



Series : **RAS-D**

Over **60** years of  
consistent excellence



## Digital Rockwell & Combined Hardness Testing Machine



Perfect vertical movement of  
loading plunger with minimum friction



Long life machine accuracy



Automatic Loading/Unloading Cycle





Over **60** years of consistent excellence

## Digital Rockwell, Rockwell Brinell Combined, Rockwell/Rockwell Superficial Combined System Hardness Testers

FIE Hardness Testers, Model : RAS-D, RAB-1-D, RAB-250-D & TWIN-D are manually operated. All these models are suitable for testing hardness of metals & alloys of all kinds hard or soft, whether flat, round & irregular shape. These testers are simple in design & easy to operate, yet sensitive and accurate. Various models from the wide range are suitable for Tech Institutes, Laboratories, Tool-rooms, Inspection, Heat treatment departments, Factories etc.

These testers strictly confirm to IS:1586-2 for Rockwell & Rockwell superficial test.

### Model : RAS-D

- Manual load selection with automatic Zero setting dial gauge.
- Manual Operation.

### Model : TWIN-D

- Manual load selection with automatic Zero setting dial gauge.
- Manual Operation.
- Diamond holder is guided in a ball cage, which enables testing of small pins having dia from 3.0 mm onwards.

### Model : RAB-1-D

- Manual load selection & automatic Zero setting dial gauge.
- Facility for Brinell tests with 187.5 kgf. load with 2.5 mm ball indenter, additional load 250 kgf with 5 mm ball indenter for testing hardness of non-ferrous material.

### Model : RAB-250-D

- Similar to 'RAB-1' but bigger capacity.
- Diamond holder is guided in a ball cage, which enables testing of small pins having dia from 3.0 mm onwards.



### Technical Data :

| MODEL                                    | UNIT | RAS-D        | RAB-1-D                  | RAB-250-D                | TWIN-D                                                       |
|------------------------------------------|------|--------------|--------------------------|--------------------------|--------------------------------------------------------------|
| Loads                                    | kgf. | 60, 100, 150 | 60, 100, 150, 187.5, 250 | 60, 100, 150, 187.5, 250 | 15, 30, 45 (Rockwell Superficial)<br>60, 100, 150 (Rockwell) |
| Initial Load                             | kgf. | 10           | 10                       | 10                       | 3 (Rockwell Superficial)<br>10 (Rockwell)                    |
| Max. Test Height                         | mm   | 230          | 230                      | 330                      | 330                                                          |
| Depth of Throat                          | mm   | 133          | 133                      | 150                      | 150                                                          |
| Max. depth of elevating screw below base | mm   | 240          | 240                      | 355                      | 355                                                          |
| Size of base (approx.)                   | mm   | 170x430      | 170x430                  | 210x474                  | 210x474                                                      |
| Machine Height (approx.)                 | mm   | 655          | 655                      | 850                      | 850                                                          |
| Nett Weight (approx.)                    | kg.  | 65           | 65                       | 100                      | 100                                                          |

### Standard Accessories :

| MODEL                                                                     | RAS-D    | RAB-1 / RAB-250-D | TWIN-D   |
|---------------------------------------------------------------------------|----------|-------------------|----------|
| Testing table 50 mm dia.                                                  | 1 pc.    | 1 pc.             | 1 pc.    |
| Testing table 38 mm dia. with 'V' groove for - round jobs 6 to 45 mm dia. | 1 pc.    | 1 pc.             | 1 pc.    |
| Diamond Indenter 120°                                                     | 1 pc.    | 1 pc.             | 1 pc.    |
| Steel ball Indenter 1/16"                                                 | 1 pc.    | 1 pc.             | 1 pc.    |
| Test block Rockwell 'C'                                                   | 1 pc.    | 1 pc.             | 1 pc.    |
| Test block Rockwell 'B'                                                   | 1 pc.    | 1 pc.             | 1 pc.    |
| Test block Rockwell Superficial 'N'                                       | NIL      | NIL               | 1 pc.    |
| Allen Spanners                                                            | 5 pcs.   | 5 pcs.            | 5 pcs.   |
| Clamping Device                                                           | 1 pc.    | 1 pc.             | 1 pc.    |
| Dash Pot Oil                                                              | 1 bottle | 1 bottle          | 1 bottle |
| Rubber bellow for elevating screw protection                              | 1 pc.    | 1 pc.             | 1 pc.    |
| Instruction Manual                                                        | 1 book   | 1 book            | 1 book   |
| Brinell Microscope                                                        | NIL      | 1 pc.             | NIL      |
| Steel ball indenter 2.5 mm                                                | NIL      | 1 pc.             | NIL      |
| Test block HB 2.5/187.5                                                   | NIL      | 1 pc.             | NIL      |
| Steel ball indenter 5 mm                                                  | NIL      | 1 pc.             | NIL      |

**Note :** For Brinell scale - manually select (187.5 or 250 kgf) with respected ball indenter. At that time take reference of set point only, apply the load, then measure the impression diameter by Brinell microscope only. (No Brinell scale display on screen).

Due to continuous improvement of the product, SAROJ reserves all rights to change the above specifications without any prior notice.

Manufactured By :

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