

Since - 2005



Modern
AN ISO 9001:2015



*Micro Structure
Sample Preparation
Equipments*



Modern Light Duty Abrasive Cut off Machine

Model : (Modern Cut - 1)

- ❖ Sturdy table top model sectioning metals
- ❖ Aluminum Base and rust proof construction
- ❖ Cutting capacity up to Dia 50mm standard steels
- ❖ 3HP 3 Phase ISI mark Motor / Motor Bharat Bijilee Brand
- ❖ T slot Bed 250 mmx70 mm, 10 mm Slot with Twin Thread vice
- ❖ 1/10 H.P Coolant Motor
- ❖ Cut off wheel Size : 250x 1.5x 31.75 mm
- ❖ Machine Size : 770 X 600 X 630mm



Modern Medium Duty Abrasive Cut off Machine

Model : (Modern Cut - 2)

- ❖ Sturdy Floor model sectioning metals
- ❖ Aluminum Base and rust proof construction
- ❖ Cutting capacity up to 70mm Diameter standard steels (Not Significant For all Materials)
- ❖ Spindle speed 2880 RPM and cut off wheel dia 12" (300 mm)
- ❖ 5 HP 3 Phase ISI mark Motor, / Motor Bharat Bijilee Brand
- ❖ Twin Thread vice T slot Bed 315 mm 75 mm, 10 mm Slot ❖ 1/10 H.P. Coolant Motor
- ❖ Cut off wheel size: 300x 2 mm x 31.75 mm
- ❖ Machine Size : 800 X 630 X 660mm
- ❖ Cutting Machine Table (Vibration observation table)



Modern Heavy Duty Abrasive Cut off Machine

Model : (Modern Cut - 3)

- ❖ Sturdy Floor Model Cutter for Selecting Metal and Mineral samples
- ❖ Cutting capacity up to 90 mm Dia / 60 mm Height X 400 mm Long
- ❖ 5HP, 3 phase motor, 2880 rpm, TEFC water proof insulation
- ❖ 1/3 HP coolant pump ❖ Heavy Large 250mm X 300mm Bed
- ❖ T - slotted bed for fixing Different Type of clamps ❖ X - Y Movement (X Movement 50MM)
- ❖ Machine Size : 950 X 900 X 1400mm
- ❖ Cut of Wheel Size : 300 X 2 X 31.75mm 12 inches



Modern Large Abrasive Cut off Machine

Model : (Modern Cut - 4) (Belt Driven)

- ❖ Sturdy floor model cutter for selecting metal and mineral samples
- ❖ Heavy fabricated structural cabinet
- ❖ Cutting capacity up to 120 mm Dia / 75 mm Height X 500 mm Long
- ❖ 7.5HP, 3 phase motor, 2880 RPM, TEFC water proof insulation with belt drive
- ❖ 1/3 HP coolant pump ❖ Heavy Large 300MM X 300MM Bed
- ❖ T - slotted bed for fixing Different Type of clamps ❖ X-Y-Z Movement (X Movement 50MM)
- ❖ Small opening in the side wall for extra length jobs & 75 mm height X 400 mm length
- ❖ Machine Size : 1000 X 1050 X 1500 MM
- ❖ Cut of Wheel Size : 355 X 2 X 31.75 mm 14 inches



Modern Hydraulic Specimen Mounting Press

- ❖ This Machine is used for mounting of metal and hard metallographic specimen
- ❖ Hydraulic press 2 ton capacity
- ❖ Mould chamber size sample size 1 ¼ inch (30 mm)
- ❖ Timer measurement Electronic Display LED
- ❖ Lock nut handle mounted to easy opening and closing of mould chamber
- ❖ 500 Watts Mould Heater ❖ Buzzer Indication for end of cycle
- ❖ Machine Size : 310 X 2250 X 500mm



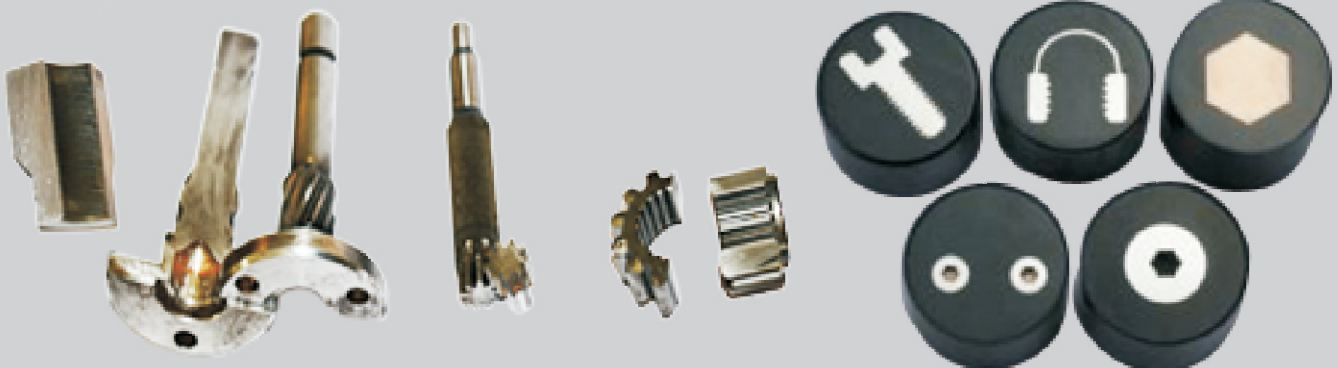
Modern Automatic Pneumatic Mounting Press

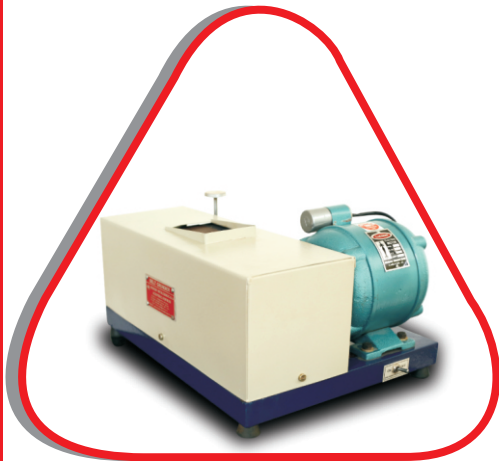
- ❖ Corrosion Resistant Mild Steel Cabinet
- ❖ Pneumatic Operation System
- ❖ Automatic water cooling system
- ❖ 1500 Watts Mould Heater
- ❖ User friendly advanced HMI LCD Touch Screen System
- ❖ Digital temperature indicator and digital timer with LCD display
- ❖ In this Machine - 32 mm dia Mould But we can use 40, 50mm also
- ❖ Machine Size : 550X600X580



Modern Automatic Pneumatic Mounting Press (Individual Operation)

- ❖ Specification : Same As Above
- ❖ Individual HMI Controller With Dual Mounting Operating System
- ❖ Machine Size : 1100X650X520





Modern Belt Grinder

Model : (Light Duty)

- ❖ Sturdy Table Top Model for Pre-Grinding of Metallurgical Specimen
- ❖ Motor Speed 1/4HP Single Phase Motor 1440 RPM
- ❖ Aluminum Idler Pulley mechanism Simplified Belt release Mechanism
- ❖ Emery Cloth Belt for Dry Polishing
- ❖ Endless Belt Size 100mm x 915mm Grit 60
- ❖ Easy Removable Safety cover
- ❖ Emery Cloth belt for Smooth Grinding
- ❖ Machine Size : 500 X 370 X 260 mm



Modern Belt Grinder

Model : (Medium Duty)

- ❖ Multi Purpose Belt Grinding Machine
- ❖ Sturdy Table Top Model for Pre-Grinding of Metallurgical Specimen
- ❖ Motor Speed 0.5 HP Single Phase Motor 1440 RPM
- ❖ Aluminum Idler Pulley mechanism Simplified Belt release Mechanism
- ❖ Belt Size 100mm x 915mm Endless Grit 60
- ❖ Easy Removable Dust Cover with Tray
- ❖ Machine Size : 580 X 400 X 260 mm



Modern Belt Grinder

Model : (Heavy Duty - Floor Model)

- ❖ Multi Purpose Belt Grinding Machine Floor Model for Pre-Grinding of Metallurgical Specimen
- ❖ Motor Speed 1 HP 3 Phase Motor 1440 RPM
- ❖ Aluminum Pulley mechanism Simplified Belt release Mechanism
- ❖ Belt Size 150 X 1220mm Endless Grit 120
- ❖ Less Vibration Design
- ❖ Easy Removable Dust Cover with Tray
- ❖ Machine Size : 710 X 610 X 1150 mm





Modern Spectro Grinding Machine

Model : (Table Top)

- ❖ The body is fabricated from heavy-duty Sheet metal
- ❖ The machine is powder coated Finishing
- ❖ Disc dynamically balanced
- ❖ DISC DIA 350mm (Dynamically Balanced)
- ❖ Motor brand Bharat Buijilee / ISI Standard Motors
- ❖ 2HP 3Phase (Disc RPM 2880)
- ❖ Power ON/OFF With Push Button, over load Protection, Contacter
- ❖ Machine Size : 400 X 550 X 500mm



Modern Spectro Grinding Machine

Model : (Floor)

- ❖ The body is fabricated from heavy-duty Sheet metal
- ❖ Machine is powder coated finished
- ❖ Rotating Disc is dynamically balanced
- ❖ To avoid noise and vibration
- ❖ Air Section for Vacuum Blower
- ❖ DISC DIA 350mm (Dynamically Balanced)
- ❖ Motor brand Bharat Buijilee / ISI Standard Motors
- ❖ Machine Size : 400 X 550 X 820mm



Modern Spectro Grinding Machine

Model : (Floor - Variable Speed)

- ❖ The body is fabricated from heavy-duty Sheet metal
- ❖ Machine is powder coated finished
- ❖ Rotating Disc is Dynamically balanced
- ❖ To avoid noise and vibration
- ❖ Air Section for Vacuum Blower
- ❖ DISC DIA 350mm (Dynamically Balanced)
- ❖ Motor 2HP Bharat Buijilee / ISI Standard Motor
- ❖ Variable speed 1000-3000 RPM
- ❖ Machine Size : 400 X 550 X 820mm

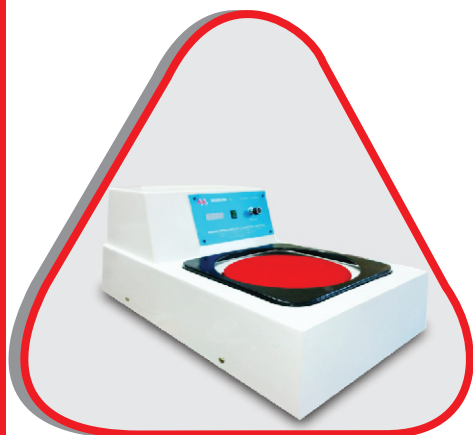
Modern Double Disc Spectro Grinding Machine Available (Individual Operation)



Modern Spectra Sample Grinding Machine

Model : (Swing Type)

- ❖ Fes Swivel Surface Grinding Machine
- ❖ Polishing Spectra Coin Sample for Cup wheel
- ❖ 2 H.P Motor Bharat Buijilee / ISI Standard Motor
- ❖ Magnetic chuck table of L 8"/ W 5" Height 3" hold to Magnetic Sample.
- ❖ Single column Chrome plated ground Finished Guide Shaft
- ❖ Make out of Ms Sheet for better safety and adjustable to accommodate the wheel wear
- ❖ Machine Size : 470 X 330 X 70 mm



Modern Single Disc Variable Speed Grinder/Polisher

Model : (Modern - 3)

- ❖ 8" Single disc polisher
- ❖ Variable speed from 100- 900 RPM
- ❖ Dc Drive with Led Display
- ❖ 0.25HP High Torque DC Motor
- ❖ Holding Spring for Stainless Steel
- ❖ Machine Size : 400 X 680 X 310mm
- ❖ Polishing machine Table



Modern Single Disc Fixed Speed Grinder/Polisher

Model : (Modern - 4)

- ❖ 8" Single disc polisher
- ❖ Fixed speed from 800 RPM
- ❖ 0.25HP High torque AC Motor
- ❖ V Belt Used For Rotate Disc for Long Life
- ❖ Holding Spring for Stainless Steel
- ❖ Power Supply 230/50Hz, L+N+E
- ❖ Machine Size : 400 X 680 X 310mm
- ❖ Polishing machine Table



Modern Single Disc Variable Speed Grinder/Polisher

Model : (Modern - 5)

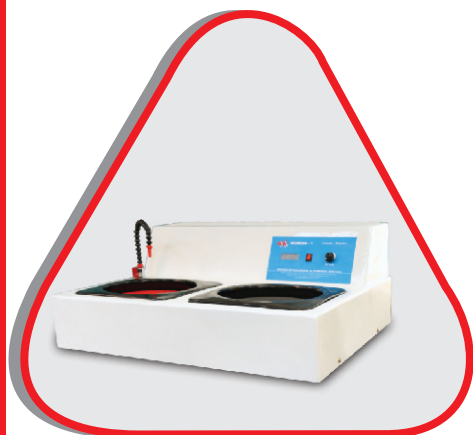
- ❖ 12" single disc polisher
- ❖ Variable speed from 100-900 RPM
- ❖ DC Drive width LED Display
- ❖ 0.25HP High torque DC Motor
- ❖ Flexible waterjet with control valve
- ❖ Paper Holding Band For (Stainless Steel)
- ❖ Machine Size : 500 X730X450 mm
- ❖ Polishing machine Table



Modern Single Disc Fixed Speed Grinder/Polisher

Model : (Modern-6)

- ❖ 12" Single disc polisher
- ❖ Fixed speed from 800 RPM
- ❖ 0.5HP High Torque AC Motor
- ❖ Aluminum Disc 12"Dia
- ❖ Flash Guard with LID
- ❖ Holding Spring for Stainless Steel
- ❖ Machine Size : 500 X 730 X 450mm
- ❖ Polishing machine Table (Fully Covered With Storage Cabinet)



Modern Double Disc Variable Speed Grinder/Polisher

Model : (Modern - 1)

- ❖ 8" double disc polisher
- ❖ Variable speed from 100-800 RPM
- ❖ DC Drive LED Display with controller
- ❖ 0.25HP High Torque DC Motor
- ❖ Aluminum Disc 8"Dia (Interchangeable)
- ❖ Holding Spring (Stainless steel)
- ❖ Size: 740x680x320mm
- ❖ Polishing machine Table



Modern Double Disc Fixed Speed Grinder/Polisher

Model : (Modern - 2)

- ❖ 8" double disc polisher
- ❖ Fixed speed 800 RPM
- ❖ Corrosion Resistant wash bowl free flow drain
- ❖ 0.5HP AC Motor
- ❖ Aluminum Disc 8"Dia (Interchangeable)
- ❖ Paper Holding Band For (Stainless Steel)
- ❖ Size: 740x680x320mm
- ❖ Polishing machine Table



Modern Double Disc Variable Speed Grinder/Polisher

Model : (Modern - DCM-01)

- ❖ 12" Double disc polisher
- ❖ Variable speed from 100-900 RPM
- ❖ DC Drive LED Display
- ❖ 0.5HP High Torque DC Motor
- ❖ V Belt used For Rotate Disc For Long Life
- ❖ Aluminum Disc 12"Dia (Interchangeable)
- ❖ Paper Holding Band For (Stainless Steel)
- ❖ Size: 960 x 720 x 330mm



Modern Double Disc Fixed Speed Grinder/Polisher

Model : (Modern - ACM - 02)

- ❖ 12" Double disc polisher
- ❖ Fixed speed 800 RPM
- ❖ Corrosion Resistant wash bowl free flow drain
- ❖ 0.5HP AC Motor
- ❖ Aluminum Disc 12"Dia (Interchangeable)
- ❖ Paper Holding Band For Stainless Steel
- ❖ Size: 960 x 720 x 330mm
- ❖ Polishing machine Table (Fully Covered With Storage Cabinet)



Modern Individual Double Disc Variable Speed Grinder/Polisher

Model : (Modern - IDCM - 03)

- ❖ 12" Double disc polisher
- ❖ Variable speed from 100-900 RPM
- ❖ DC Drive LED Display (Independent Drives)
- ❖ 0.25HP High Torque DC Motor
- ❖ Extra Power for Individual Motor, Drive Operation
- ❖ Machine Size: 960 x 720 x 330mm
- ❖ Polishing machine Table



Modern Individual Double Disc Fixed Speed Grinder/Polisher

Model : (Modern - IACM - 04)

- ❖ 12" Double disc polisher
- ❖ Fixed speed 800 RPM
- ❖ Corrosion Resistant wash bowl free flow drain
- ❖ 0.5HP AC Motor (Independent Motor)
- ❖ Aluminum Disc 12"Dia (Inter changeable)
- ❖ Holding Spring, with Holding brant (Stainless Steel)
- ❖ Size: 960 x 720 x 330mm
- ❖ Polishing Machine Table



Modern Individual Double Disc Variable Speed Grinder/Polisher

Model : (Modern - IDCM - 05)

- ❖ 8" Double disc polisher
- ❖ Variable speed from 100-900 RPM
- ❖ DC Drive LED Display (Independent Drives)
- ❖ 0.25HP High Torque DC Motor
- ❖ Aluminum Disc 8"Dia (Interchangeable)
- ❖ Holding Spring (Stainless steel)
- ❖ Size: 740 x 680 x 320mm
- ❖ Polishing machine Table



Modern Individual Double Disc Fixed Speed Grinder/Polisher

Model : (Modern - IACM - 06)

- ❖ 8" Double disc polisher
- ❖ Fixed speed 800 RPM
- ❖ 0.25HP AC Motor (Independent Motor)
- ❖ Aluminum Disc 8"Dia (Inter changeable)
- ❖ Holding Spring (Stainless steel)
- ❖ Size: 740 x 680 x 320mm
- ❖ Polishing machine Table (Fully Covered With Storage Cabinet)

Four Disc Polishing Machine (Heavy Duty) Also Available

Inverted Trinocular Metallurgical Microscope

Our goal is quality. Quality is our Priority. We have the best solutions in the metallurgy field. The productivity of managing the world does not make an excuse, you will do it confidently. We are introducing Metallurgical image processing software. The Metallurgical image processing software is user-friendly. The investigation of the metallurgy analysis work carried out is very difficult nowadays. With this software, it can be done rapidly and accurately. The investigation analysis is done, the verification can be done of the output results, and the software analysis data can be changing the formats like notepad and Excel. Field Metallurgical software helps to analyze the purpose, which is undetermined measurements, counts, length, angles, phase analysis, grain size measurements, Etc. The investigation results are more accurate and reliable. It is possible at 0.01 microns. The image processor software occupies very low Disk Space. The analysis of the image processor includes many appearance editable options and switches to changing the data processing.

Trinocular Observation Head

- ❖ Siedentopf observation head inclined at 45°
- ❖ Diopter adjustment ring on ocular tube (±5)
- ❖ Inter-pupillary distance from 53mm to 75mm
- ❖ Focusable vertical tube for Digital Microphotography

Eyepiece (Anti Fungus)

- ❖ Wide field 10X (paired) F.O.V. 22mm

Objectives (Infinity Corrected)

- ❖ M Long working distance plan 5X, 10X, 20X, 50X, 100X

Mechanical Body

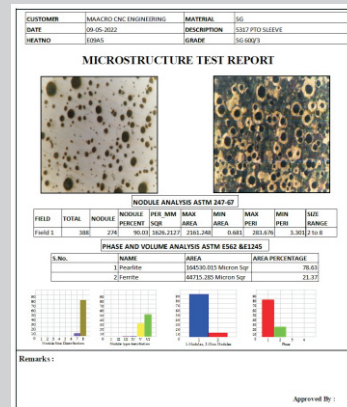
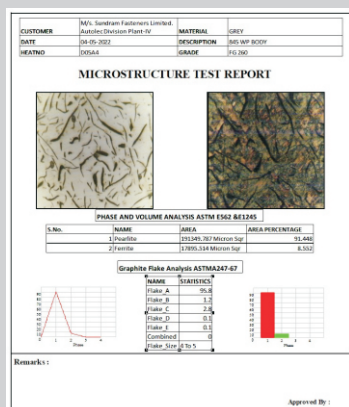
- ❖ Co-axial focusing system with large knobs, PRE-FOCUSING LEVER & TENSION ADJUSTMENT RING
- ❖ Quintuple nosepiece on ball bearing
- ❖ Mechanical stage is 210mm X 180mm and moving range 50mm X 50mm
- ❖ Mechanical stage has low positioned co-axial controls on ball bearing guide ways
- ❖ Upper port with phototube for micro photography

Standard Accessories

- ❖ 12V/50W halogen tungsten bulb, operating manual, dust cover, guarantee card and Styrofoam molded pack



Metallurgical Software



Sterozoom Microscope

Technical Specifications

- ❖ Observation head inclined at 45° rotatable at 360°
- ❖ Inter-pupillary distance from 54mm to 76mm
- ❖ EYE PIECE Wide field 10X (paired) F.O.V. 20mm
- ❖ Zoom 0.7X to 4.5X with magnification ratio of 1:6.4
- ❖ Magnification Range 7X-45X
- ❖ Mechanical body Lateral zoom control movement
- ❖ Clip for holding specimen
- ❖ Base size is 285mm X 238mm
- ❖ Operating manual, dust cover, guarantee card and styrofoam molded pack

Weld Check Software



Polarizing Microscope

Technical Specifications

- ❖ Optical System Infinite optical System
- ❖ Eyepiece Plan eyepiece 10X/20mm
- ❖ Objectives Stain free Plan Achromatic 10x/20x/40x/60x
- ❖ Polarizing Rotatable stage Diameter $\phi 170\text{mm}$, center adjustable, 360° scale, Minimum division 1°, Minimum reading 6° by means of vernier scale, 45° click stop knob
- ❖ Focusing Coaxial coarse & fine adjustment, Range 32MM, Fine division 0.001MM, coarse stroke 37.7 MM per rotation, fine stroke 0.1mm per rotation
- ❖ Polarizer 360° Rotatable 0° Position Adjustable

Measuring Software



Portable Hardness Tester

Features

- ❖ Compact plastic case, suitable for use under poor working conditions. Test at any angle, even upside down.
- ❖ Wide measuring range. It can measure the hardness of all metallic materials. Direct display of hardness scales HRB, HRC, HV, HB, HS, HL
- ❖ Large screen (segment LCD), showing all functions and parameters. With EL background light
- ❖ Large capacity memory could store 100 groups information
- ❖ Data pro Software to connect with PC via RS232 port. Micro printer support Software calibration function

Technical Specifications

- ❖ Measuring Range (170-960)HLD, (17-68.5)HRC, (19-651)HB, (80-976)HV, (30-100)HS, (59-85)HRA, (13-100)HRB
- ❖ Measuring Direction 360° ($\downarrow \nearrow \swarrow \searrow \leftarrow \rightarrow$)
- ❖ Hardness Scale HL, HB, HRB, HRC, HRA, HV, HS
- ❖ Display Segment LCD
- ❖ Data Memory Max. 100 groups
- ❖ Working Voltage 3V (2 AA size alkaline battery)
- ❖ Continuous Working Period About 100 Hours (With backlight off)
- ❖ Communication Interface RS232

Main Application

- ❖ Die cavity of molds
- ❖ Bearings and other parts
- ❖ Failure analysis of pressure vessel, steam generator and other equipment
- ❖ Heavy work piece
- ❖ The installed machinery and permanently assembled parts
- ❖ Testing surface of a small hollow space



Consumables



Client Locations Across The World



**Modern Metallurgical
& Scientific Services**



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