

HR-110MR / HR-320MS / HR-430MS

SERIES 963 – Rockwell Hardness Testing Machines

Technical Data

Max. specimen height: 180 mm (100 mm if cover is attached)
Max. specimen depth: 165 mm (from indenter axis to the frame)

Optional Accessories

Code No.	Description
264-505E	DP-1VA LOGGER Digimatic Mini-Processor
810-027	Adjustable support for long workpieces
810-028	Height adjustable jack rest
810-029	V-anvil (400 mm long, 120° groove 50 mm wide, ø50 - ø100 mm)
810-030	Spot anvil (diamond tipped type for Rockwell Superficial, ø3.5 mm)
810-037	Round table (ø180 mm)
810-038	Round table (ø250 mm)
810-040	V-anvil (ø40 mm, 120° groove 30 mm wide, ø15 - ø60 mm)
810-041	V-anvil (ø40 mm, 90° groove 6 mm wide, ø3 - ø9 mm)
810-042	V-anvil (ø10 mm, 120° groove 8 mm wide, ø4 - ø16 mm)
810-043	Spot anvil (ø12 mm)
810-044	Spot anvil (ø5.5 mm)
810-048	Steel table
810-700	Stage with fine adjustment
937387	SPC data cable (1 m)
965013	SPC data cable (2 m)
06AFM380E	USB Input Tool Direct USB-ITN-E (2 m)
56AAK286B	Brinell weight set for HR-110MR (3 pcs.)
56AAK287B	Brinell weight set for HR-320MS (4 pcs.)
56AAK289B	Brinell weight set for HR-430MS (4 pcs.)

For Hardness Test Blocks refer to page M-10 for details.
For Indenters refer to page M-10 for details.

- The newly designed frame provides maximum clearance for positioning the workpiece. A table or bench is all that is needed for mounting these testing machines.
- Simple to operate. With the analogue type, HR-110MR, the gauge presetting operation has been eliminated by the adoption of an automatic presetting dial gauge.
- The HR-430MS uses an automatic steering wheel brake and loading sequence to enable simple test handling.
- HR-110MR does not require a power source, and is considered to be environmentally friendly.
- The digital types HR-320MS and HR-430MS provide Digimatic output for direct data transfer to the DP-1VA LOGGER Digimatic Mini-Processor, and the USB-ITN-E input tool can be used to connect to a PC for data transfer and processing.
- Brinell hardness tests can be performed by using the following optional accessories: a Brinell indenter, a weight set and a measurement microscope.

MeasurLink ENABLED
Data Management Software by Mitutoyo



963-210-20



963-231E



963-241E

Specifications

Model	HR-110MR	HR-320MS	HR-430MS
Code No.	963-210-20	963-231E	963-241E
Type of hardness test	Rockwell	Rockwell / Rockwell Superficial	
Standard	JIS B 7726	ISO 6508-2, JIS B 7726, ASTM E 18	
Display	Analogue	Digital	
Minimum reading	0.5HR graduation	0.1HR indication	
Preload force (handing support)	Automatic pre-setting dial gauge	Loading navigator indication	Automatic steering wheel brake
Preload force setting	—	Dial switching	
Total test force setting	Weight change		Dial switching
Total test force control	Manual	Motor drive – button start	Motor drive – automatic start
Test force duration	Manual	Fixed 3 - 5.5 s or manual	3 - 60 s setting or manual operation
Functions	—	Success or failure decision function, offset revision function, hardness conversion function	
Data output	—	Digimatic (SPC), RS-232C	
Power supply	No power required	240VAC ±10%, 50/60Hz	
Dimensions (WxDxH)	Approx. 296 x 512 x 780 mm	Approx. 235 x 516 x 780 mm	
Mass	Approx. 49 kg	Approx. 47 kg	Approx. 50 kg

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