

Model : TRS

# HARDNESS

## TESTERS

**Rockwell, Rockwell Cum Brinell,  
Rockwell Cum Rockwell Superficial**

Fine make hardness testers model TRS, TRS-150, TRB, TRB-250 and TSM are manually operated. These models are designed and developed after years of experience in this field. All the models are manufactured under strict quality at all manufacturing stages.

These models are suitable for testing hardness of metals and alloys of all kinds, hard or soft, whether flat or round etc. or of irregular shape. These Testers are simple in design and easy to operate, still quite sensitive and accurate.

These models strictly conform to IS 3804, BS 891 Part-I & II, ASTM-E-18 for Rockwell test and IS 2281-2005, BS 240, ASTM-E-10 for Brinell test and IS 5073-1988, ASTM-E-18 for Rockwell Superficial test.

*Mastering the fine art of testing*





**Model : TRB-250**

## Rockwell System

**TRS** : Automatic weight selection with automatic zero setting dial gauge.

**TRS-150** : Automatic weight selection with automatic zero setting dial gauge.

## Rockwell cum Brinell Combined System

**TRB** : Automatic weight selection with automatic zero setting dial gauge.

**TRB-250** : Arrangement similar to TRS with two additional weights of 187.5 kgf and 250 kgf for Brinell tests. On this machine small pin having Dia 2 mm can be tested as plunger is guided with a set of six bearings.

## Rockwell cum Rockwell Superficial Combined system

**TSM** : This hardness tester is similar to TRB-250 machine in construction and with automatic weight selection. This is useful for carrying Rockwell and Rockwell Superficial Tests. The Rockwell Superficial method is useful for checking hardness of very thin sheets and surface hardness.

## Motorised Hardness Tester

Model TRS-M : Similar to TRS

Model TRS-150-M : Similar to TRS-150

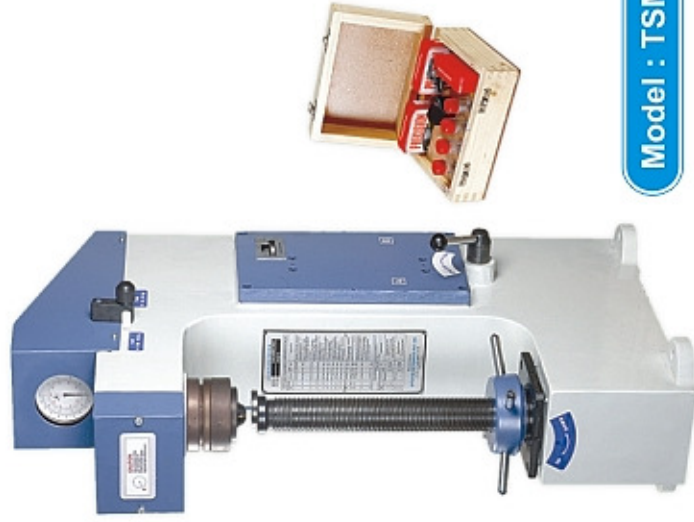
Model TRB-M : Similar to TRB

Model TRB-250-M : Similar to TRB-250

Model TSM-M : Similar to TSM

Application and removal of major load is motorised. Motorised models have semi automatic operations for products testing.

Drive motor Single Phase, 230-V, 50 Cycles AC.



**Model : TSM**



**Model : TRP-1**

## Portable Hardness Tester

Portable Rockwell Hardness Tester model TRP-1 is able to test parts where bench type model not useful. This machine is quite handy for product testing of crank shafts, cylinder blocks, liner and assemblies. This can be used for testing the hardness of both inside and outside of surface testing of pipes, bushings, ball bearing rings or other complicated parts. This model can be used in any direction without affecting the accuracy.

### Technical Data

Maximum test height : 110 mm  
Throat capacity : 55 mm  
Weight (Approx.) : 1.75 kg

### Standard Accessories

Flat anvil Ø 25 mm : 1 No.  
V-anvil Ø 25 mm : 1 No.  
Test block HRC : 1 No.  
Test block HRB : 1 No.  
Diamond indenter : 1 No.  
1/16" ball indenter : 1 No.  
Steel Ball Ø 1/16" : 5 Nos.  
Carry case : 1 No.

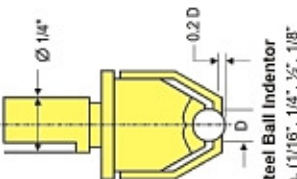

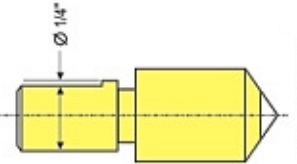
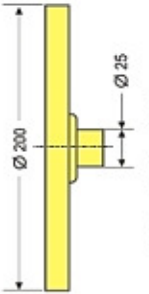
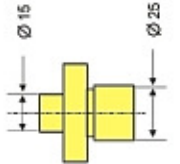
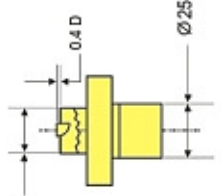
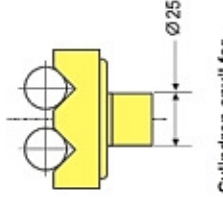
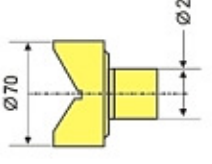
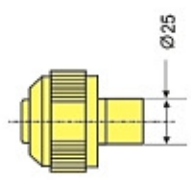
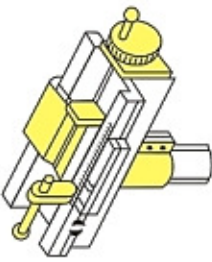
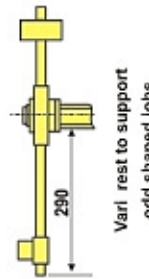
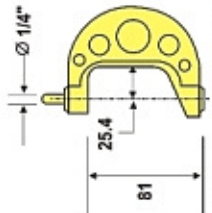
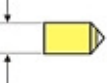
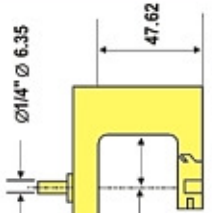
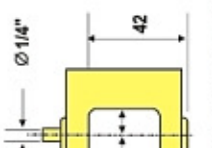
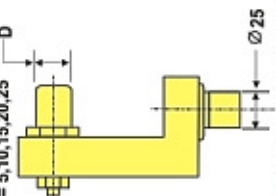
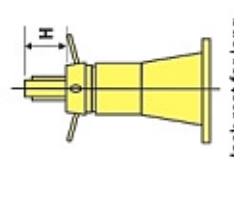
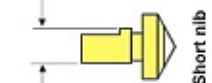
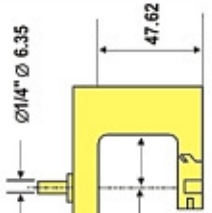
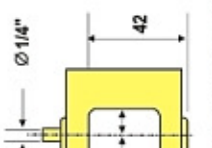
## Technical Specifications

Model	TRS	TRS-150	TRB	TRB-250	TSM
1 Test Loads (Kgf)	60, 100, 150 (Rockwell)	60, 100, 150 (Rockwell)	60, 100, 150 (Rockwell) 187.5 (Brinell)	60, 100, 150 (Rockwell) 187.5, 250 (Brinell)	60, 100, 150 (Rockwell) 15, 30, 45 (Rockwell Superficial)
2 Initial loads (Kgf)	10	10	10	10	10 (Rockwell) and 3 (Rockwell Superficial)
3 Max. Test Height (mm)	215	295	215	295	295
4 Depth of Throat (mm)	132	148	132	148	148
5 Max. Depth of Elevating Screw Below Base (mm)	230	290	230	290	290
6 Size of Base (mm) (Approx.)	430 x 180	475 x 220	430 x 180	475 x 220	475 x 220
7 Machine Height (mm)	635	865	635	865	865
8 Nett Weight (Approx.) kg.	65	105	65	105	125

## Standard Accessories

Model	TRS	TRS-150	TRB	TRB-250	TSM
1. Rockwell Diamond Indentor	1 No.	1 No.	1 No.	1 No.	1 No.
2. Superficial Diamond Indentor	—	—	—	—	1 No.
3. Testing Table Ø 50 mm	1 No.	1 No.	1 No.	1 No.	1 No.
4. Testing Table Ø 40 mm with 'V' Groove for round Jobs Ø 6 to 45 mm	1 No.	1 No.	1 No.	1 No.	1 No.
5. Steel Ball Indentor Ø 1/16"	1 No.	1 No.	1 No.	1 No.	1 No.
6. Steel Ball Indentor Ø 2.5 mm	—	—	1 No.	1 No.	—
7. Steel Ball Indentor Ø 5 mm	—	—	—	1 No.	—
8. Test Block HRC	1 No.	1 No.	1 No.	1 No.	1 No.
9. Test Block HRB	1 No.	1 No.	1 No.	1 No.	1 No.
10. Test Block HB 2.5 mm / 187.5 Kgf	—	—	1 No.	1 No.	—
11. Test Block Rockwell Superficial 30 N	—	—	—	—	1 No.
12. Steel Ball Ø 1/16"	5 Nos.	5 Nos.	5 Nos.	5 Nos.	5 Nos.
13. Ø 2.5 mm Steel Ball	—	—	5 Nos.	5 Nos.	—
14. Ø 5 mm Steel Ball	—	—	—	5 Nos.	—
15. Allen Spanners	3 Nos.	3 Nos.	3 Nos.	3 Nos.	3 Nos.
16. Clamping Device	1 No.	1 No.	1 No.	1 No.	1 No.
17. Brinell Microscope	—	—	1 No.	1 No.	—
18. PVC Cover for Machine	1 No.	1 No.	1 No.	1 No.	1 No.
19. Rubber Bellow	1 No.	1 No.	1 No.	1 No.	1 No.
20. Instruction Manual	1 Book	1 Book	1 Book	1 Book	1 Book

## DETAILS OF ACCESSORIES FOR HARDNESS TESTERS

 <p><b>Steel Ball Indenter</b> Dia. (1/16", 1/4", 1/2", 1/8", 2.5mm, 5mm)</p>	 <p><b>Test block of various scales &amp; ranges, Ø 50 mm</b></p>	 <p><b>Diamond Indenter</b></p>	 <p><b>Testing Table Ø 200 mm Hardened &amp; Ground</b></p>	 <p><b>Raised Centre Table (Ø 15 mm)</b></p>
 <p><b>Diamond spot anvil</b></p>	 <p><b>Cylindron anvil for testing big job from Ø50 mm to Ø150 mm</b></p>	 <p><b>Testing table of Ø 70 mm with V groove for jobs Ø 10 to 80 mm</b></p>	 <p><b>Eyeball anvil with Ø 25.4 and Ø 38 mm</b></p>	 <p><b>Jominy Fixture for end quench test (Pitch 1 mm)</b></p>
 <p><b>Vari rest to support odd shaped jobs</b></p>	 <p><b>Gooseneck adaptor No.3</b></p>	 <p><b>Special indenter</b></p>	 <p><b>Gooseneck adaptor No. 2</b></p>	 <p><b>Gooseneck adaptor No.1</b></p>
 <p><b>Gooseneck anvil for pipe 5 to 25 mm ID with 5 mm step</b></p>	 <p><b>Jack rest for long jobs H-200 &amp; 300 mm</b></p>	 <p><b>Short nib indenter</b></p>	 <p><b>Gooseneck adaptor No. 2</b></p>	 <p><b>Gooseneck adaptor No.1</b></p>

### We can also supply ...

Universal,  
Tensile,  
Impact,  
Torsion,  
Custom built Testing Machines  
and  
Accessories.

FHTM Reserves the rights of change in above specification due to constant improvement in design.

**Manufactured By :**



**Fine Hardness Testing Machines Pvt. Ltd.**

Office : B-7/12, M.I.D.C. Area, MIRAJ - 416410. (Maharashtra), India.

Works : Plot No.73, M.I.D.C. Area, MIRAJ - 416410. (Maharashtra), India.

Phone : +91 233 6453690 to 697, 2644237, 2644238, Fax : +91 233 2644913

e-mail : [san\\_fmi@sancharnet.in](mailto:san_fmi@sancharnet.in), website : [www.finemanufacturing.com](http://www.finemanufacturing.com)