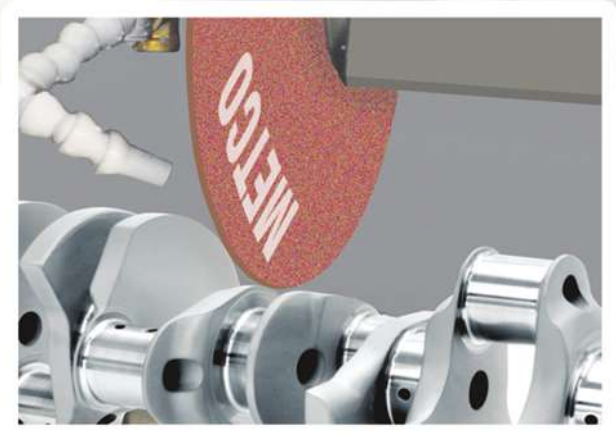


Chennai Metco



Finest products for
Micro Structure Analysis

www.chennaietco.com

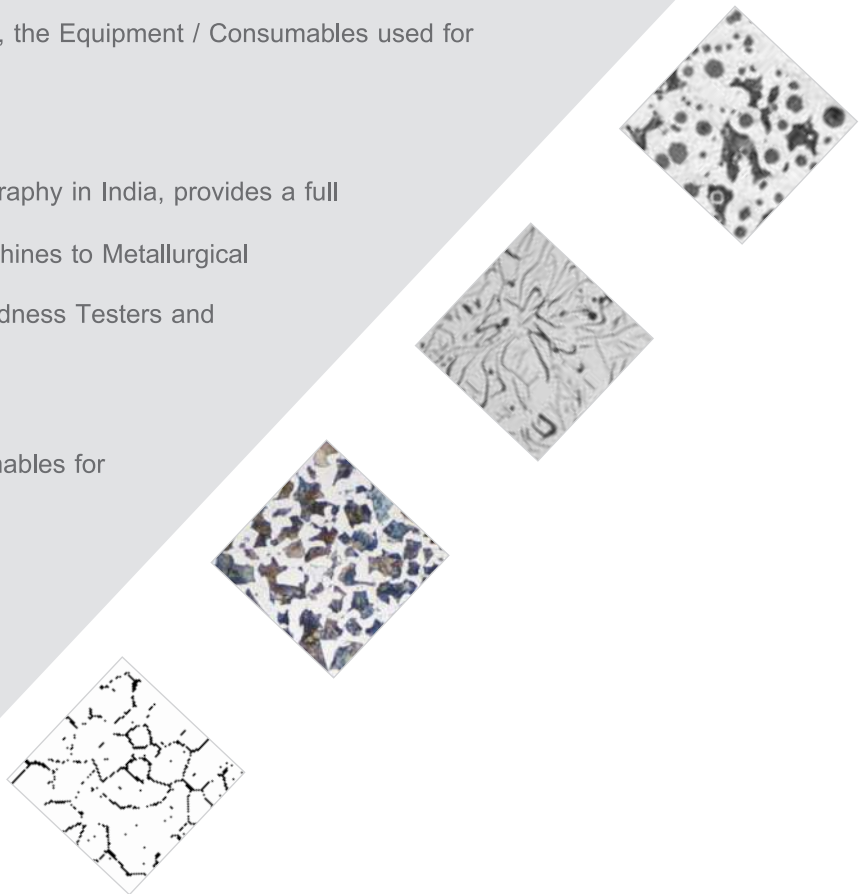
Metallography

Metallography is the art and science of preparation and examination of materials for their microstructure using microscopes.

The success of examination and interpretation of microstructure depends on the quality of the surface preparation. This in turn depends on cutting, grinding, mounting and polishing to a high degree to get a mirror-like reflective surface free from scratches. While the skill of the operator is important to get a high quality of surface, the Equipment / Consumables used for preparation equally plays a crucial role.

Chennai Metco, as leaders in the field of Metallography in India, provides a full range of Metallography equipment from Cutting Machines to Metallurgical Microscopes including Image Analysis systems, Hardness Testers and Lab Furniture.

Besides, we also supply the entire range of Consumables for Research, Quality Control and Testing.



Chennai Metco

One Stop Solution for all your Metallographic needs

METALLOGRAPHY

SECTIONING

SECTIONING, the removal of a conveniently sized and representative specimen from a larger piece is the first major operation in the preparation of metallographic specimen.

Incorrect preparation techniques can cause micro structural changes that lead to erroneous interpretation.

The selection of the right cutter/right tool is the first crucial step of specimen preparation.

Abrasive Cutting, with copious supply of coolant to ensure that no thermal damage takes place, is the most widely used method of sectioning materials for microscopic examination.

Chennai Metco provides a wide range of Abrasive Cutters, including tailor made ones, to suit the specific needs of the customer sample.

We have also developed very large cutters to section massive and long sized components such as crankshafts.

Backed by a strong R&D and with a strong commitment to quality, Chennai Metco now have emerged to be a global player in this field.



Precision Cut Off Machine

BAINCUT LSS (LOW SPEED SAW) LSS003

The precision section saw is designed for slicing all types of materials with ease. The slow speed cutter is mostly used for accurate sectioning of very small, hard components for R & D.

- Cutting capacity upto 20 mm ★
- Built-in S.S coolant tray
- Down-feed facility with different weights upto 350 grams
- **Advanced touch screen system with pre set programs**
- Continuously variable speed upto 600 RPM
- Micrometer for cross-feed adjustment upto 25 mm
- Transparent splash guard
- Power single phase : 220V/50Hz or 110V/60Hz
- Diamond blade size : upto 5" dia
- Rotating fixer to increase double the capacity - 30" (Option)



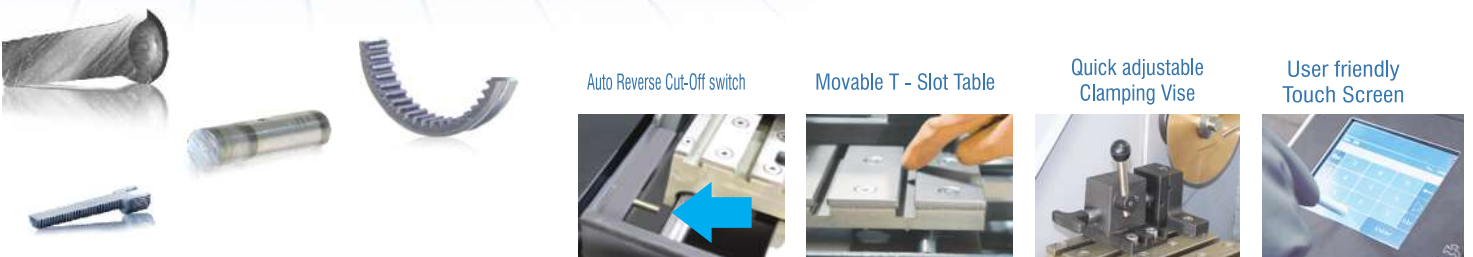
Precision Cut Off Machine

BAINCUT HSS (HIGH SPEED SAW) CMHSS049

The Precision saw for cutting all types of materials with variable spindle speed. Automated Y movement adds to the convenience. A must for slicing Surface Engineered components. Most preferred by Research Laboratories.



- Cutting capacity upto 40 mm dia ★
- Door Interlock limit switch
- Re-circulating coolant system
- Automatic Y-Movement (Longitudinal)
- Variable speed system 100-3000 rpm
- Variable feed rates and cutting length
- Precision serial cutting (option)
- Power single phase 1HP : 220V/50Hz or 110V/60Hz
- Diamond / Abrasive wheel upto 200 mm dia (8")
- Machine Size: 600 x 600 x 500 mm





PLC based touch screen system

Precision Cut Off Machine BAINCUT HSS PLUS CMHSSP060

Same as HSS, but with added features

- Cutting capacity up to 60 mm ★
- Large Movable Cutting T - Slot Table- 250 x 200mm
- "Z" Movement permits height adjustments of cut off wheel upto 40 mm.
- Door safety Interlock system
- X Movement scale reading system
- Variable speed 100-5000 rpm
- Powerful LED lamp
- Precision Serial Slicing (Optional)
- Diamond wheel or Abrasive wheel upto 8" (200 mm) dia
- Easy to clean cutting chamber
- Power single phase 2HP : 220V/50Hz or 110V/60Hz
- Fume exhaust port
- Machine Size: 845 x 784 x 525 mm



Baincut Medium

Abrasive Cut Off Machine - Medium

CMM001

A popular general purpose cut-off machine with simple construction FRP hood, viewing window, internal illumination, re circulation coolant system, washing jet, safety limit switch. Chop cutting by lowering the wheel with the handle (Z movement).



- Cutting size up to 60 mm dia ★
- Powered by 3 HP (2.2 kw), 3 Phase motor
- Rust proof steel construction
- Inbuilt movable re circulation coolant tank
- Z axis Movement - Manual
- Wheel Dia 10" (250 mm)
- Spindle speed 2800 rpm
- T-slot bed Size: 240 X 200 mm with 10 mm "T" slot
- Door Limit switch / emergency stopper
- Easy operator panel
- Side opening for longer components
- Power : 415v / 50 Hz or 220v / 60 Hz
- Machine Size : 850 x 750 x 1550 mm



Automation available

CMM001A



Baincut Medium

Abrasive Cut Off Machine - Medium (Table Top)

CMT022

Same as above medium floor model but with out "stand". Machine can be kept on a table.

Coolant tank with coolant pump provided.

Machine Size : 850 x 750 x 750 mm



Coolant Tank with pump

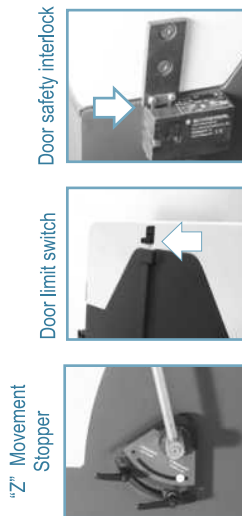
Baincut UM

ABRASIVE CUT OFF MACHINE - UPPER MEDIUM

CMU002

A sturdy floor model general purpose cutter. Large space in the cutting zone offers flexibility to use wide variety of fixtures. Cutting action possible by lowering the arm (Z movement) and longitudinal table movement through cutting plane (Y - movement). Additional side movement (X - movement) option is of advantage. Lockable Z movement wheel position offers extra convenience. Suitable for variety of applications including small gears, medium sized auto components and shafts.

- Cutting capacity up to 80 mm dia ★
- Powered by 5 HP (3.7 kw), 3 Phase
- Z, Y and X movement
- Inbuilt movable re-circulation coolant tank
- Cut-off wheel dia 12" (300 mm)
- Safety emergency stop with door limit switch
- Easy operator panel
- Serial Cutting (Option)
- Table size : 310 x 260 mm with 8mm T-Slot
- Door safety interlock (option)
- Side opening for longer components
- Power : 415v / 50 Hz or 220v / 60 Hz
- Machine Size: 1100 x 1000 x 1650 mm



Automation available
CMU002A



Baincut Large

CML004

ABRASIVE CUT OFF MACHINE - LARGE

Large heavy-duty cutting machine for sectioning large samples for metallography. Has similar features of UM model, but with higher capacity with Z,Y and X movements.

- Cutting Capacity up to 110 mm dia ★
- Powered by 7.5 HP (5.5 kw), 3 Phase motor
- Inbuilt movable re-circulation coolant tank
- Cut-off wheel dia 14" (350 mm)
- Spindle speed 2880 rpm
- Easy operator panel
- Safety emergency stop with door limit switch
- Z movement ergonomic handle
- Serial cutting (Option)
- Table size : 400mm x 400 mm with 8mm T-Slot
- Side opening for longer components
- Power : 415v / 50 Hz or 220v / 60 Hz
- Machine Size: 1040 x 1600 x 1800 mm



Automation available
CML004A



Baincut L Plus Auto CMLP015A

ABRASIVE CUT OFF MACHINE - LARGE PLUS AUTO




Automatic Large plus heavy-duty cutting machine with Integral construction. Standard Y automation. Pulse cutting for burn free cutting. Preset parameters for consistency.

- Cutting Capacity about 130 mm dia ★
- Powered by 10 HP (7.5 kw), 3 Phase Motor
- Cutting action Y Movement Automatic (longitudinal)
- Cut-off wheel dia 16" (400 mm)
- Z- Movement Auto (Option)
- Inbuilt movable - re circulation coolant tank
- Heavy duty Screw Vise
- Spindle speed 2200 rpm (variable speed at option)
- Serial cutting (Option)
- Table size : 400 x 400 mm with 8 mm T-Slot
- Side opening for longer components
- Power : 415v / 50 Hz or 220v / 60 Hz
- Machine Size: 1040mm x 1600mm x 1800 mm

Advanced PLC based touch screen system with pre set programs

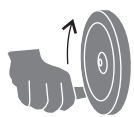


Cut off wheel cooling systems

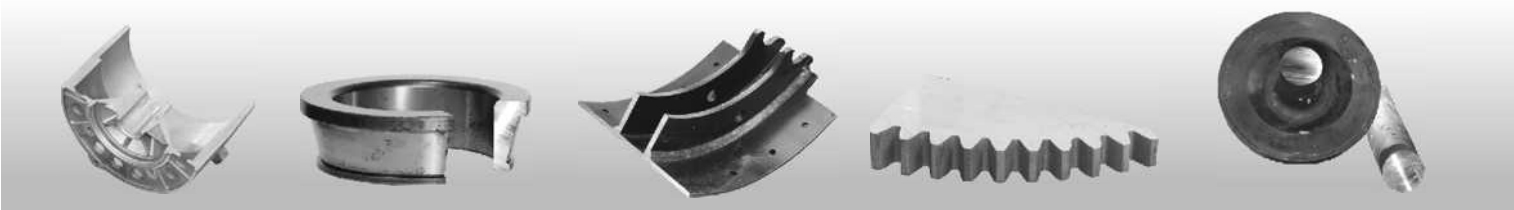




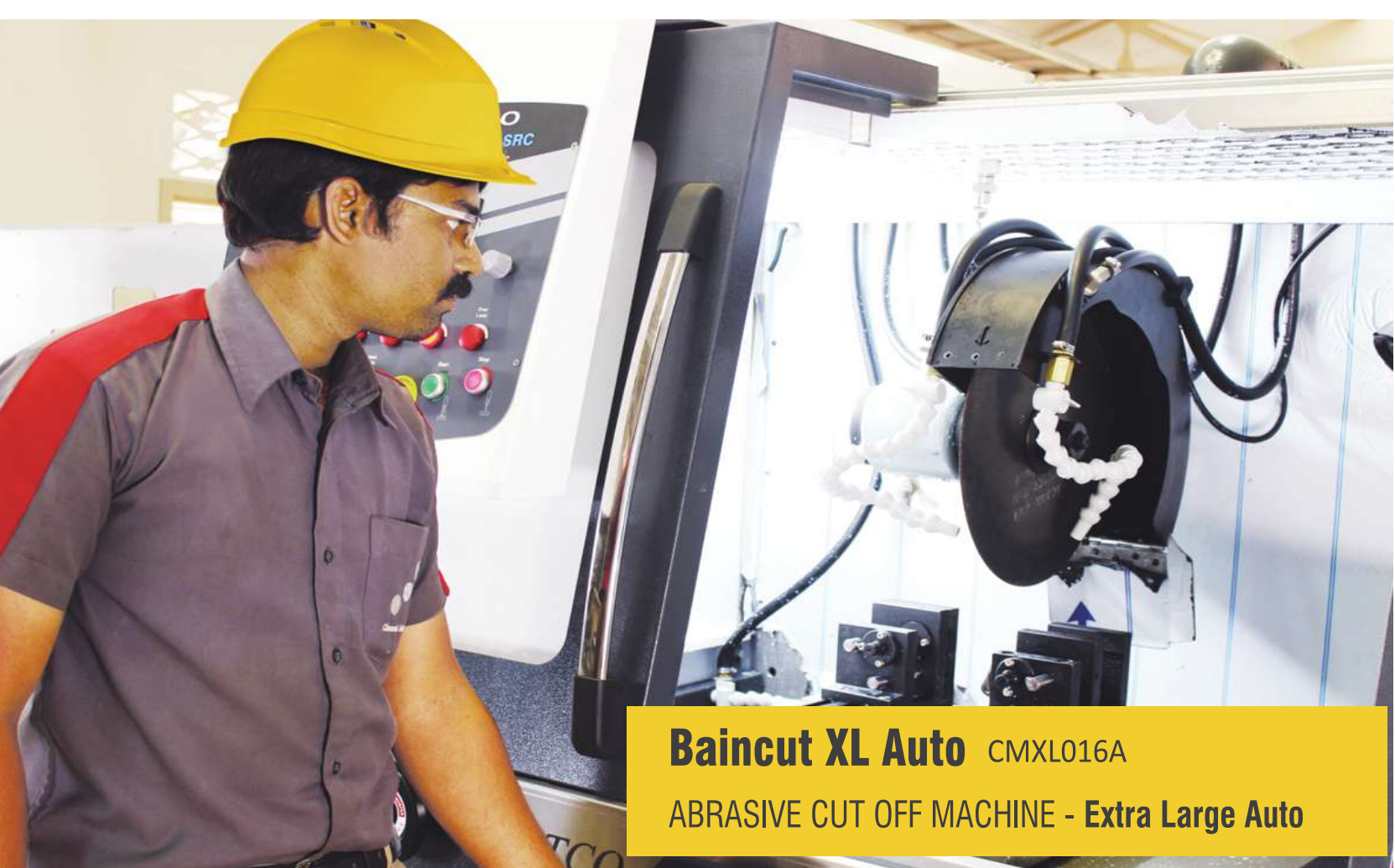
Touch Screen (PLC)

400 X 260 mm with 8 mm "T" Slot Table



Manual Model Available
CMLP015





Baincut XL Auto CMXL016A

ABRASIVE CUT OFF MACHINE - Extra Large Auto

Automatic Extra Large heavy-duty cutting machine with Integral sliding door construction. Standard Y automation with optional Z automation. Pulse cutting, step cutting etc., for burn free cutting. Preset parameters for consistency and ease of use.

- Cutting Capacity up to 150 mm dia ★
- Powered by Motor 15 HP, 3 Phase motor
- Cut-off wheel dia 20" (500mm)
- 3 Axis user friendly movement (X,Y & Z)
- 'Y' Movement automatic with Servo system
- Z - Movement Auto (Option)
- Coolant Tank with 150L capacity
- Advanced PLC based Graphical Touch Screen System with Pre set programs
- Laser Line Marking System (Option)
- High flow Multiple Coolant jets (4 Nos)
- Magnetic Separator
- Paper band filter system (option)
- Serial Cutting (Option)
- Fume digester (Option)
- Door Safety Interlock System
- Bed Wash and Auto Wash for a clean machine
- Table : 500 X 500 mm with 12mm T-Slot
- Power : 415v / 50 Hz or 220v / 60 Hz
- Machine Size: 1700 x 1700 x 1900 mm



Baincut XXL Auto

CMXXL017A

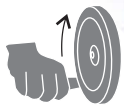
Heavy Duty ABRASIVE CUT OFF MACHINE - Double Extra Large Auto

Automatic bigger sized fully loaded cutting machine with top Closed design. Two side sliding door provides voluminous internal space to section big components and also easy access.

Standard Z & Y automation. Pulse cutting, step cutting modes for burn free cutting. Variable spindle speed included.

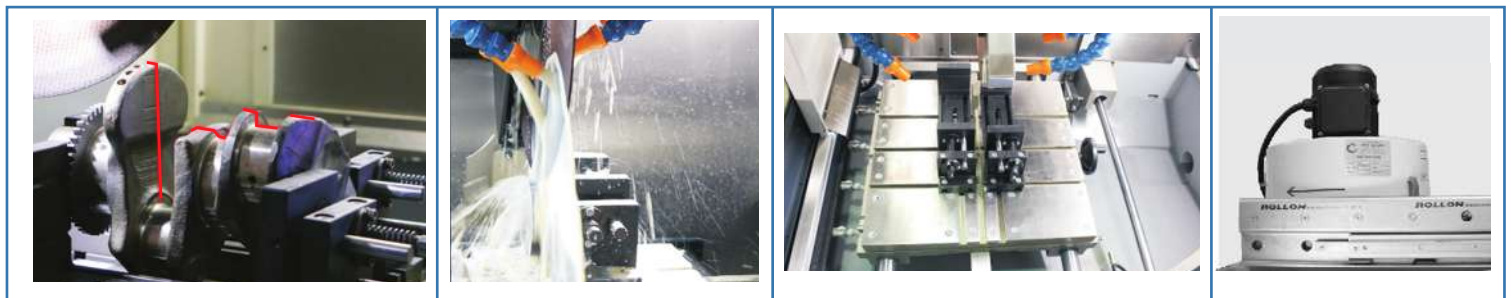


- Cutting capacity up to 180 mm dia ★
- Powered by 30 HP (22.5 kw), 3 Phase Motor
- Cut-off wheel dia 20" (500 mm)
- Variable Speed 1000 - 3000 rpm
- 3 Axis user friendly movement
- 'Y' Movement and "Z" Movement automatic with Servo System
- Laser Line Marking system
- Advanced PLC based Graphical Touch Screen System with Pre set programs
- High flow coolant jet system with Bed Wash and Auto Wash for a clean machine
- Magnetic Separator
- Paper band filter system (option)
- Serial Cutting (Option)
- Fume digester
- Door Safety Interlock System
- Optional power up gradation (30 HP)
- Table 600 x 600 mm with 12mm T-Slot
- Power : 415v / 50 Hz or 220v / 60 Hz
- Machine Size: 2100 x 2150 x 2400mm



Manual Model Available

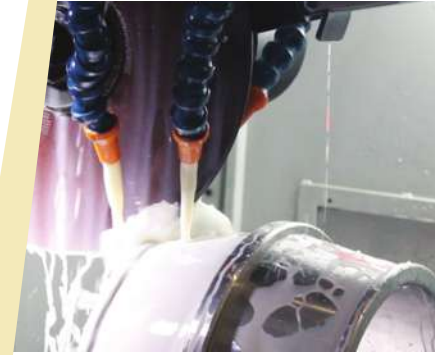
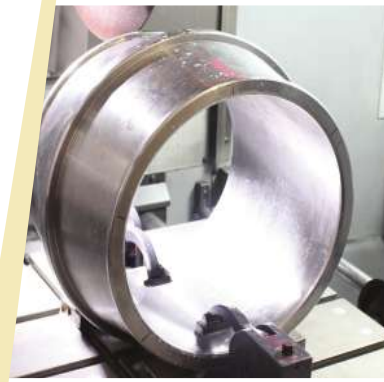
CMXXL017



Baincut XXXL Auto CMXXXL018A

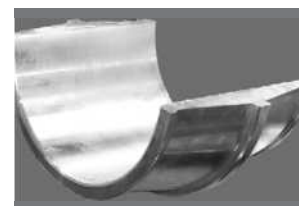
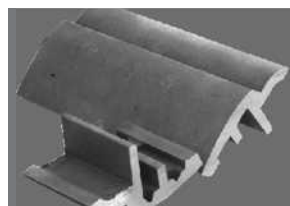
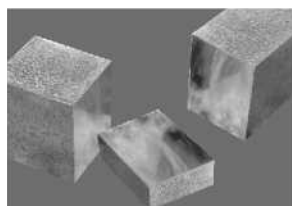
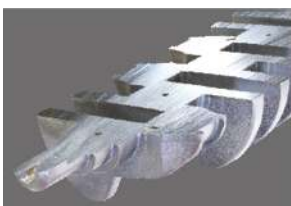
Heavy Duty Abrasive Cut Off Machine - Triple Extra Large Auto

There are industrial components that require real extra power for sectioning, here is a machine that can handle big / tough components. Intelligent cutting modes like step cutting, cradle cutting, jump cutting and pulse mode used for easy sectioning.



- Cutting capacity up to 200 mm dia ★
- Powered by 40 HP (30 kw), 3 Phase Motor
- Cut-off wheel dia 24" (600 mm)
- Variable Speed 1000 - 3000 rpm
- Table size 600 x 600 mm with 12mm T-Slot
- 3 Axis user friendly movement
- "Y" Movement and "Z" Movement automatic with Servo System
- Door Safety Interlock System

- Advanced PLC based Graphical Touch Screen System with Pre set programs
- High flow coolant jet system with Bed wash and Auto wash for a clean machine
- Magnetic Separator
- Paper band filter system (option)
- Serial Cutting (Option)
- Fume digester
- Power : 415v / 50 Hz or 220v / 60 Hz



Special Purpose Cutters

The industry may need specific solution for special requirement. Chennai Metco builds special purpose cutters for such Applications

Bar Cutting Machine / Rail cutting machine/ Carbide Rod Cutting Machine with feeder

CMB020A

CMR021A

CMC019A



Bar / Rail cutting machine with feeder

- Cutting capacity about 60mm dia ★
- Powered by 4 HP, 3 Phase motor
- Inbuilt movable re-circulation coolant tank
- Cut-off wheel dia 8" & 10"
- Easy Operator panel with touch screen display
- Pneumatic clamping
- Paper band filter system (option)
- Safety emergency stop with door limit switch
- Power : 415v / 50 Hz or 220v / 60 Hz
- Automatic bar feeding (Option)

Carbide Rod Cutting Machine

Tool rooms need to cut tools, carbide rods, ejector pins etc., on routine basis.

- Cutting capacity about 40mm dia ★
- Powered by 4 HP, 3 Phase motor
- Inbuilt movable re-circulation coolant tank
- Diamond wheel dia 8" & 10"
- Easy Operator panel with touch screen display
- Paper band filter system (option)
- Automatic bar feeder (Option)
- Power : 415v / 50 Hz or 220v / 60 Hz

Refractory Bricks Diamond Cutting Machine



Automatic Refractory Bricks Diamond Cutting Machine

Used to slice Refractory Bricks. Can be also used to cut Rocks, minerals, concrete, ceramics and other geological samples.

- Cutting capacity upto 1000mm X 150mm x 100mm ★
- Powered by 10 HP, 3 Phase AC motor
- Inbuilt movable re-circulation coolant tank
- Diamond wheel dia 14"/16"
- Pulse cutting / Step Cutting / Continuous cutting
- User friendly for 3 Axis operation
- T slot bed: 500mm X 500 mm with 8mm T-slot
- Power : 415v / 50 Hz or 220v / 60 Hz
- Machine size: 2100mm x 2150mm x 2400 mm (LxDxH)

Manual Model Available



It is suggested that your component is subjected to trials to decide right model of cutter



MOUNTING

MOUNTING the specimen after sectioning is often necessary for subsequent handling and Metallographic polishing. Mounting has several benefits, especially in hand polishing when specimen flatness and edge retention are important. Specimen mounting has other benefits such as

- Uniform flatness for either manual or automatic grinding and polishing machine
- Easier handling of specimens that are too small and fragile
- Chennai Metco Mounting Presses are engineered with best in class techniques with international standards



Pneumatic hot mounting press

Suitable for high volume.
For Phenolic mounting only.

BAINMOUNT-P

MPP006

MOUNTING PRESS- Pneumatic Manual

- Pneumatic operating System
- Inter Changeable moulds 1¼", 1½" and 2" dia
- Optional: Metric mould dimensions : 30, 40 & 50 mm
- Heater 1600 Watts , Single Phase
- Manual Water cooling system
- User friendly feather touch button
- Machine Size : 480 x 620 x 590 mm
- **Optional: Water cooling Re-circulation system**
- Buzzer on completion of cycle



BAINMOUNT-P AUTO

MPP006A

AUTOMATIC MOUNTING PRESS- Pneumatic

Digital Temperature Indicator and Digital Timer with Display, Automatic Water Cooling System.

Optional: Water cooling Re-circulation system

Manual hot mounting press

Direct reading pressure gauge,
timer with buzzer at the end of cycle.

- Inter changeable moulds 1¼", 1½" and 2" dia,
- Optional: Metric mould dimensions : 30, 40 & 50 mm
- Heater 1600 Watts , Single Phase
- Digital Temperature Indicator & digital timer
- Timer-Buzzer for heating and cooling cycles
- Manual water cooling system
- User friendly feather touch button
- Machine size : 490 x 620 x 590 mm
- **Optional: Water cooling Re-circulation system**

BAINMOUNT-H

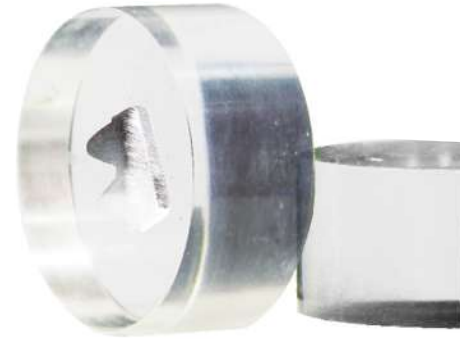
MPH007

MOUNTING PRESS- Manual



Hydraulic hot mounting press Auto

- Hydraulic fully Automatic system
- Setting of Temperature, Heating Time, Mounting Pressure, Cooling Time, Ram up and down, Cycle Start can be done and controlled through the Touch Screen Pad
- Modern Metallography Practices now demand variable heating, cooling and high pressure during moulding for enhanced results like high mould hardness and edge retention.



BAINMOUNT-H Auto MPH007A

AUTOMATIC HYDRAULIC MOUNTING PRESS



- Inter changeable moulds 1¼", 1½" and 2" dia,
- Optional: Metric mould dimensions : 30, 40 & 50 mm
- Heater 1600 Watts , Single Phase
- LCD Parameter Indicator
- User Friendly advanced LCD Touch Screen
- Ideal for Transparent, EPO & Bakelite moulds preparation
- Preset Programs & Data Storage of Mounting Parameters up to 25 Programs
- Timer-Buzzer for heating and cooling cycles
- Automatic Water Cooling System
- Machine size : 490 x 620 x 590 mm
- Optional: Water cooling re-circulation system

BAINMOUNT - Twin H Auto MPHD007A

Automatic Hydraulic Mounting Press with Dual Cylinders

Same as above

Simultaneous mounting in both cylinders can be done for higher volume throughput



BAINMOUNT-HD Auto MPHD007A

Automatic Hydraulic Mounting Press with Auto Doser (For the extra automation, including filling the cylinder with mounting medias) Automatic cylinder size detection indicator.

Soft water is recommended. In case of unavailability, we suggest to buy recirculation system for trouble free operations.



Grinding & Polishing

Grinding involves process of coarse grinding prior to fine grinding to obtain flat surface, followed with steps of fine grindings.

Polishing, in one or more final steps, in specimen preparation is to get mirror finished surface. This process is necessary to get the clear view of the microstructure in the specimen

It is done through a series of SiC sheets, diamond platens, cloths, and suspensions to obtain mirror like and planar surface in the specimen.

Coarse flat grinding is preferably done in abrasive belts. We offer simple, heavy and twin wet machines.

Chennai Metco offers a full range of Table Top, Floor Model, Manual, Semi Automatic and Fully Automatic Polishing Machines

Our State of the Art Fully Automatic Polishers are ideal for laboratories looking for high quality consistent results for demanding applications.

For flat, coarse grinding prior to fine grinding. The specimens are to be ground in 60,80 or 120 grit after cutting / mounting

BAINLINE-TWIN WET

TBG011

TWIN BELT GRINDER - WET



Optional Variable Speed

- Motor : 1 HP 3 phase motor, 1440 rpm
- 100mm x 915mm endless belt
- Simplified belt change and alignment mechanism
- Water cooling
- Machine Size: 630 x 250 x 520 mm

For the best results in grinding



FLOOR MODEL

with Re circulation water cooling system

TBG 012

BAINLINE-GP

BG010

BELT GRINDER - General Purpose

- Motor : 0.5 HP Single Phase
- 100mm x 915mm endless belt
- Simplified belt change and alignment mechanism
- Machine Size: 560 x 350 x 250 mm



BAINLINE-H

BGH005

HEAVY DUTY BELT GRINDER

- 1 HP 3 phase motor
- 150 mm x 1220 mm endless belt
- Simplified belt release and alignment mechanism
- Mechanical double speed design
- Machine Size : 700 x 600 x 1120 mm

BAINLINE-VSG

VSG014

VARIABLE SPEED SPECTRO GRINDER

- 1 HP 3 phase motor
- 14" Vacuum Disc
- Variable Speed 100 to 2880 rpm
- 1 HP Vacuum system
- Machine Size : 1050 x 650 x 1000 mm

Single speed also available (SGS)

Single speed 2880 rpm

SSG013





Fully moulded FRP cover.
Quick change disc design enables discs with different emery grits / polish cloths to be used in desired steps.



BAINPOL - VT

PMV008

VARIABLE SPEED TABLE TOP SINGLE DISC

- 0.5HP high torque AC motor
- Single Phase input 220v/50Hz or 110V/60Hz
- Imported AC Drive
- 8" disc dia. standard
- 10" & 12" dia options
- LCD display
- Feather touch control
- 50 to 1000 RPM or 50 to 600 RPM
- Machine Size : 360 x 660 x 310 mm

BAINPOL - VTD

PMV009

VARIABLE SPEED TABLE TOP DOUBLE DISC

- 0.5HP high torque AC motor
- Single Phase input 220v/50Hz (or) 110V/60Hz
- Imported AC Drive
- 8" disc dia. standard
- 10" & 12" dia options
- LCD display
- Feather touch control
- 50 to 1000 RPM or 50 to 600 RPM
- Machine Size : 710 x 660 x 310 mm



PMV018

BAINPOL - VTD Individual Drive

VARIABLE SPEED TABLE TOP DOUBLE DISC INDIVIDUAL DRIVE

Same as above but two independent motors. Get extra power and individual operation.



BAINPOL - SA

Economic automation for less demanding applications

SEMI AUTOMATIC, VARIABLE SPEED SINGLE / DOUBLE DISC



PMS012

- Auto head to hold 3 samples
- 0.5 HP high torque Motor
- Independent Powered Polish Head
- Variable speed 50- 600 rpm
- Head speed 100 rpm
- Imported AC Drive
- LCD Display
- Feather touch control
- 12" disc standard (10" optional)
- Metric Mould option 30,40,50 mm



PMS024

VTD SA also available

BAINPOL - Auto

PMV028

FULLY AUTOMATIC VARIABLE SPEED SINGLE DISC

- World class Auto polishing machine
- User Friendly advanced LCD Touch Screen
- Setting of Head Up/Down, Disc Direction, Head direction, Head speed, Individual Force can be controlled through the Touch Screen
- Ideal choice for the laboratories looking for quality and reproducible results
- **The Machine with Central force is optional**

- Can hold upto 6 moulds
- Hold multiple moulds : 1 ¼" dia (std), 1 ½" and 2".
- Disc size 10" (12" Optional)
- 1 HP high torque AC motor
- Single Phase Input
- Variable Disc speed 50 to 600 rpm
- Variable Head speed 30 to 150 rpm
- Reliable imported Electronics
- Individual pressure specimen loading
- Metric Mould option 30,40,50 mm
- Machine Size: 850 X 500 X 600 mm



Optional Auto Doser



BAINPOL - Auto Double Disc

PMV050

Double Disc Fully Automatic
Grinder / Polisher with swingable arm

Machine Size: 950 X 850 X 750 mm



Particularly suitable for high volume/Large specimen preparation. Includes compartments for storing consumables

BAINPOL-VFD PMV035

VARIABLE SPEED - HEAVY DUTY FLOOR MODEL DOUBLE DISC



- 12" disc dia, 8" & 10" dia option
- 0.5 HP AC motors
- Single Phase Input
- Variable speed AC drive
- 50 - 600 RPM
- Individual drive
- Storage Compartment
- Size : 870 x750 x1020 mm

BAINPOL-VFD SA PMS036

PMS036



BAINPOL-VFF (Four Disc) PMV059

VARIABLE SPEED - HEAVY DUTY FLOOR MODEL FOUR DISC

Demanding customers prefer the convenience of multi station preparation.

- 12" disc dia (8"&10" dia Option)
- 0.5 HP AC motors
- Single Phase Input
- Variable speed AC drive
- 50 - 600 rpm
- Individual drive
- Compartment to store consumables
- Size : 1740 x 750 x 1020 mm



Triple disc also available (VFT) PMV3D12



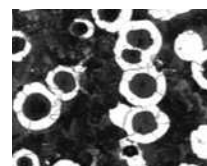
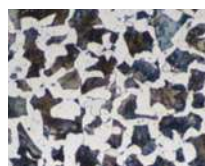
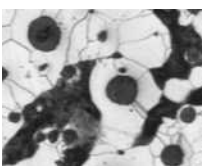
Industrial Microscopes

OPTICAL MICROSCOPE remains the most important tool for the study of microstructure.

All examination of microstructure should begin with use of light microscope starting at low magnification followed by progressively higher magnification for study and interpretation of the microstructure.

Reflected light microscopes are commonly used for the study of metals and are classified as “Upright” & “Inverted”. These terms refers to the orientation of the light path to the plane-of-polish of the specimen during observation.

We supply a wide range of microscopes based on the application and budget of the customers.



METSCOPE - I

Trinocular Inverted Metallurgical Microscope with Plan Optics and Incident light illumination

Convenient 'inverted' model for quick micro analysis, with ergonomic design. The best fusion of price and performance. The options to add quality by upgrading optics.

Objectives : 10X, 20X, 40X, 100X oil (100 X dry optional)

Magnification Range : 100X -1000X (Standard)

A third port permits image to be captured



VERTIMET CP

Trinocular Vertical Metallurgical Microscope with Plan Optics and Incident light illumination

Best suited for situations demanding vertical viewing. Practical no-frill Microscope with amazing clarity.

10X,20X,40X,100X oil (100X dry optional)

Magnification Range : 100X - 1000X (Standard)

Imaging addable with third port.



MACSCOPE - Z (Stereo Zoom)

Stereo Zoom Microscope with Camera Port

Superbly designed Stereo Zoom Microscope with excellent clarity and ergonomics. Modular design enables configuration to suit your applications.

Standard magnification 6.2x to 50 x

Magnification: 3.1x to 100x with suitable eye pieces and objectives. Fiber optic illuminator (optional)

Illumination: Ring illuminator 10w bulb



Flexible stands for flexible use

METJI Japanese Range

100% Japanese Microscope with Infinity corrected optical system. Super wide high eye point eyepieces with 50 to 500x magnification range. Integrated front mounted camera port.

Brightfield and Darkfield option also available.

Total solution, for micro and macro imaging needs, for industrial inspection.



Vertical



Inverted



Stereo Zoom



Hardness Testers

Economet Series

BH 3000D



BRINELL

Digital Brinell Hardness Tester

- Testing Load: 62.5 kgf to 3000 kgf
- Hardness testing Range: 8~650HBW
- Distance of Indenter to outer wall: 135 mm
- Max Height of Specimen: 200 mm

ROCKWELL



RH-150D(H)

Digital Rockwell Hardness Tester

- Testing Load: 60, 100, 150 kgf
- Conversion Scale: Superficial Rockwell, Brinell, Vickers
- Distance of Indenter to outer wall: 160 mm
- Max Height of Specimen: 400 mm

Analog Hardness Tester

- Testing Load: 60, 100, 150 kgf
- Indication of Hardness Value : Dial display
- Distance of Indenter to outer wall: 135 mm
- Max Height of Specimen: 100 mm (with protection sleeve); 170 mm (without protection sleeve)



RH-150A

VICKERS / MICRO VICKERS

VH-50MD



Digital Automatic Turret Vickers Hardness Tester

- Testing Load: 1 kgf to 50 kgf
- Hardness measuring range: 8~2900HV
- Distance of Indenter to outer wall: 135mm
- Max Height of Specimen: 160mm
- Testing Force Application Method: Automatic Loading and Unloading

VH-50D



Digital Vickers Hardness Tester

- Testing Load: 1 kgf to 50 kgf
- Hardness measuring range: 8~2900HV
- Distance of Indenter to outer wall: 135mm
- Max Height of Specimen: 160mm
- Testing Force Application Method: Automatic Loading and Unloading

VH-1MD



Digital Automatic Turret Micro Vickers Hardness Tester

- Testing Load: 10 gf to 1 kgf
- Hardness measuring range: 8~2900HV
- Distance of Indenter to outer wall: 95 mm
- Max Height of Specimen: 80 mm
- Testing Force Application Method: Automatic Loading and Unloading

VH-1D



Digital Micro Vickers Hardness Tester

- Testing Load: 10 gf to 1 kgf
- Hardness measuring range: 8~2900HV
- Distance of Indenter to outer wall: 95 mm
- Max Height of Specimen: 80 mm
- Testing Force Application Method: Automatic Loading and Unloading

VH-10MD



Digital Automatic Turret Vickers Hardness Tester

- Testing Load: 0.3 kgf to 10 kgf
- Hardness measuring range: 8~2900HV
- Distance of Indenter to outer wall: 135mm
- Max Height of Specimen: 160mm
- Testing Force Application Method: Automatic Loading and Unloading

Available

VH-1MD Digital Automatic Turret Micro Vickers Hardness Tester with Video Screen Measuring Device



PORTABLE HARDNESS TESTERS

Portable hardness tester is used for in situ hardness testing of large specimen. A wide range Rebound type or Ultra sonic is available to suit individual application.



PHT - 200 Plus
Leeb Hardness Tester



PHT - 310 DL

MATSUZAWA JAPAN

ROCKWELL

Digital Rockwell



RMT - 1

Digital Rockwell cum Superficial



RMT-3

VICKERS / MICRO

Entire range of Vickers and Micro Vickers Hardness Testers



VMT X7



MMT X7



KB Prüftechnik

Germany

The new generation of micro/macro hardness testing machines from KB Prüftechnik GmbH convince by extraordinary precision and reproducibility. The user enters a whole new world of hardness testing by the use of the new hardness testing software KB Hardwin XL. The KB hardness testing machines can superiorly test Bri-nell, Vickers and Knoop.

- Fully computerised hardness testers with & without load cell
- 5 Megapixel camera
- Wide range of models to choose from
- Wide range of loads

Micro Vickers Hardness Testers



KBW 1-V
Stand-alone

Regulation via LCD Display
Digital interpretation and indication of hardness



KBW 1-V Video
With video Interpretation

Regulation via pc with manual - Cross Table

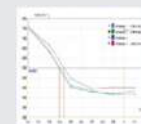
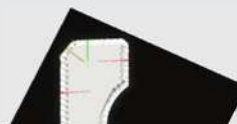


KBW 1-V - FA
Fully automatic machine

Regulation via PC with motor - driven cross table

KBW 1-V - SA
Semi automatic machine

Regulation via PC with motor - driven cross table





KB 30 S Video

Micro Low load
Macro Hardness Tester

Maximum Sample weight: 120 kg

Throat depth: 170 mm

Test room height without x/y table 245 mm

Magnification optical zoom : 1:7 in 10 steps



KB 3000 B Video Brinell Hardness Tester

Optical multi touch panel

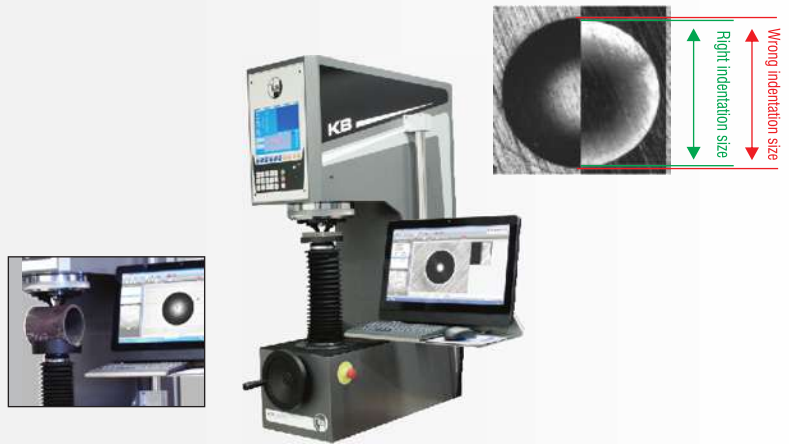
Measuring range: 5 - 3000 kgf

with software option KB Hardwin XL Autofocus Brinell

with light control Brinell

Objectiv 4x

Optical range 4x objective for Brinell with ball 10 mm,
5 mm, 2.5 mm, 1 mm and vickers HV 30 - 100



KB 150 R

Rockwell Hardness Tester

Hardness Tester KB 150 R Standalone 0.5 to 250kgf

Load range from 0.5 to 250 kgf.

Motorized closed loop loading system with load cell

200 free adjustable test programs

Resolution 0.0125 HRC

Throat depth: 250 mm

Maximum testing height: 300 mm

Universal Hardness Testing Machine KB- 250 - 3000 BVRZ Standalone

Vickers, Knoop, Brinell, Rockwell

- Standard 7x optical zoom: Highest measuring range with only one objective
- Evaluation manually via high resolution display
- Optional automatic evaluation
- Pixel by pixel evaluation via digital hand wheel
- Simplest operation via front panel and digital hand wheel
- No contamination of the screen due to touchscreen operation
- Simple change of the indenter because of the magnetic indenter holder
- Throat 250 mm
- Test room height: KB 250/ 750/ 1000

KB 3000

Standard: 320 mm
Optional: 560, 700, 800 mm
Standard: 350 mm
Optional: 560, 700 mm



Image Analysis Systems

From bringing the image to PC to advanced analysis. The integration includes Adapter, Camera, Hardware and Software. Chennai Metco provides economic Image Analysis Solutions - Envision Series.

From phase quantification, flakes size, nodularity, Grain size, inclusion, coating, decarb, Porosity, Particle and Linear measurements etc, the system is available for cost conscious customers. Improve your competitive edge by image analysis solutions.

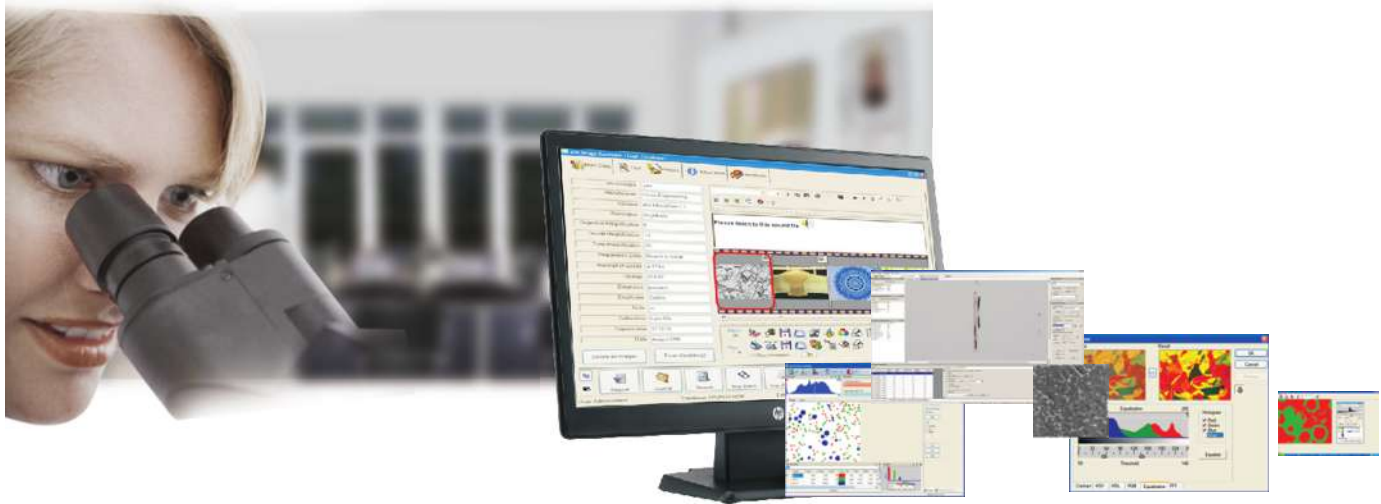
ENVISION 6.0

Image processing software at affordable cost





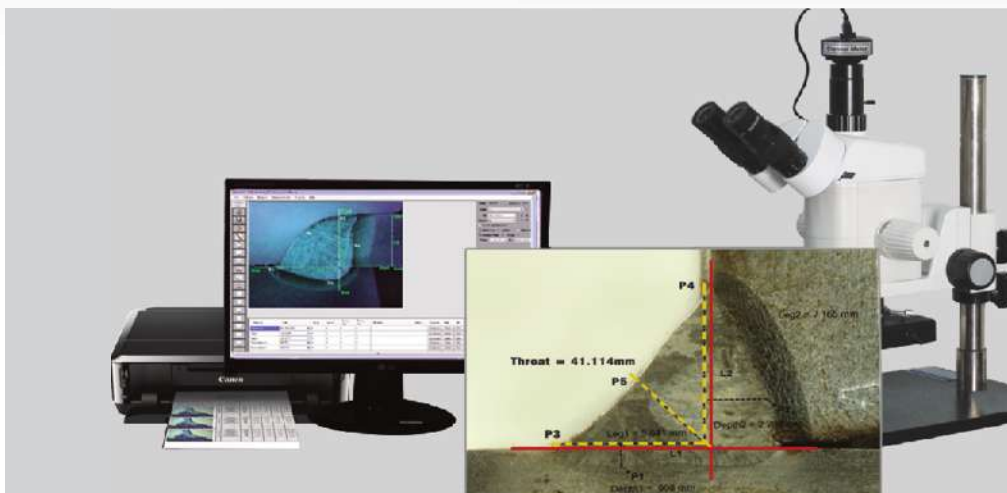
Chennai Metco Provides products of **dhs Germany**, the leaders in Europe.



From Phase quantification, grain size, nodularity etc to demanding Automatic **Computerised Inclusion Rating**, the whole range is available for discerning customers. **Improve your competitive edge by incorporating this world standard image analysis solutions.**

Weld Met

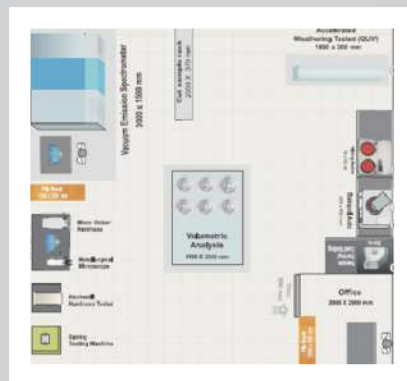
Total solution for Weld Macro Analysis



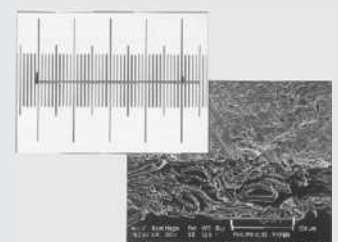
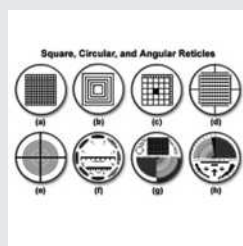
To analysis weld quality parameters like depth / penetration, % penetration, leg lengths, throat and root etc. Can set expected values and tolerances for each parameters. Ensures accuracy & repeatability. Reports in excel & Pdf formats. Integrated online help.

Turnkey lab

Take advantage of Chennai Metco's expertise in lab design. Get your met lab, stress free from single source **including professional Tables & Furniture**. More and more customers now prefer to get the full lab done through Chennai Metco.



Service / Spares / Calibration



We provide services for industrial microscopes, hardness testers and metallography equipment. Placing your equipment under our AMC service is an assurance of availability for your continued effective use. Obtain calibrations with appropriate traceability to meet your standardization needs.

service@chennaietco.com

Tel: 044-3999 5000, 044-2688 0737, Cell (HOD): 098 4079 3572

Consumables



Sample preparation requires good quality consumables for best results of microstructure analysis. We at Chennai Metco provide consistent quality consumables for your metallography needs. The usage of right consumables at every stage of sample preparation aids in obtaining enhanced results. Our application engineers can help you choose the right consumables for your exacting needs.

consumables@chennaietco.com

Tel: 044 3999 5000 Fax: 044 2688 0850 Cell (HOD): 096 0009 4293



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