



MATRIX

Stereo Microscope

MATRIX-100M



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Powerful imaging capabilities at an economical price with excellent specifications and ergonomics. Featuring a zoom magnification of 6.7x to 45x and a long working distance of 100mm. Fully coated prism produces brighter images with higher contrast, and the anti-mold design allows the microscope to be used in environments where the temperature and humidity are high. These instruments are perfect for zoological studies and insectaries. The provision has been given to record pictures of the samples using trinocular head. You may wish to use digital camera/phone camera available with you we can't guarantee the quality of the pics or may want to order an additional camera purchase.

Features

- A 45° inclined trinocular head comprised zoom optical system stereo microscope
- WF10x/22mm eyepiece and 100 mm of working distance
- Optional auxiliary lens 0.5X with 0.5X C-mount.
- Inter pupillary distance adjustable between 54 mm to 76 mm.
- 6.7 to 45X Total Magnification.
- 3W LED bulb for incident and transmitted illumination.
- Highly-flexible and stable with high quality performance.

Applications

It finds best well suited for biology, medicine, scientific research, modern electronics industry and other industrial uses. Perform dissections, observe live objects, record the data of species, identify species, taxonomy, work for metallurgy, use it for phone repair, or watch-making, circuit board manufacture or inspection, and fracture surfaces across various manufacturing industries, quality control, forensic science etc. Uses are endless and depends on the customer intended to purchase

Specifications

Model	MATRIX-100M
Optical system	Parallel zoom optical system
Viewing head	45°inclined trinocular head
Eyepiece	WF10x/22 mm
Interpupillary distance	54 to 76 mm
Objective	Zoom objective: 0.67x to 4.5x
Field of View	close to 40 mm
Zoom magnification	6.7x to 45x
C-Mount	0.5X
Zoom ratio	1:6.7
Working distance	100 mm
Illumination	Incident and Transmitted LED illumination
Stand Type	Pillar style dovetail stand with clips
Camera	3 MP USB CAMERA Camera Resolution - 2048 X 1536, 1024 X 768,1280 X 1024, 800 X 600, 640 X 480 Camera FOV- 45 mm
Power supply	220/110 V, 50/60 Hz
Packaging dimension (WxDxH)	430x430x510 mm
Gross weight	Approx. 9 kg

Weld EYE® Software

MEASUREMENTS

- Supports all Weld parameters like depth/penetration, leg lengths, throat lengths, root penetration, angle, % penetration and all 2D measurements
- Can find mid-points, perpendiculars to lines, angle between lines
- User defined parameters
- User defined templates for different types of components, with user defined parameters, expected values and tolerances
- User defined Rules/ Criteria for PASS/FAIL
- Automatic profile measurements
- Ability to create a master template for measurements for each type of component
- Ability to set expected value as well as tolerances at individual work level or at a master template level
- Automatic edge detection
- Component level reporting
- Date and time on image
- Result and parameter name on image
- Can add comments to the image
- Integrated Help

REPORT

- Reports in Excel or PDF format
- Report will have the measurement data as well as the image with drawings
- Component level summary report, with images & measurements of each weld spots

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.



Automatic Cutting Machine

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

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



Manual Control 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

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 & ASTM E10	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 & ASTM E384	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 A956	'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

Major Customer List

- IIT Delhi
 - Eastman Impex, Ludhiana
 - Udehra Fastners, Ludhiana
 - Rajendra Forge, Ludhiana
 - S.S.Steel, Rajpura
 - Sriram Foundry, Pantnagar
 - Sriram Foundry – Plant 1, Kolhapur
 - Sriram Foundry – Plant 2, Kolhapur
 - MSME Testing Laboratories, Okhla New Delhi
 - ELCA Labs, Pune
 - ELCA Labs, Thane
 - ELCA Labs, Kohlapur
 - SGS Labs, Manesar
 - Mosdorfer, Nasik
 - QH Talbros, Gurgaon
 - QH Talbros, Manesar
 - QH Talbros, Chennai
 - QH Talbros, Dehradun
 - Caparo Fasteners, Choupanki
 - Knor Bremse, Faridabad
 - Amar Udhyog, Faridabad
 - Karan Automotives, Faridabad
 - Ample Auto, Manesar
 - Panasonic, Jajjar
 - Vishwakarma Foundry, Faridabad
 - Imperial Auto, Faridabad
 - Regional Testing Centre, Mumbai
 - SPM Auto, Pune
 - EMI Tranmissions, Nashik
 - Rico Castings, Ludhiana
 - Autokast Foundry, Kerala
 - Sunmax Auto, Manesar
 - Texmaco Ltd, Kolkatta
 - Sharu Steels, Ludhiana
 - GKN Driveline, Dharuherra
 - Royal Enfield, Chennai
 - Subodh Technologists & Metallurgical Services, Mumbai
 - Mack Springs, Ambernath, Mumbai
 - Cochin University of Science and Technology, Cochin
 - Amal Jyothi College of Engineering, Kerala
 - Resilient Auto, Ludhiana
 - Malke Group, Mohali
 - New Star, Industry
 - Deenbandhu Chotu Ram University of Science and Technology, Sonipat
- In addition to this, we supply the software (labelled in their names) to other OEMs in India who package this with their hardware and supply in India as well as export
 - We supply 10-12 systems a month to the OEMs in India, who export or sell in India/ Abroad.

ESTEEMED CUSTOMERS



BHARAT FORGE



WELSPUN INDIA
HOME TEXTILES



Volkswagen



Matrix Testing Machine Services

MATRIX TESTING & TECHNOLOGIES PVT. LTD.

GROUP OF MATRIX TESTING MACHINE SERVICES

Redefining Qualities...

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