

DYNAMIC HARDNESS TESTER

MEASURING PRINCIPLE

Dynamic Hardness Tester is an extremely light weight, portable, fast & reliable hardness tester based on a novel, dynamic & Rapid test procedure with widest measuring ranges for metals. A carbide tipped shuttle with a definite kinetic energy is impacted on the specimen. A part of this energy absorbed by the specimen and is a function of the hardness of the specimen. A tubular device housing electrodynamic energy measuring device carries out the impacting of the shuttle. A measuring instrument receives the signal, equivalent to absorbed energy through a cable and displays with instant calculations. This displays Dynamic hardness (D) a three digit figure, which is proportional to the hardness of the specimen. The machine has built in conversion facility for given material to convert D value to Vickers, Rockwell, Brinell scales which can be selected by pressing keys.



APPLICATION

In stores for Material identification.
Measurement of Hardness in confined spaces.
Variation in hardness over large work piece.
Large & heavy components.
Permanently installed parts.

SALIENT FEATURE

Alpha numeric display which indicates selected material and scale combination and hardness value.
Average key to select average of 2 to 10 readings.
Machine is having improved electronics with micro controller circuitry.
Machine is with built in 12 conversion scales which can be selected by feathertouch keys.
Facility to connect dot matrix printer through printer port. (Centronics parallel port)
Upto 99 readings can be stored in memory of the machine for printing purpose (This facility is useful when operating the machine at site).
Sleek and handy design, comes in a slim briefcase, for carrying the machine.
Low test expenditure.



OPTIONAL FEATURE

Different types of probes are available
Short (Suitable for checking hardness in holes, cylinders, etc.)
Standard (Suitable for general application)
Extended (Suitable for checking hardness in grooves, & recess)
Heavy (Suitable for Castings & Forgings)
Special conversion scales can be offered to suit different material.
Machine can be connected to computer for data loading
Using our serial interface card which is an extra accessory.



Material // Hardness	Test Range and Order Code				
	Brinell	Vickers	Rockwell-C	Rockwell-B	Shore D
Steel & Cast	80-647	80-940	20-68	38.4-99.5	32.5-99.5
Steel unalloyed/low Alloyed	ST/BHN	ST/VPN	ST/HRC	ST/HRB	ST/HSD
High Carbon High Chromium (12% above) Cold Work tool steel	----	80-898 HC/VPN	20.4-67.1 HC/HRC	----	----
Grey Cast Iron Grade 15-40 (GG)	93-334* CI/BHN				
Copper Zinc Alloys (Brass)	40-173* BS/BHN			13.5-95.3 BS/HRB	
Wrought Copper Alloys (Low alloyed)	45-315 Cu/BHN				

Material / Hardness	Brinell	Rockwell-B
Steel & cast steel / Unalloyed And low alloyed	90-640 ST/BHN-G	47-99 ST/HRB-G
Grey Cast Iron Grade 15-40 (GG)	90-315 CI/BHN-G	
S.G. Iron:(CI With spheroida And nodular graphite (GG-40-80)	125-315 SG/BHN-G	

DIMENSIONIW (Approx)

Probe -
Standard - Dia 25 x 150 mm long
Short - Dia 25 x 100 mm long Extended - Dia 25 x 150 mm long
Heavy - Dia 30 x 255 mm long
Digital Display Unit - 185(L) X 130(W) X 87(H) mm

POWER SUPPLY CONDITIONS

- Model DHT-2- AC 220 V, 50 Hz A.C. Supply
- Model DHT-2- RB/AC Both 220 V, 50 Hz AC Supply & rechargeable battery

FIELD OF APPLICATION		Depth 13
Measuring Ranges HB 30-680 HV 80-940 HRC 20-68 HSD 32-100		micron
Preparation of the surface to be tested N7		Min bore dia of the specimen
Max roughness depth RL 10 microns		Only for a short probe 100mm
Av. roughness depth Ra=Cla=AA 2 microns		MEASURING ACCURACY Average Measuring deviation +/-1 % referred to D=800 on ' D ' scale standard test block at a particular test lactation.
Min.wt of the test piece		OPERATING TEMP RANGE 0 degC to 500C
Of compact shape 5kg		WEIGHT (Approx)
On solid support 2.5 Kg		Probe (Standard) 150 gms.
Coupled 0.1 to 2 Kg		Display Unit 1500 gms.
Min. thickness of test piece coupled 5 mm		Standard Test Block 3000 gms
Indentation of the test tip with 300 HB specimen hardness - Diameter 0.6 mm		Total Weight of Machine 10 kg.
STANDARD ACCESSORIE		EXTRA ACCESSORIES
Probe (Standard) 1 No.		Standard Test Block of any hardness.
Digital display unit with ' D ' Scale and 12 conversion scales 1 No.		Rechargeable battery
Standard test block calibrated in ' D ' Scale 1 No.		Support rings for smaller radius for
Brush for cleaning probe 1 No.		(SIR 1) Convex, Concave, Cylindrical, Spherical radius 30 to 60 mm
Carry case for Machine 1 No.		(SIR 2) Convex cylindrical radius 14.5 to 30 mm
Instruction manual 1 No.		(SR 3) Convex cylindrical radius 10 to 15 mm
Power Supply Unit 1 No.		(SIR 4) Concave cylindrical radius 16.5 to 30 mm
		(SIR 5) Concave cylindrical radius 12.5 to 17 mm
		(SIR 6) Concave cylindrical radius 11 to 13 mm 0
ORDERING CODE		Serial Interface 0 80 Col. Dot Matrix
Model DHT - 2 AC or DHT - 2. RB/AC		Different types of Probes.
Scale Select 12 scales from the 18 scales given in specifications table		1. Standard 3. Extended
Accessories Extra accessories if any		2. Short 4. Heavy