Matrix Testing Machine Services

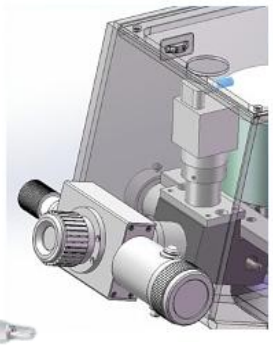
Advance Computerized Touch Screen Micro Vickers Hardness Tester

Model – MMT-X8 (Alpha Series)

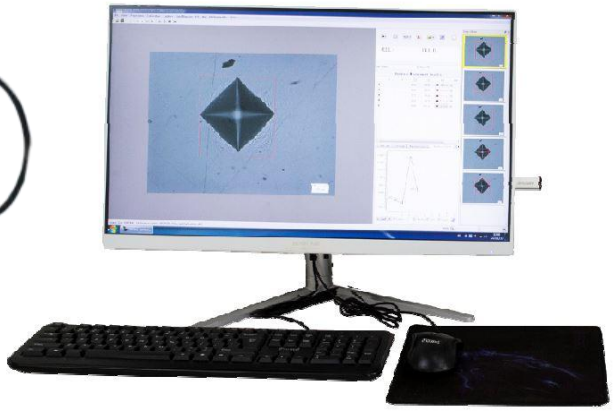
Salient Features of our Top End Model

- Auto Turret
- Optical Measurement with Digital Encoder
- Worm UP/DOWN Movement
- Same Image at the same time is shown on Monitor and Optical System
- Touch Screen
- Direct ECD value
- 15 years Spare Back up
- Digital Computerized





More than 200 successful installations across the nation



MATRIX TESTING & TECHLOGIES PVT. LTD.

Group of Matrix Testing Machine Services

Redefining qualities...

Advance Computerized Touch Screen Microvickers Hardness Testers

MMT-X8 (Alpha Series)

Highly precise hardness tester suitable for test of widely hardness ranges from softest to hardest materials. This machines available with Manual & automatic turret system guided by optical cross rail to achieve highly accurate & precise results. This machine is equipped with built-in encoder with click button on encoder to avoid human errors. Equipment is also featured with a DATA storage & calibration. Most compact in size (540*260*650mm) & light weight (50kg).



Features

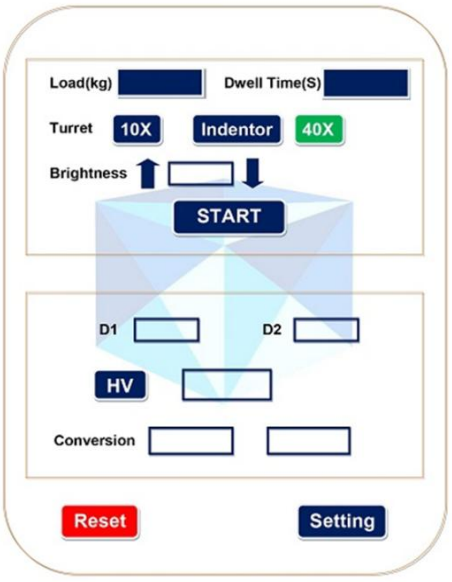
- Automatic Turret System.
- Multifunctional 8 inch LCD touch screen panel.
- Flexible & Foldable design of hand wheel.
- 10X digital Encoder with built in encoder.
- 8P Data Storage system with store up to 300 Test reports.
- LED cold light source (can use continuously for 24 hrs.)
- Easy conversion of hardness scales.
- Can print results data Min & Max values with graph facility

Model	MMT-X8
Turret Movement	Automatic
Measuring Eyepiece	10X & 40X
Min. Measuring unit	0.01µm
Testing Force	10g (0.098N), 25g (0.0245N), 50g (0.49N), 100g (0.98N), 200g (1.96N), 300g (2.94N), 500g (4.9N), 1000g (9.8N)
Hardness Scale	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Hardness conversion scale	HRA, HRB, HRC, HRD, HRF, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HV, HK, HBW.
Hardness Range	1HV – 4000HV
Hardness Value of reading	8 inch LCD touch screen display
Magnification	100X for observation & 400X for Measurement
Dwell time	1 - 99 sec
Loading Control	Automatically (Load / Dwell / Unload)
X-Y Testing table	100*100 mm, Travel up to 25*25 mm with resolution 0.01mm
Max. Height of Specimen	100 mm (Vertical)
Max. depth of specimen	130 mm (Horizontal)
Light source	Cold light source 5V/3W LED (Can be continuous use for 24Hrs, No heat generate, ensure stable working, Services life can reach 1,00,000 hrs.)
Executed Standard	IS1501-2 , ASTM384 & ASTM E92
Overall dimension	540*260*650mm (L x W x H)
Net weight approx.	65 kg
Power supply	220V ± 5%, 50/60 Hz (110V is available)

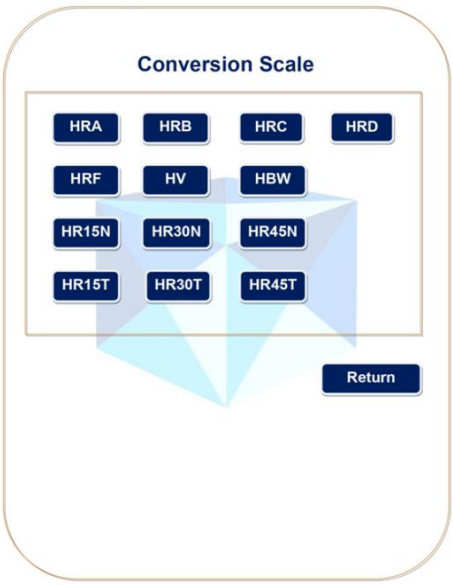
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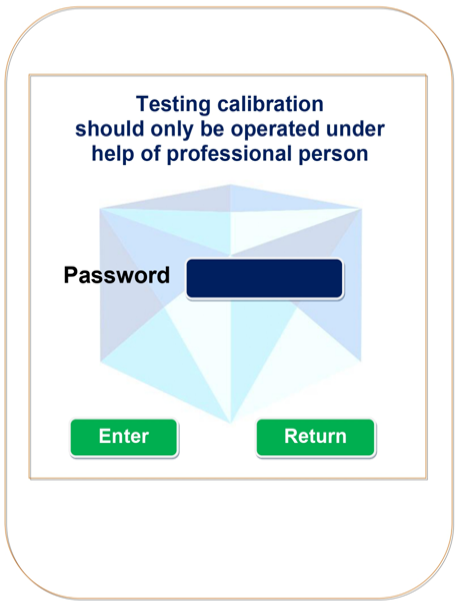
Standard Accessories	10x Omron digital micro eyepiece	1 No.
	10X & 40X objective lens	1 No. Each
	Vickers Indentor	1 No.
	X-Y Testing Table	1 No.
	Hardness Test Blocks (HV1 & HV0.2)	1 No. Each
	Screw Driver	1 No.
	Level Bubble	1 No.
	Allen Keys	1 Set
	Leveling Screw	4 Nos.
	Power Cable	1 No.
	Manual Book	1 No.
	Dust Proof Cover	1 No.
	Accessories Case	1 No.
Optional Accessories	Digital X-Y Table, Data transfer software, Built-in-printer (Hardness value- Max. & Min. value, Testing times & Avg. Value)	

Menu Interface (8” Touch Screen Display)













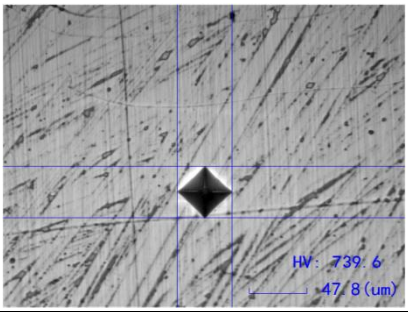
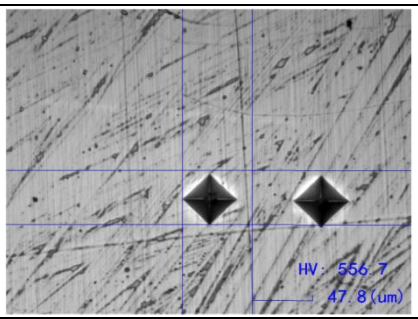
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Test Report (ECD)

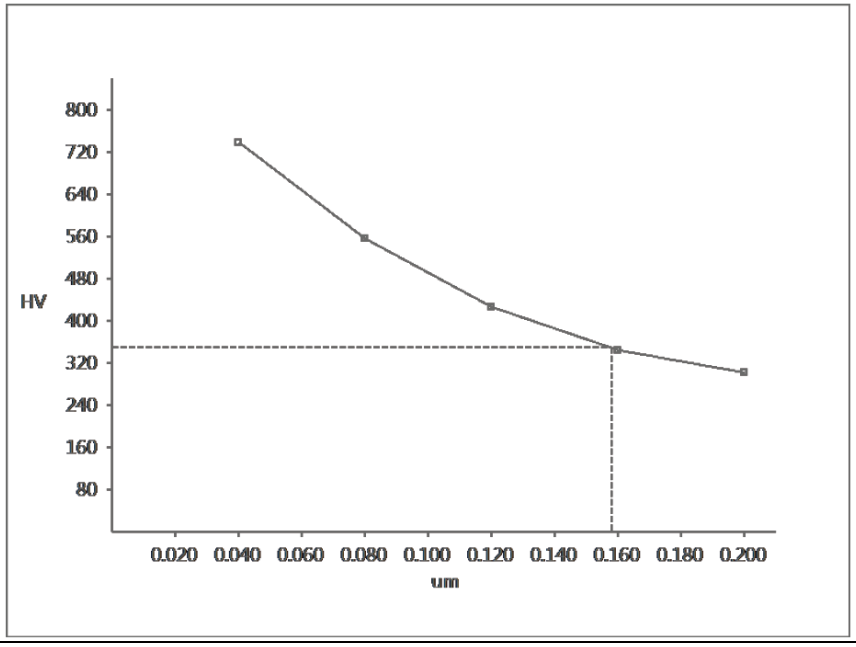
Sample Name	Sample Name	Sample S_n	Sample S_n
Min Value	300.0	Max Value	800.0
Inspection Company	Inspection Company	Inspection Date	2022-02-05
Tester	Tester	Reviewer	Reviewer
Force	0.2kgf	Load Time (s)	2

Statistical data							
NO	MAX	MIN	AVE	VAR	STD	Cp	Cpk
5	739.6	302.7	474.3	25085.65	158.38	0.53	0.37

Detailed data									
#	D1(um)	D2(um)	Davg(um)	Hardness type	Hardness value	Convet type	Convet value	Qualified	Depth
1	22.39	22.39	22.39	HV	739.6	HRC	61.8	YES	0.040
2	28.29	23.34	25.81	HV	556.7	HRC	52.8	YES	0.080

#	Pictures	#	Pictures
1		2	

Depth hardness tester			
Hardness at Effective Hardness Depth	350.0	Depth of Effective Hardness	0.158



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OPTIONAL PURCHASES

Metallographic Specimen Mounting Machine



Touch Screen Automatic Mounting Machine

Model	AM-30
Mould Diameter	30 mm
Heating temperature range	100-200° C
Holding Time Range	0-999 sec
Cooling Method	Water Cooling
Pressure	Automatically
Mould Preparation Capacity	Single Mould
Electric Power	650W, 220V, 50Hz
Dimensional Weight	350 X 450 X 470 mm, 48kg



Touch Screen Manual Mounting Machine

Model	MM-30	MM-45
Mould Diameter	30 mm	45 mm
Temperature Adjusting Range	90-200° C	
Cooling Method	Air Cooling Fan	
Pressure	Manually by hand wheel	
Mould Preparation Capacity	Single Mould	
Electric Power	650W, 220V, 50Hz	
Dimension / Net Weight	440 X 253 X 310 mm, 32kg	

Metallographic Polishing Machine



Double Disc Polishing Machine

Model	MPM-2D
Disc Diameter	203 mm
Grinding/Polishing Speed	50-1000 RPM
Power	550W, 220 Volt
Head Rotating Speed	50 RPM
Sample Force	0-40 N
Sample Capacity	1-3 Nos.
Dimension/Net Weight	700 X 600 X 278 mm, 45kg



Double Disc Polishing Machine (Advanced)

Model	MPM-2D(V)
Disc Diameter	203 mm
Disc Diameter (Optional)	10 Inch, 12 Inch
Grinding/Polishing Speed	50-1000 RPM
Sample Force	0.5 HP High Torque Motor
Power	550W, 220 Volts
Dimension/Net Weight	800 X 600 X 278 mm, 47kg

Metallographic Specimen Cutting Machine

MATRIX metallographic sample cutting machine is widely used to cut the various types of metal materials. These machines are equipped with cooling system which clear up the heat produced during sample cutting and avoid deformation of metal structure because of heating influence.



Model	ACM-100X
Display	LCD Display with high resolution backlight
Cutting Capacity	100mm
Cutting Method	Manual & Automatic
Way of infeed	Arbitrary adjustment
Infeed distance	Arbitrary Set, Adjustment and fixture position
Reset Mode	Automatic
Cooling System	Water Cooling with 3 ways
Effective workpiece Length	200 mm
Spindle Speed	2800 RPM
Coolent Tank Capacity	65 liters
Cutting wheel dimension	350mm X 2mm X 32mm
Motor	4 HP (3 kw), 380V, 50Hz
Dimension / Net Weight	1650 X 680 X 740 mm, 150kg

Automatic Cutting Machine

Model	ACM - 60	ACM - 80
Front Cover	Fully Enclosed	
Cutting Capacity	60 mm	80 mm
Cutting Method	Manual	
Cooling System	Water Cooling	
Spindle Speed	2800 RPM	
Coolent Tank Capacity	50 liters	
Cutting wheel dimension	250mm X 2mm X 32mm	
Motor	2.9 HP (2.2 kw), 380V, 50Hz	
Dimension / Net Weight	700 X 650 X 560 mm, 117kg	



Abrasive Cutting Machine



Model	MCM - 35	MCM - 50
Cutting Capacity	35 mm	50 mm
Cutting Method	Manual	
Cooling System	Water Cooling	
Spindle Speed	2800 RPM	
Coolent Tank Capacity	50 liters	
Cutting wheel dimension	250mm X 2mm X 32mm	
Motor	1.4 HP (1.1 kw), 380V, 50Hz	2.9 HP (2.2 kw), 380V, 50Hz
Cutting Capacity	30 mm	55 mm
Net Weight	60 kg	80 kg

Manual Control Cutting Machine

Our NABL Scope of Calibration

Sr. No.	INSTRUMENT NAME	CALIBRATION METHOD	RANGE/SCALE	CMC(±)
1	Uniaxial Testing Machine	IS 1828-1, ISO7500-1 & ASTM E4	5N - 3000 kN (Compression) 20N - 1000kN (Tension)	0.25 %
2	Displacement of cross-head-travel of Uniaxial Testing Machines	ASTM E2309	0 to 600 mm	50µm
3	Speed of cross-head-travel of Uniaxial Testing Machines	ASTM E2658	0 mm to 500 mm	0.5 mm/min
4	Rockwell Hardness Testing Machine	IS1586-2,ISO6508-2 & ASTM E18	HRA, HRBW, HRC	0.65 HRA, 0.68 HRBW 0.60 HRC
5	Rockwell Superficial Hardness Testing Machine	IS1586-2,ISO6508-2 & ASTM E18	HR 15N, HR 30N, HR 45N HR 15T, HR 30T, HR 45T	0.82 HR15N, 0.82 HR30N 0.86 HR45N, 1.10 HR15T 1.10 HR30T, 1.10 HR45T
6	Brinell Hardness Testing Machine	IS1500-2, ISO6506-2 & ASTM10	2.5/62.5, 2.5/187.5, 5/250 5/750, 10/500, 10/1000 10/3000	2.60%, 2.10%, 2.00% 1.61%, 1.40%, 1.40% 1.60%
7	Vickers Hardness Testing Machine	IS1501-2, ISO6507 & ASTM E92	HV5, HV10, HV 20, HV30	2.60%, 1.30% 1.20%, 1.20%
8	Micro Vickers Hardness Testing Machine	IS1501-2, ISO6507-2 & ASTM384	HV0.1, HV0.2, HV0.3, HV0.5, HV 1	3.7 %, 3.0 %, 3.6 %, 3.5 %, 2.6 %
9	Test Force Verification of Hardness Tester	IS, ISO & ASTM Relevant Standard	0.1 kgf to 3000 kgf	0.4%
10	Indentation Measuring system of hardness Testers	IS, ISO & ASTM Relevant Standard	0 to 7 mm	0.4%
11	Testing Cycle of hardness Testers	IS, ISO & ASTM Relevant Standard	0 to 180 sec	0.8 Sec.
12	Leeb / Dynamic Hardness Tester (DHT)	ASTM A952	'D' scale	7 HLD
13	Durometer (Shore Hardness Tester)	ASTM D2240	Shore A & D	0.5 Shore
14	Charpy & Izod Metal Impact Testing Machine	ISO148 - 2, BS131 - 4, IS3766, ASTM E23	up to 750 J	0.50%
15	Charpy & Izod Plastic Impact Testing Machine	ISO13802 - 2, ASTM D256, ASTM D6110	up to 50 J	0.65%
16	Extensometer	IS12872,ISO9513 & ASTM E83	0 to 25 mm travel	2.0 µm
17	Microscope	ASTM E1951	Magnification Up to 1000 X	1%
18	Erichsen Cupping Fixture	IS10172	0 to 20 mm	10 µm
19	Profile Projector	JIS B 7184	Linear : 0 to 200 mm Magnification : 10 to 100 X Angular Scale : 0° to 360°	5 µm, 0.7%, 2 min of arc

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Matrix Testing Machine Services

MATRIX TESTING & TECHNOLOGIES PVT. LTD.

GROUP OF MATRIX TESTING MACHINE SERVICES

Redefining Qualities...

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