

Advanced Rockwell Type Hardness Testing Machines

HR-521/523

Advanced Rockwell Hardness Testing Machines

Features

- ◆ Multiple test force generation for Rockwell, Rockwell Superficial and optional Brinell hardness.
- ◆ Projected-nose indenter arm for easy reach of interior (min. $\phi 1.6"$ (40mm)/ $\phi 0.86"$ (22mm)*) and exterior surfaces.
*When using an optional diamond indenter (19BAA292).
- ◆ Closed Loop electronic test force control for accurate loading.
- ◆ Auto-stop elevation table and automatic preliminary test force loading provide consistent test force generation.



Specifications

Inch (mm)

Order Number	810-202-03A	810-205-03A	810-204-03A	810-207-03A
Model	HR-521	HR-521L	HR-523	HR-523L
Test Scales	Rockwell and Rockwell Superficial			
Standard	JIS B 7726 ISO 6508-2 ASTM E18-10			
Preliminary Test Force	98.07N (10kgf), 29.42 (3kgf)			
Test Force Rockwell	588.4N (60kgf), 980.7N (100kgf), 1471N (150kgf)			
Test Force Superficial	147.1N (15kgf), 294.2N (30kgf), 441.3N (45kgf)			
Touch Screen LCD Showing: Hardness value, Converted hardness value, Test conditions, OK/NG tolerance judgement, statistical processing result. 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/ \pm 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, \bar{x} -R chart.				
Hardness Minimum Value	0.1 HR			
Scale Conversions	Advanced with corrections			
Preliminary Test Force	Manual (with automatic brake-start)		Fully Motorized Power Elevating Screw	
Total Test Force Load Control	Automatic (loading, duration, unloading)			
Loading Method	Closed Loop Electronic Force			
Load Duration (Dwell)	Adjustable (0s to 120s) or manual			
Maximum Specimen Height	8.1" (205mm)	15.5" (395mm)	8.1" (205mm)	15.5" (395mm)
Maximum Depth	5.9" (150mm)			
Data Output	RS-232C, SPC and Centronics			
Power Supply	120V AC ($\pm 10\%$), 60Hz			
Dimensions (D x W x H)	26.4" (670mm) x 9.8" (250mm) x 23.8" (605mm)	26.4" (670mm) x 9.8" (250mm) x 29.5" (750mm)	26.4" (670mm) x 9.8" (250mm) x 23.8" (605mm)	26.4" (670mm) x 9.8" (250mm) x 29.5" (750mm)
Mass	132.28lb (60kg)	154.32lb (70kg)	132.28lb (60kg)	154.32lb (70kg)

Optional Accessories for Rockwell/Rockwell Superficial



Calibration Set

Order No.	Order No.
64BAA241	64BAA242
C Scale Set	B Scale Set
Test Blocks	Test Blocks
64BAA125	64BAA126
64BAA124	64BAA132
64BAA158	64BAA135
Indenter	Indenter
64BAA072	64BAA078
Order No.	Order No.
64BAA243	64BAA244
30N Scale Set	30T Scale Set
Test Blocks	Test Blocks
64BAA128	64BAA129
64BAA165	64BAA140
64BAA167	64BAA130
Indenter	Indenter
64BAA073	64BAA078

810-038-7
Round table $\phi 9.85"$ (250mm)

For large specimens



810-037-7
Round table $\phi 7.09"$ (180mm)

For large specimens



810-040-7
V anvil (large)
 $\phi 1.6"$ (40mm), groove width 1.18" (30mm)
For large specimens



810-043
Spot anvil
 $\phi .47"$ (12mm)
For sheet specimens



810-041-7
V anvil (small)
 $\phi 1.6"$ (40mm), groove width 6mm
For cylindrical specimens

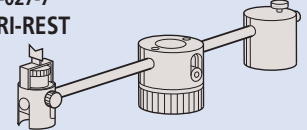


810-044-7
Spot anvil
 $\phi .22"$ (5.5mm)
For sheet specimens



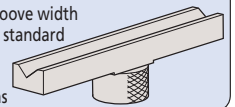
810-027-7
VARI-REST

For testing long specimens using anvil



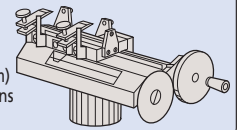
810-029
Special V anvil

Length 16" (400mm), groove width 2" (50mm) Supports the standard hardenability test for steel
For cylindrical specimens



810-026
Fine adjustment table for Jominy test

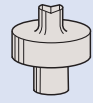
Fine adjustment table for Jominy test
Length 16" (400mm)
groove width 2" (50mm)
For cylindrical specimens



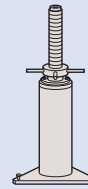
810-030-7
Diamond spot anvil
.39" (10mm)
For sheet specimens



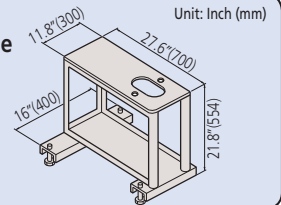
810-042-7
Small V anvil
 $\phi .39"$ (10mm)
For cylindrical specimens



810-028-7
Jack rest
For testing long specimens using table or anvil



810-048
Console table



264-504-5A
Digimatic mini-processor DP-1VR
* No connection cable supplied.
(Should be ordered separately)
Connection cable (1m) 937387



06ADV380E
USB Direct Input Tool
The USB plug is connected to a computer

Type Hardness Testing Machines

Test Blocks*

Order No.	Hardness
64BAA159	HRA81/86 Rockwell Test Block
64BAA160	HRA75/79 Rockwell Test Block
64BAA161	HRA70/73 Rockwell Test Block
64BAA162	HRA65/68 Rockwell Test Block
64BAA163	HRA60/62 Rockwell Test Block
64BAA249	HRBW95/100 Rockwell Test Block
64BAA126	HRBW90/95 Rockwell Test Block
64BAA131	HRBW80/85 Rockwell Test Block
64BAA132	HRBW70/75 Rockwell Test Block
64BAA133	HRBW60/65 Rockwell Test Block
64BAA134	HRBW50/55 Rockwell Test Block
64BAA135	HRBW40/45 Rockwell Test Block
64BAA127	HRBW30/35 Rockwell Test Block
64BAA136	HRBW20/25 Rockwell Test Block
64BAA137	HRBW10/15 Rockwell Test Block
64BAA138	HRBW0/5 Rockwell Test Block
64BAA125	HRC60/65 Rockwell Test Block
64BAA157	HRC50/55 Rockwell Test Block
64BAA124	HRC40/45 Rockwell Test Block
64BAA123	HRC30/35 Rockwell Test Block
64BAA158	HRC20/25 Rockwell Test Block

Order No.	Hardness
64BAA129	HR30T74/79 Rockwell Test Block
64BAA139	HR30T70/73 Rockwell Test Block
64BAA140	HR30T63/67 Rockwell Test Block
64BAA141	HR30T56/60 Rockwell Test Block
64BAA142	HR30T49/53 Rockwell Test Block
64BAA130	HR30T43/47 Rockwell Test Block
64BAA143	HR30T36/39 Rockwell Test Block
64BAA144	HR30T29/33 Rockwell Test Block
64BAA145	HR30T22/26 Rockwell Test Block
64BAA146	HR30T15/18 Rockwell Test Block
64BAA147	HR15T90/92 Rockwell Test Block
64BAA148	HR15T86/69 Rockwell Test Block
64BAA149	HR15T83/85 Rockwell Test Block
64BAA150	HR15T80/82 Rockwell Test Block
64BAA151	HR15T77/79 Rockwell Test Block
64BAA152	HR15T72/74 Rockwell Test Block
64BAA153	HR15T70/72 Rockwell Test Block
64BAA154	HR15T68/69 Rockwell Test Block
64BAA155	HR15T64/66 Rockwell Test Block
64BAA156	HR15T61/63 Rockwell Test Block

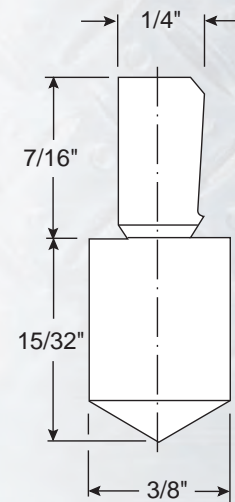
Order No.	Hardness
64BAA222	HR45N65/70 Rockwell Test Block
64BAA223	HR45N55/60 Rockwell Test Block
64BAA224	HR45N45/50 Rockwell Test Block
64BAA225	HR45N35/40 Rockwell Test Block
64BAA226	HR45N25/30 Rockwell Test Block
64BAA128	HR30N77/82 Rockwell Test Block
64BAA164	HR30N68/73 Rockwell Test Block
64BAA165	HR30N59/64 Rockwell Test Block
64BAA166	HR30N50/55 Rockwell Test Block
64BAA167	HR30N40/45 Rockwell Test Block
64BAA168	HR15N90/93 Rockwell Test Block
64BAA169	HR15N85/88 Rockwell Test Block
64BAA170	HR15N80/83 Rockwell Test Block
64BAA171	HR15N75/77 Rockwell Test Block
64BAA172	HR15N69/72 Rockwell Test Block

Order No.	Description
64BAA118	HRE 50/55 Rockwell Test Block
64BAA119	HRE 60/65 Rockwell Test Block
64BAA120	HRE 70/75 Rockwell Test Block
64BAA121	HRE 80/85 Rockwell Test Block
64BAA122	HRE 90/95 Rockwell Test Block

Carbide Ball Indenters

Order No.	Description
19BAA515	1/16" Carbide ball indenter
19BAA504	1/8" Carbide ball indenter
19BAA505	1/4" Carbide ball indenter
19BAA506	1/2" Carbide ball indenter
19BAA507	1/16" Carbide ball (1pc.)
19BAA508	1/8" Carbide ball (1pc.)
19BAA509	1/4" Carbide ball (1pc.)
19BAA510	1/2" Carbide ball (1pc.)

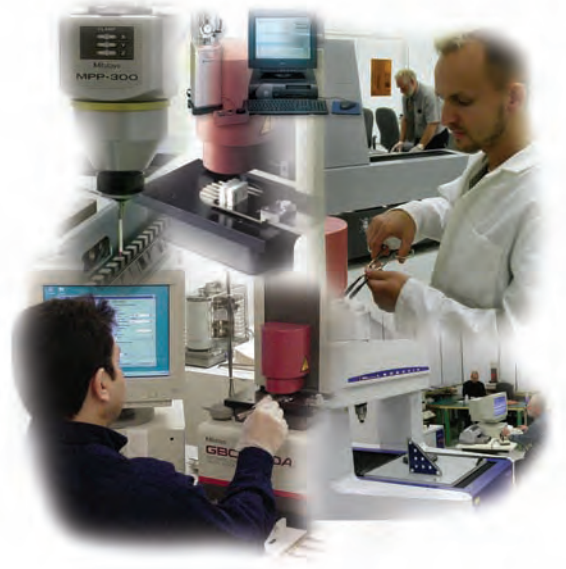
Rockwell Type Diamond Indenters



Order No.	Scale
64BAA072	C
64BAA073	N
64BAA086	A
64BAA071	C & N

* Please inquire for other hardness ranges

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