

SOLARMAN ENGINEERING PROJECT (P) LTD. TESTING EQUIPMENT DIVISION



HAARD Master HARDNESS TESTING MACHINE



SPEIFICATIONS

■ TYPE R-3

Rockwell Hardness Tester: Suitable for carrying out Rockwell Hardness Tests on Metals and Alloys of all kinds. Hard or soft, from Carbides to Plastic covers. Standard Scales. A, B, C, D, E, F, G, H and K also additional Scales L, M, P, R, S and V.

■ TYPE RB-3

Rockwell Cum Brinell Hardness Tester: In addition to R-3 Model it has the facility to perform Brinell Tests with 2.5 mm steel Ball at 187.5 kg load suitable for Cast Iron and Annealed Steels.

■ TYPE RB-5

Rockwell Cum Brinell Hardness Tester: In addition to R-3 & RB-3 Model it has the facility to perform Brinell Tests with 5mm steel Ball at 250 kg load suitable for Cast Irons and Annealed Steels.

TYPE S-1

Hardness Tester : This is a special machine for checking Hardness in Superficial Scales. It covers a range of Superficial Scales with 15, 30 and 45 kg loads suitable for wide variety of materials where shallow indentation is desired such as lightly case Hardened Parts, Cemented Carbides, Sintered Products, Hard Chrome Plating, Shaving Blades, Needles etc. and finished surface where Indentation has to be subsequently lapped away. In this particular machine dial is Automatic and load selector is manual.

FEATURES

Haard Master Hardness Tester Models R-3, RB-3, RB-5, S-1 is manually operated and are used for measuring hardness of metals and alloys of all types, hard or soft, flat, round or irregular in shape. These Hardness Testers can offer reliable results demanded by laboratories, tool-rooms, inspection departments, heat-treatment departments, educational institutions, foundries, etc. These are a simple machines very easy to use yet very sensitive and accurate. These models have Automatic load selector and Automatic zero setting dial gauge. Diamond spindle is guided in Hardened ground and lapped bush which enables testing of small pins having dia. less than 6 mm.

DESCRIPTIONS

Main spindle is guided in HRD/ Ground/ Lapped bush with friction compensator arrangement. These are fully enclosed machines with Cast-Iron body and the weights applied can not be seen from outside. The mechanism inside the machine is thus protected from dirt and dust. The basic system is one of weights and levers. The load under Hydraulic Dash-Pot is adjustable. Time control is applied by standardized weights through a levers on knife edged fulcrum and a knife edge free floating frictionless plunger system. All knife edges and levers in this system are thoroughly hardened and lapped, which is a precision point and it gives long life to these machines. It is inspected by high precision optical instruments.



HAARDMaster

HARDNESS TESTING MACHINE

TECHNICAL DATA ■■■■■■■■■■

Type	R-3	RB-3	RB-5	S-1
Load Range (Kgf)	60,100,150	60,100,150 187.5	60,100,150 187.5, 250	15,30,45
Initial Load (Kgf)	10	10	10	3
Maximum Test Height (mm)	220	220	220	220
Depth of Throat (mm)	150	150	150	150
Size of Base (mm)	190 x 370	190 x 370	190 x 370	190 x 370
Machine Height (mm)	630	630	630	630
Net Weight (kg.) (Approx.)	75	80	85	85

STANDARD ACCESSORIES ■■■■■■■■■■

Type	R-3	RB-3	RB-5	S-1
Flat Anvil	1 Pc.	1 Pc.	1 Pc.	1 Pc.
'V' Anvil	1 Pc.	1 Pc.	1 Pc.	1 Pc.
Diamond Indentor	1 Pc.	1 Pc.	1 Pc.	1 Pc.
Steel Ball Indentor 1/16"	1 Pc.	1 Pc.	1 Pc.	1 Pc.
Steel Ball Indentor 2.5 mm.	Nil	1 Pc.	1 Pc.	Nil
Steel Ball Indentor 5 mm.	Nil	Nil	1 Pc.	Nil
Test Block Rockwell 'C'	1 Pc.	1 Pc.	1 Pc.	Nil
Test Block Rockwell 'B'	1 Pc.	1 Pc.	1 Pc.	Nil
Test Block Brinell HB-2.5/187.5	Nil	1 Pc.	1 Pc.	Nil
Test Block Brinell HB-5/250	Nil	Nil	1 Pc.	Nil
Dash Pot Oil	1 Bottle	1 Bottle	1 Bottle	1 Bottle
Brinell Microscope	Nil	1 Pc.	1 Pc.	Nil
Test Block Rockwell Superficial 'N'	Nil	Nil	Nil	1 Pc.
Test Block Rockwell Superficial 'T'	Nil	Nil	Nil	1 Pc.
Allen Key	1 Pc.	1 Pc.	1 Pc.	1 Pc.

EXTRA ACCESSORIES ■■■■■■■■■■

- Quick lifting and release attachment for Elevating Screw most suitable for batch production testing.
- Gear Testing fixture.
- Jack rest for long Jobs
- floor Stand.
- Gooseneck adapters for testing inside hardness of Tubes and Bushes etc,
- Gooseneck Anvils for Testing outer hardness of Tubes and Bushes etc.
- Cylindrical Anvil for Testing jobs 20 to 200 mm. diameter.
- Shallow Vee Anvil for testing small diameter pins and rods.
- Eye Ball Anvils for Testing Small tapered jobs.
- Spot Anvil.
- Vee 70 mm. dia for jobs 10 to 80 mm. dia.
- Flat Anvil 200mm dia.
- Flat Anvil 15mm dia..
- Testing Table 240mm. dia with T Slot for Testing odd shapes
- Steel Ball Indentors and Extra balls 1/8 and 1/2 dia.

Manufactured By:

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