

# Analogue Rockwell Hardness Testing Machines

Series : RASN



MatrixTestingMachineServices

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**MATRIX TESTING MACHINE SERVICES**

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## Analogue Rockwell Hardness Testing Machines Series : RASN



### Analogue Rockwell Hardness Tester, Model : RASN

#### Features :

- Suitable for Rockwell Tests.
- Manually operated.
- Preliminary Test Force : 98.07 N(10 kgf)
- Additional Test Force : 490.3, 882.6, 1373 N (50,90,140 kgf).
- Total Test Force : 588.4, 980.7, 1471 N (60,100,150 kgf).
- Test Force Selection by external dialing.
- Auto zero setting dial gauge.



### Analogue Rockwell Cum Brinell Hardness Tester, Model : RASN-B

#### Features :

- Suitable for Rockwell Tests.
- Manually operated.
- Preliminary Test Force : 98.07 N (10 kgf)
- Additional Test Force : 490.3, 882.6, 1373 N (50,90,140 kgf).
- Total Test Force : 588.4, 980.7, 1471 N (60,100,150 kgf).
- Test Force Selection by external dialing.
- Auto zero setting dial gauge.
- Additional Test Force : 1471, 2354 N (177.5,240 kgf).  
for Brinell
- Total Test Force : 1839, 2452 N (187.5, 250 kgf).



### Analogue Rockwell Cum Superficial Hardness Tester, Series : RASNT

#### Features :

- Suitable for Rockwell & Rockwell Superficial Tests.
- Manually operated.
- Preliminary Test Force : 29.42, 98.07 N (3,10 kgf)
- Additional Test Force : 117.7, 264.8, 411.9, 490.3, 882.6,  
1373 N (512,27,42,50,90 &140 kgf).
- Total Test Force : 147.1, 294.2, 441.3, 588.4, 980.7, 1471 N  
(15,30,45,60,100,150 kgf).
- Auto zero setting dial gauge.



### Analogue Motorized Rockwell Hardness Tester, Model : RASNM

#### Features :

- Suitable for Rockwell Tests.
- Motorised for automatic operation cycle i.e Load/Dwell/Unload.
- Preliminary Test Force : 98.07 N(10 kgf)
- Additional Test Force : 490.3, 882.6, 1373 N (50,90,140 kgf).
- Total Test Force : 588.4, 980.7, 1471 N (60,100,150 kgf).
- Test Force Selection by external dialing.
- Auto zero setting dial gauge.

All models confirm to respective standards as under  
IS : 1586-2, BS 10109-2 & ASTM E-18 for Rockwell Test  
IS : 1586-2, BS 10189-2 & ASTM E-18 for Rockwell Superficial Test.  
IS : 1500-2, BS 10003-2 & ASTM E-10 for Brinell Test.





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FIE's new 'RASN' Series of Hardness Testing Machines comes with much improved design & look with following major design changes.

- 1) The machine body having a taper front look and a big size dial gauge in the front. The machine is powder coated for better look. The paint shade do not fade and machine looks like new over year.
- 2) The elevating screw of machine is guided in a hardened and ground bush, not allowing movement of elevating screw more than 0.05mm when raised to full height. The accuracy is returned for years together due to hardened bush.
- 3) A hardened and ground stepped bush is fixed on top of main screw for location and rest surface. This guarantees no change in results due to rough handling of test table or test piece. It means a trouble free long life machine accuracy.
- 4) An antifriction linear bearing with almost no clearance is provided for a perfect vertical movement of loading plunger with minimum friction. This enable testing of a small dia. pin or ball up to 3mm dia.
- 5) All machine modes are provided with automatic zero setting dial gauge readout. Hence zero setting at every test is avoided.

### Principle :

Rockwell, Rockwell superficial & Rockwell cum Brinell test consists of forcing an indenter (Diamond or Ball) into the surface of a test piece in two steps i.e. first with preliminary test force and thereafter with additional test force and then measuring depth of indentation after removal of additional test force (Remaining preliminary test force active) for measurement of hardness value.

### Standard Accessories :

| Model  | RASN     | RASN (B) | RASN (T) | RASN (M) |
|--|----------|----------|----------|----------|
| Testing table 50mm dia   | 1        | 1        | 1        | 1        |
| Testing table 38mm dia with "V" groove for round jobs 6-45 mm dia. | 1        | 1        | 1        | 1        |
| Diamond indenter - Rockwell  | 1        | 1        | 1        | 1        |
| Stell Ball indenter 1/16" with 5 spare balls                       | 1        | 1        | 1        | 1        |
| Stell Ball indenter 2.5 mm with 5 spare balls                      | -        | 1        | -        | -        |
| Test block Rockwell "C"  | 1        | 1        | 1        | 1        |
| Test block Rockwell "B"  | 1        | 1        | 1        | 1        |
| Test block HB 2.5/187.5  | -        | 1        | -        | -        |
| Test block HR 30 N   | -        | -        | 1        | -        |
| Allen Spanners   | 5        | 5        | 5        | 5        |
| Screw Driver   | 1        | 1        | 1        | 1        |
| Clamping device  | 1        | 1        | 1        | 1        |
| Dash Pot Oil   | 1 Bottle | 1 Bottle | 1 Bottle | -        |
| Wooden box for std. accessories                                    | 1        | 1        | 1        | 1        |
| Telescopic sleeves for elevating screw position                    | 1 Set    | 1 Set    | 1 Set    | 1 Set    |
| Spare fuse 1 AMP   | -        | -        | -        | 1        |
| Power cable  | -        | -        | -        | 1        |
| Brinell microscope   | -        | 1        | -        | -        |
| Machine cover  | 1        | 1        | 1        | 1        |
| Instruction Manual   | 1        | 1        | 1        | 1        |

### Technical Specifications :

| Model                    | Unit         | RASN                                   | RASN (B)  | RASN (T)  | RASN (M)                               |
|--------------------------|--------------|--|---|---|--|
| Major Load               | N<br>( kgf ) | 288.4, 980.7, 1471<br>( 60, 100, 150 ) | 588.4, 980.7, 1471,<br>1839, 2452<br>( 60,100,150,187.5,250 ) | 147.1, 294.2, 441.3,<br>588.4, 980.7, 1471<br>( 15,30,45,60,100,150 ) | 588.4, 980.7, 1471<br>( 60, 100, 150 ) |
| Minor Load               | N<br>( kgf ) | 98.07<br>( 10 )                        | 98.07<br>( 10 )   | 29.42, 98.07<br>( 3,10 )  | 98.07<br>( 10 )                        |
| Max. Test Height         | mm           |  | 230   | 230   | 230                                    |
| Depth of Throat          | mm           | 130                                    | 133   | 133   | 133                                    |
| Net Wt. Approx.          | kg.          | 65                                     | 70  | 62  | 67                                     |
| M/c. Dimensions (Approx) | mm           | L-450, W-265, H-627                    | L-450, W-265, H-627   | L-450, W-265, H-627   | L-450, W-180, H-627                    |

**Optional Accessories :** ● Steel Ball Indenter 1/8", 1/4", 1.2" ● Testing table 200mm dia. ● Testing table 70mm dia. with V groove for round jobs 10mm to 80mm dia. ● Vari-rest to support odd shaped jobs. ● Jominy test fixture for end quench test. ● Gooseneck Adopter No.1 ● Special Diamond Indenter suitable for Gooseneck Adopter No.1. ● Short Nib Diamond Indenter suitable for Gooseneck Adopter No. 1. ● Gooseneck Adopter No. 2 . ● Special Diamond Indenter suitable for Gooseneck Adopter No.2. ● Gooseneck Adopter No.3. ● Raised center testing table 15mm dia. ● Diamond Spot Anvil ● Cylindron anvil for testing big jobs above 20mm dia. ● Eyeball anvil with 25.4mm dia. or 38mm dia. ball. ● Gooseneck anvil for pipes 5 to 25mm ID with 5mm step inserts. ● Jack rest for long and heavy jobs.

Due to constant Research & Development, Specifications and Features are subject to change without notice.



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