

" EtchON Electro Chemical Metal Etching Machine... "

Electro Chemical marking or electro-marking is recognized as one of the best methods of marking metal permanently without distortion. Electro-marking is permanent because it created by etching out metal and then plating on the etched surface a stable compound of the base metal. In most cases this stable compound is an oxide, the electro-mark is, in effect, stable rust which will withstand additional corrosive action. This machine is nothing but economical substitute for laser marking machines

Electro-Chemical etching systems are perfect for marking various conductive metals like Stainless Steel, Steel Alloys, Brass, Bronze, Carbide, Aluminum, and Copper. And plated metals such as Chrome, Nickel, Gold, Silver, Cadmium and Zinc. Our Etching systems use a unique electro marking technique, without any corrosion. Metallic Items Like Surgical - Dairy Equipments, Medical Instruments, Cutlery, SPM Manufactures, Drills, Taps, Tools, Engine Valves, Aerospace Industries, Crank Pins, Sanitary Hardware, Gears, Ball Bearing, etc.; can all be marked through Consumables like Stencils and Electrolyte Solution.

Basic Principle: The Etching process

Etching process works by passing a controlled low voltage electric current through a pre-printed stencil. The current is transferred through the gaps in the stencil using a harmless electrolyte solution and burns away a thin layer of the surface material leaving a dark contrasting finish on the metal. The mark is generated within 3-4 seconds depending on the material and the size or composition of the mark. The result of etching will be like a printing on a metal surface.

Using metal etching technique we are capable of marking high quality logos, simple text messages, part numbers, dates, serial numbers and other required information, directly onto the product - whether the surface is rounded or flat. The marking process takes a matter of seconds. Concealed small size transformer, Imported Graphite based marking head, Non Corrosive Electrolyte, Reusable Felt, Soft Cable Leads, Attentive Service support, This all features makes EtchON Etching Machine is ideal choice for Manufactures.



EtchON Chemical Etching Machine, Model : ME100



EtchON ME 100", This model is portable manual electrochemical metal etching machine. This model is economical and suitable for small batch production. Etching process is limited only for black/brown marking and suitable for small etching areas.

TECHNICAL FEATURES

- Input Voltage : 110 ~230V AC
- Output Voltage : 8V
- Etching Color : Black / Brown
- Etching Time : Average (2-3 Seconds per Sq. Inch)
- Etching Quality : Average Good
- Etching Depth : Less then 50 Microns
- Application : Suitable for conductive Metals

EtchON Chemical Etching Machine, Model : ME101



EtchON ME 101", This model is portable manual electrochemical metal etching machine. This model is economical and suitable for medium batch production. Variable Etching Output Voltage for controlling etching Depth and Time, Etching process is limited only for black/brown marking. Suitable for large area etching.

TECHNICAL FEATURES

- Input Voltage : 110 ~230V AC
- Output Voltage : Variable Step Voltage Control (5-25V)
- Etching Color : Black / Brown
- Etching Time : Average (1-2 Seconds per Sq. Inch)
- Etching Quality : Sharp and Filled
- Etching Depth : Less then 100 Microns
- Application : Suitable for conductive Metals

ETCHON Chemical Etching Machine, Model : ME102

ETCHON ME 102", This model is portable manual electrochemical metal etching machine. This model is economical and suitable for high batch production. Variable Etching Output Voltage for controlling etching Depth and Time, Etching process is limited only for black/brown as well as white marking. Black and White Control Knob. Suitable for large area etching.



TECHNICAL FEATURES

- Input Voltage : 110 ~230V AC
- Output Voltage : Variable Step Voltage Control (5-25V)
- Etching Color : Black / Brown / White
- AC /DC : Black /White Etching Control Switch
- Etching Quality : Sharp and Filled
- Etching Time : Average (1-2 Seconds per Sq. Inch)
- Etching Depth : Less then 100 Microns
- Application : Suitable for conductive Metals

ETCHON Chemical Etching Machine, Model : ME103

ETCHON ME 103", This model is semiautomatic portable manual electrochemical metal etching machine. This model is economical and suitable for high batch production. Variable Etching Output Voltage for controlling etching Depth and Time, Etching process is limited for white and black/brown marking. Digital Batch Counter with Buzz Indicator, Manual Timer Controller for controlling etching time. This model is suits in AUTOMATION only



TECHNICAL FEATURES

- Input Voltage : 110 ~ 230 V
- Output Voltage : Variable Step Voltage Control (0-25V)
- Etching Color : Black/Brown/White
- Counter : Batch Counter with Buzz Indicator
- Timer Control : Timer Control for Etching Time Control
- Etching Time : Average (1-2 Seconds per Sq. Inch)
- Etching Depth : Less then 100 microns
- Etching Quality : Sharp and Filled
- APPLICATION : Applicable for All Conductive Metals(Non Coated)

ETCHON Chemical Metal Etching Fixtures and Automation

Our in-house technical team produce the jigs-fixture as per your requirement. Due to fixtures we get ease in etching operation and supports to get speedy marking in batch production. Fixtures speeds up the Etching activity. Fixtures are applicable for Round Surface Marking, Bearing Marking, Circumference Marking etc.

1. Fixture, Table and Syringe Startup Kit (Custom Made)

Our in-house technical team produce the jigs-fixture as per your requirement. Due to fixtures we get ease in etching operation and supports to get speedy marking in batch production. Fixtures speeds up the Etching activity. Fixtures are applicable for Round Surface Marking, Bearing Marking, Circumference Marking etc.

2. Pneumatically operated Semi Automatic Machine.(Custom Made)

This system is a pneumatically operated semi-automatic marking system, this machine can be customized to suits once's application. This compact unit contains marking machine (ME103), pneumatically operated making head assembly, electronic-electrolyte dosing unit, securing fixtures for stencil, table, food padel and product to be marked. When the foot switch is pressed the marking head travels down and presses the stencil according to the pre-selected marking time onto the product.



Features

- Suitable for Large volume production.
- Electronically or Saline operated dose pump, for dosing of electrolyte
- Pneumatic marking head controlled with the help of food padel.
- Singe Stroke or Double Stroke controller to get consistency in marking.
- output per hour 300-400 pc with Batch Counter for counting jobs

EtchON Chemical Etching Machine Consumables

Your metal etching applications can be made easier with the right selection of etching accessories - such as marking heads, white felt, stencil, electrolyte, product fixture. With the right combination of etching machine, etching stencils, electrolytes and accessories like fixture. Your permanent metal marking

Stencils

We produce wide range of stencils to meet minimum impressions or maximum impressions that you can count on. Our quality, long lasting durable stencils can serve your marking requirements. Our recent trable marking stencil, which translates into a great looking image on your product. We also provide custom made mountings-fixtures for stencils to get clear and repetitive impressions.



There are two basic types of Stencils available.

The One type of stencil commonly called as Permanent Stencils, These stencil are made by photographic process. We produce three types of photographic stencils, which differ according to the Class of Impressions

Green Stencil(Class II), Brown Stencil(Class I) are Pre Exposed Stencils which are pre-manufactured and we also supply Post Exposed Stencils (Class III) with Stencil Developer Liquid which was exposed under UV Light at customer end.

The other type of stencil can be made by on an ordinary typewriter or dot matrix printer. The limitation of this type of stencil is fine lines are not covered. These are only suitable for serial number and some changing text etching.



Electrolytes

It plays a vital role in electro chemical etching process. Depending upon the material and its properties like hardness, plating, coating, we can make firm recommendation of electrolyte. Most of the electrolytes are corrosion - free ad those which are not, we can supply the appropriate cleaning agent.

Selection of the proper electrolyte is very important. Using an incorrect electrolyte can produce a mark with an unstable oxide - which can rubbed off after the mark is made. Most electrolyte cause an excess of oxides and thus clog the stencils, giving poor marks and short stencil life. Therefore, on production runs particularly, it is imperative to use the self-cleaning electrolytes which stop stencil clogging by controlling the amount of oxides created.

These are only general suggestions; please contact us regarding the best solution for your project.

Grade's

GP/SS General Purpose Suitable for Maximum Metals and its Alloys, Specially Steel

BC Brass, Copper Suitable for Brass, Copper, Bronze etc

GPD General Purpose Depth Suitable for White Marking and smaller depth can be achieved in metal

Marking Head

The marking head is made of special conductive material called Graphite and Brass. Graphite is famous for its conductivity and durability and conductive Quality, we use Janpese imported Graphite where as for proper transmission of electricity we use Brass, which is also famous for its conductive.

Different types of Standard marking heads are available or it can be customized as per individual requirement, .example. 35 x 20 x 25 mm, 120 X 20 X 30 mm, 15 Diameter Head etc.



Connecting Leads

Connecting Leads we supply is made of Stainless Steel Crocodile Head, used in easier way to get proper flow of current. Connecting lead can directly attach to fixture for ease of operation. Two types of Leads we provide

-Black Lead for Marking Head

-Red Lead fro Ground connection with Crocodile Clips

Marking Felt

White Felt is a conductive net, used in conjunction with our marking heads on an electrolyte marking system provide you with a clear, permanent mark. Result of etching and stencil impressions life is depends upon the proper usage of Marking Felt.

Available Sizes : 295 x 215 mm size Sheet, 145 x 215 mm Size Sheet