

|                          | RT 200                                      | RT 201  | RT202   | RT 203   |
|--------------------------|---|---|---|--|
| Standard                 |   | JIS B 7726 ISO 6508-2                           | ASTM E18-10                                   |  |
| Preliminary Test Force   | 98.07N (10kgf)                              | 98.07N (10kgf), 29.42 (3kgf)                    | 98.07N (10kgf), 29.42 (3kgf)                  | 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)  | —   | 147.1N (15kgf), 294.2N (30kgf), 441.3N (45kgf) |
| Display                  | Dial  |   | Matrix Backlight LCD                          |  |
| Hardness Minimum Value   | 0.5 HR                                      |   | 0.1 HR  |  |
| Scale Conversions        | —   |   | HRC, HRB, HV, HBW, HS, Mpa plus offset, OK/NG |  |
| Preliminary Test Force   | Manual (with automatic zero set)            | Manual (with Loading Navigator)                 | Manual (with automatic brake-start)           |  |
| Total Test Force Control |   | Automatic (loading, duration, unloading)        |   |  |
| Loading Method           |   | Dead Weight                                     |   |  |
| Load Duration (Dwell)    | Fixed (3s to 5.5s) or Manual                |   | Adjustable (1s to 99s) or Manual              |  |
| Maximum Specimen Ht.     |   | 7.1" (180mm)                                    |   |  |
| Maximum Depth            |   | 6.5" (165mm)                                    |   |  |
| Data Output              | —   |   | RS-232C, SPC                                  |  |
| Power Supply             |   | 120V AC (±10%), 60Hz                            |   |  |
| Dimensions (D x W x H)   | 20.15"(512mm) x 9.25"(235mm) x 30.7"(780mm) | 20.6"(523mm) x 9.25"(235mm) x 30.7"(780mm)      | 20.6"(523mm) x 9.25"(235mm) x 30.7"(780mm)    | 20.6"(523mm) x 9.25"(235mm) x 30.7"(780mm)     |
| Mass                     | 100.53lb (45.6kg)                           | 102.07lb (46.3kg)                               | 108.69lb (49.3kg)                             | 110.01lb (49.9kg)                              |

## STANDARD ACCESSORIES

| Item                        | All Models  |  | RT 200 RT 201       |          | RT 201 RT 203       |           |
|-----------------------------|-------------|--|---------------------|----------|---------------------|-----------|
|                             | Description |  | Description         |          | Description         |           |
| V Anvil (large)             | 30mm        |  |                     |          |                     |           |
| Flat Anvil                  | 64mm        |  | Diamond Indenter    | Rockwell | Diamond Indenter    |           |
| 1/16" Carbide Ball Indenter |             |  | Hardness test Block |          | Hardness test Block | 60 HRC    |
| AC Adapter                  |             |  | Hardness test Block | 60 HRC   | Hardness test Block | 30 HRC    |
| Users Manual                |             |  | Hardness test Block | 30 HRC   | Hardness test Block | 90 HRBW   |
| Vinyl Cover                 |             |  |                     | 90 HRBW  | Hardness test Block | 65 HR30N  |
| Accessory Box               |             |  |                     |          | Hardness test Block | 70 HR30TW |
| Level                       |             |  |                     |          |                     |           |

## HARDNESS SCALES

| Scale | Hardness symbol*1 | Indenter          | Preliminary test force | Total test force | Hardness range applicable | Scale | Hardness symbol*1 | Indenter          | Preliminary test force | Total test force | Hardness range applicable |
|-------|-------------------|-------------------|------------------------|------------------|---------------------------|-------|-------------------|-------------------|------------------------|------------------|---------------------------|
|       |                   |                   |                        |                  |                           |       |                   |                   |                        |                  |                           |
| A     | HRA               |                   |                        | 588.4N (60kgf)   | 20-95HRA                  | 15N   | HR15N             |                   |                        | 147.1N (15kgf)   | 70-94HR15N                |
| D     | HRD               | Conical diamond   |                        | 980.7N (100kgf)  | 40-77HRD                  | 30N   | HR30N             | Conical diamond   |                        | 294.2N (30kgf)   | 42-86HR30N                |
| C     | HRC               |                   |                        | 1471N (150kgf)   | 10-70HRC                  | 45N   | HR45N             |                   |                        | 441.3N (45kgf)   | 20-77HR45N                |
| F     | HRF               | Sphere            |                        | 588.4N (60kgf)   | 60-100HRF                 | 15T   | HR15T             | Sphere            |                        | 147.1N (15kgf)   | 67-93HR15T                |
| B     | HRB               | ø1.5875mm (1/16") |                        | 980.7N (100kgf)  | 20-100HRB                 | 30T   | HR30T*2           | ø1.5875mm (1/16") |                        | 294.2N (30kgf)   | 29-82HR30T                |
| G     | HRG               |                   |                        | 1471N (150kgf)   | 30-94HRG                  | 45T   | HR45T             |                   |                        | 441.3N (45kgf)   | 10-72HR45T                |
| H     | HRH               | Sphere            | 98.07N (10kgf)         | 588.4N (60kgf)   | 80-100HRH                 | 15W   | HR15W             | Sphere            | 29.42N (3kgf)          | 147.1N (15kgf)   |                           |
| E     | HRE               | ø3.175mm (1/8")   |                        | 980.7N (100kgf)  | 70-100HRE                 | 30W   | HR30W             | ø3.175mm (1/8")   | Coverage               | 294.2N (30kgf)   |                           |
| K     | HRK               |                   |                        | 1471N (150kgf)   | 40-100HRK                 | 45W   | HR45W             |                   |                        | 441.3N (45kgf)   |                           |
| L     | HRL               | Sphere            |                        | 588.4N (60kgf)   |                           | 15X   | HR15X             | Sphere            |                        | 147.1N (15kgf)   |                           |
| M     | HRM               | ø6.35mm (1/4")    |                        | 980.7N (100kgf)  |                           | 30X   | HR30X             | ø6.35mm (1/4")    |                        | 294.2N (30kgf)   |                           |
| P     | HRP               |                   |                        | 1471N (150kgf)   |                           | 45X   | HR45X             |                   |                        | 441.3N (45kgf)   |                           |
| R     | HRR               | Sphere            |                        | 588.4N (60kgf)   |                           | 15Y   | HR15Y             | Sphere            |                        | 147.1N (15kgf)   |                           |
| S     | HRS               | ø12.7mm (1/2")    |                        | 980.7N (100kgf)  |                           | 30Y   | HR30Y             | ø12.7mm (1/2")    |                        | 294.2N (30kgf)   |                           |
| V     | HRV               |                   |                        | 1471N (150kgf)   |                           | 45Y   | HR45Y             |                   |                        | 441.3N (45kgf)   |                           |

\*1: In the case of scales which specify a spherical indenter, a letter should be appended to the hardness symbol ("S" for steel, "W" for tungsten carbide) when quoting the measurement result to show that it was obtained with an indenter made of the indicated material.

\*2: Applied to a specimen of less than 0.6mm thickness a special test, which takes account of the influence of the impression made by the test sphere on such a thin specimen, may be designated as HR30Tm and is defined in JIS Z 2245 appendix A.