102	CTS-103
Applicable model	HH-331, 332	HH-333, 334, 337, 338	HH-335, 336



Refer to the Hardness Testing Machines (Catalog No. E17001) for more details.