

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 (handling 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 (W x D x H) | Approx. 296 x 512 x 780 mm | Approx. 235 x 516 x 780 mm | |
| Mass | Approx. 49 kg | Approx. 47 kg | Approx. 50 kg |