# **Mitutoyo**



# HARDNESS TESTER PROMO

HR, HV, HM & HH SERIES TESTERS

Effective through December 13, 2024







### **Rockwell and Rockwell Superficial Hardness Tester**

With Real-Time Electronic Test Force Control

- > Closed-loop control of testing forces.
- > Initial and Total test forces (loads) are applied with unparalleled accuracy and repeatability.
- > Extended indenter arm reaches inside diameters and hard-to-reach surfaces at eye level, allowing the operator to easily see where the indenter accesses small or hard-to-reach parts.
- > Automatic cycle start after initial set point is reached.
- > Continuous test mode for automatic testing of all like sized parts.
- > All hardness parameters set automatically via the touch screen.
- > Cylindrical and spherical surface corrections.
- > Auto conversion to most common hardness scales or tensil strength.



Model No.		810-233-33A	810-333-33A			
Order No.		HR-530	HR-530L			
Hardness testing m	nethods	Rockwell / Rockwell Superficial / Brinell / Plastics Hardness				
Initial Test Force		29.42 N (3kgf),	98.07 N (10kgf)			
	Superficial	147.1 N (15kgf), 294.2 N	(30kgf), 441.3 M (45kgf)			
	Rockwell	588.4 N (60kgf), 980.7 N	(100kgf), 1471 N (150kgf)			
Test Force (N)	Light Force Brinell	61.29 N (6.25kgf), 98.07 N (10kgf), 153.2 N (15.625kgf), 245.2 N (25kgf), 294.2 N (30kgf), 306.5 N (31.25kgf), 612.9 N (62.5kgf), 980.7 N (100kgf), 1226 N (125kgf), 1839 N (187.5kgf)				
Test Force Control		Automatic (load / hold / unload)				
Maximum Specime	nt Size	Height: 9.8" (250mm) Height: 15.5" (395mm Depth: 5.9" (150mm) Depth: 5.9" (150mm)				
External Data Outp	out	RS-232C, digimatic, USB2.0				
External	Main Unit	9.84" x 26.38" x 23.82" (250 w x 667 d x 621 h mm)	11.6" x 26.2" x 30.1" (300 w x 667 d x 766 h mm)			
Dimensions Touch-Panel Display		191 w x 147 d x 71 h mm (Color)				
Mass		Approx. 60 kg	Approx. 69 kg			
	List	\$16,600.00	\$20,000.00			
	Promo	\$14,940.00	\$18,000.00			





## **ASTM Compliant HR Series Rockwell and Superficial Hardness Tester Packages Include:**

- > Certified Blocks an Indenters
- > C and N Scale Indenter
- > 1/16" Carbide Ball Indenter
- > HRC30 Rockwell Test Block
- > HRC63 Rockwell Test Block
- > HRBW95 Rockwell Test Block
- > HR30N60 Rockwell Test Block
- > HR30TW70 Rockwell Test Block
- > Certificate stating conformance to ASTM E 18
- > Mitutoyo Installation and A2LA Calibration



\*HR-430MR includes only diamond indenter, C scale indenter, HRC and HRBW blocks listed above\*

#### Calibration Set

Order No.	Order No.	Order No.					
64HAA463	64HAA464	64HAA465					
HRBW Scale	HR30N Scale	HR30TW Scale					
Test Blocks	Test Blocks	Test Blocks					
64HAA172	64HAA270	64HAA303					
64HAA170	64HAA266	64HAA301					
64HAA168	64HAA262	64HAA299					
Universal Style Indenter with Flat							
64HAA119	64HAA101	64HAA119					
	64HAA463  HRBW Scale  Test Blocks 64HAA172 64HAA170 64HAA168 Universal Style I	64HAA463         64HAA464           HRBW Scale         HR30N Scale           Test Blocks         Test Blocks           64HAA172         64HAA270           64HAA170         64HAA266           64HAA168         64HAA262           Universal Style Indenter with Flat					



For more information regarding compatible accessories such as fixtures, indenters, and calibration blocks use the QR Code!



### **A Complete Line of ASTM Compliant Rockwell Hardness Testing Machines**















Cambration included	HR-320MS	HR-430MR	HR-430MS	HR-530/HR-530L	HR-610A/HR-620A	HR-620B
Rockwell Scales		Х				
Rockell and Superficial	Х		Х	Х	Х	Х
Dead Weight	Х	Х	Х			
Individual Hanging Weights	Х					
Dial Weight		Х	Х			
Automatic break		Х	Х			
Closed Loop				Х	Х	Х
Digital Display	Χ	X	Х	Х	Х	Х
7.1" Max Sample Height	Χ	X	Х			
9.8" Max Sample Height				HR-530	Х	Χ
15.5" Max Sample Height				HR-530L		
6.5" Max Depth	Χ	X	Х			
5.9" Max Depth						
8.6" Max Depth				Х	Х	Х
CNC						Х
Motorized X Stage (Optional)					Х	Χ
Motorized Y Stage						Х
Software Control and Analysis						Χ
ASTM Compliant HR Series Rockwell & Rockwell Superficial Packages - All 10% Off	810-192-21A	810-193-21A	810-194-31A	810-233-33A (HR530) or 810-333- 33A (HR530L)	810-512-23A (HR610A) or 810-522-23A (HR620A)	810-527-21A
List	\$10,900.00	\$12,400.00	\$12,500.00	\$16,600.00 / \$20,000.00	\$28,100.00 / \$30,400.00	\$48,800.00
Promo	\$9,810.00	\$11,160.00	\$11,250.00	\$14,940.00 / \$18,000.00	\$25,290.00 / \$27,360.00	\$43,920.00

### **Scalable Interfacing Options**



HR-320MS, HR-430MR, HR-430MS



HR-530, HR-530L, HR-610A & HR-620A Touchscreen Controller



HR-620B PC Interface, Utilizing AVPAK Software



## Up to 25% OFF ALL HARDNESS TESTERS!



### Hardness Testers

#### **Heavy Load Hardness Testers - HV Series**

Highly Versatile Basic Model

HV-110/120 System A

- > Equipped with a high performance motorized test force selection function and motorized turret mounts.
- > Operates as smoothly as electric models but with the certainty of traditional test forces.
- > A List function make it easy to perform multi-point and average hardness evaluations, which required extra effort or external data processors with conventional manual models. This convenient screen enables consistency of test results.
- > Motorized test force selection and motorized turret positions can be easily controlled via a touch screen control panel. Adjustable X-Y stage with built-in digital micrometers for detailed measurement analysis

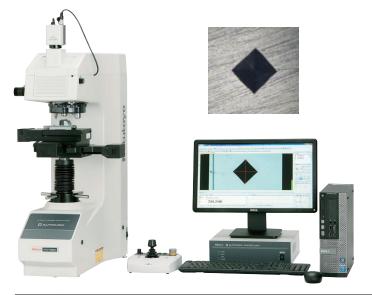
25% **OFF** 





Model		Test Force								Order No.	Body	List	Promo
	V.S*	HV1	HV2	HV3	HV4	HV5	HV10	HV20	HV50	810-440-13	110-440-13 A TYPE	\$25,700.00	\$19,275.00
HV-110	N	9.807	19.61	29.52	49.03	98.07	196.10	294.2	490.3				
	kgf	1	2	3	5	10	20	30	50				
	V.S*	HV 0.3	HV 0.5	HV1	HV2.5	HV5	HV10	HV20	HV30				
HV-120	N	2.942	4.903	9.807	24.51	49.03	98.07	196.1	294.2	810-445-13	A TYPE	\$25,700.00	\$19,275.00
	kgf	0.3	0.5	1	2.5	5	10	20	30				

\*V.S - Vickers Scale



## Advanced models promise additional productivity improvements

#### HV-110/120 System B,D

- > B, and D series testers feature AVPAK dedicated image software enabling automatic indentation reading with excellent automatic edge detection capability, reducing reading variation and visual error.
- > D series testers add powered X-Y stages which enable automatic continuous testing. This allows extended multi-point testing, complex pattern creation and multiple work piece analysis now carried out automatically.
- > D series testers add Auto Focus and create a fully automatic system that dramatically shortens the cycle time of your test and indentation analysis!

Model		Test Force									Body	List	Promo	
	V.S*	HV1	HV2	HV3	HV4	HV5	HV10	HV20	HV50	810-443A				
HV-110	N	9.807	19.61	29.52	49.03	98.07	196.10	294.2	490.3		B / D TYPE	\$34,000.00	\$25,500.00	
	kgf	1	2	3	5	10	20	30	50					
	V.S*	HV 0.3	HV 0.5	HV1	HV2.5	HV5	HV10	HV20	HV30					
HV-120	N	2.942	4.903	9.807	24.51	49.03	98.07	196.1	294.2	810-448A	B / D TYPE	\$34,000.00	\$25,500.00	
	kgf	0.3	0.5	1	2.5	5	10	20	30					

\*V.S - Vickers Scale

<sup>\*</sup>Additional Components Required for a Complete System

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#### Micro Vickers Hardness Testers - HM Series

- > HM Type A systems include a built-in measuring eyepieces for indentation analysis and accurate workpiece positioning
- > Automatic Turret (Touch-screen controlled in Type A systems and software controlled via AVPAK in Type B
- > Test force range 10g-1000g (HM-210) and .05-2000g (HM-220)
- >LFD illumination
- > Type B and D systems include a camera for software analysis (Type A systems can use optional camera for digital imagery)
- > Type A and B systems use micrometer controlled adjustable stages and Type D systems utilize a motorized XY Stage



MeasurLink ENABLED Data Management Software by Mituto

> Seamless assistance is a scan away -Connect with your local representative by making an inquiry today!



### 20% OFF MICRO VICKERS TESTERS!

Functions	System A	System B	System D
Focusing	Manual	Manual	Automatic
Testing Action	Single Point	Single Point	Pattern Specific
Test-point Positioning	Manual X-Y Stage	Manual X-Y Stage	Automatic X-Y Stage
Measuring Indentations	Manual Monoscope	Automatic by AVPAK	Automatic by AVPAK
Camera (for observing and measuring indentations)	600,000 pixels B&W*	Color, 3 million pixels	Color, 3 million pixels
Operating the main unit	Touchel Panel	PC**	PC**
Order No	64AAB305PA	64AAB323PA	64AAB380PA
Main Unit	HM-210A	HM-210B	HM210D
List	\$25,000.00	\$41,200.00	\$71,100.00
Promo	\$20,000.00	\$32,960.00	\$56,880.00

<sup>\*\*</sup> PC sold separately

### Portable Hardness Testers

#### **Durometers (Digital and Analog)**

For Rubber and Plastic Hardness Testing

Order No	Model	Scale	Display	Graduation	Range	Indenter	List	Promo
811-335-10	HH-335	Shore A	Analog	1.0	10~90	Blunt Taper	\$686.00	\$617.40
811-336-10	HH-336	Shore A	Digital	0.5	10~90	Blunt Taper	\$1,470.00	\$1,323.00
811-337-10	HH-337	Shore D	Analog	1.0	20~90	Sharp Point	\$686.00	\$617.40
811-338-10	HH-338	Shore D	Digital	0.5	20~90	Sharp Point	\$1,470.00	\$1,323.00

Compact Dial

811-335-10

**MeasurLink**° ENABLED

Data Management Software by Mitutoyo



Compact

Digital 811-336-10

#### **HH-411 Hardmatic**

Rebound Leeb portable hardness tester featuring reproducibility and ease of operation on large parts. It is lightweight and can be carried into the shop or out in the field.

Order No.	Туре	List	Promo
810-298-10	HH-411 Hardmatic	\$4,580.00	\$4,122.00

<sup>\*</sup>Additional Packages Available Please contact your local distribution or Mitutoyo sales representative.

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M³ Solution Centers (Showrooms): Locations (8 in total):

Total Number of Employees: Approximately 400

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PDF ONLY • Printed in USA • July 2024