

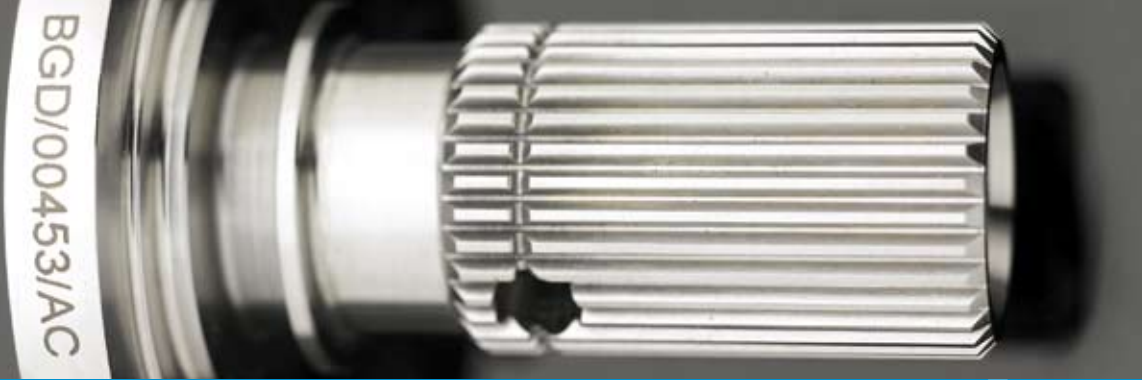


ELECTROCHEMICAL MARKING SYSTEMS

NEW GENERATION PROGRAMMABLE MARKING TECHNOLOGY



MOVING MARKING TECHNOLOGY FORWARD



Moving marking technology forward

Universal Marking Systems electrochemical marking provides permanent, stress free marking on metal surfaces. It's a simple and highly cost effective process suited to one off or volume applications.

You can mark flat or curved shapes with serial & part numbers, Data Matrix codes, complex graphics and company logos on to soft or fully hardened metals. The mark can also be applied to small, large or awkward shaped components as well as fabrications where it may be impossible to use alternative systems.

UMS have transformed electrochemical marking technology in almost every respect.

Today, our Programmable range of electrochemical marking equipment offers a whole range of benefits that make the system virtually unrivalled in speed of application, ease of use, versatility and affordability.

LOW COST SOLUTION TO:

- > High quality permanent mark with no deforming of the surface of the metal whatever the type, shape, thickness and surface finish
- > Meets ISO16022, ATASpec 2000, MIL130, JES131, UID
- > Ultra quick and easy with no setup or fixturing
- > Uses UMS manufactured water based electrolytes
- > No noise with little or no maintenance
- > Light portable small footprint marking kits suit any workshop environment
- > No cytotoxicity in electrolyte ME6 for stainless steel. In accordance with BSEDIS010993: safe for marking surgical implants and instruments

UMS provide a range of Windows based software applications used for stencil production. Not all electrochemical marking applications require software for stencil production but the software options provide a high degree of functionality for variable marking applications including data matrix applications. For advice on the most suitable software for your application please give us a call and we will be happy to discuss your requirements with you.



So versatile it can mark most components with just the one system

JAS-604/A4

ME3000 Range

A new generation of digital marking units

EQUIPMENT - HAND APPLIED MARKING

ME3000T Advanced Marking Kit

The most advanced electrochemical marking machine available today. It will produce very high quality, permanent marks simply and efficiently and comes as either hand-operated or a semi-automatic bench top machine. Complete systems can be supplied for Data Matrix Mark and Read Applications.

The mark can take 3 forms:

- > The "OXIDE" mark where a stable black mark is produced or a white oxide on chemical black steel or aluminium alloy
- > The "ETCH" mark where the image is etched away beneath the surface to a small depth
- > The "COMBINED" or compound mark where the image is etched followed by an oxide mark in one operation

MAIN FEATURES:

- > 11 preset programs plus 4 blank (all programs can be edited)
- > 0.25 to 29.75 secs timer function and dual timer function meeting aerospace applications using the combined function and also marking carbide. New oxide delay function to give even higher quality oxide mark on some specialised metals
- > Can utilise UMS stencil software range for creating stencil layouts & full software control over the marking unit & other third party devices
- > Clear twin line angled LCD display for easy viewing
- > Multi-lingual - available in 6 languages
- > Audible buzzer on completion of mark

ME3000S Standard Marking Kit

The ME3000S can be used for hand applied marking for small to medium batch runs. The timer function allows for repeatability and placement of the marking head onto the component prior to the marking cycle.

ME3000B Basic Marking Kit

The ME3000B has no timer function, ideal for low volume batch marking and inspection as the output is on continuously.



Front panel layout for the ME3000T displaying one of the easy to use preset programs.



ME3000S
Timer Controlled
Marking Unit.

ME3000T Kit



As easy as 1, 2, 3...
Expect typical marking speeds
of 0.25 secs to 4 secs



ME3000 Range

A new generation of digital marking units

EQUIPMENT AUTOMATED & SPECIALIST APPLICATIONS

ME3000P Semi-Automatic

- > The ME3000P is designed for small to medium components
- > Guided air cylinder with 50mm stroke to give consistency with the placement of the mark and accommodates different sized components with minimum setup
- > Electronically controlled electrolyte pump delivers exactly the correct amount of electrolyte for production marking
- > Can mark onto convex surfaces with SMV head
- > Integrated version to make it fully automated
- > "T" slot base to ease component fixing and workholding

ME96 Strain Grid

- > Strain grid marking is the standard method for analysing stress in sheet metal forming. Our large capacity strain grid unit is favoured for its ease of marking, speed of operation and clarity of mark
- > 100amp max output
- > 280mm wide stainless steel roller marker with pistol control and output trigger
- > Volt and ampmeter
- > Supplied with accessories to get started

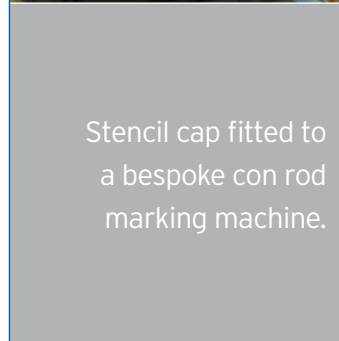
ME3000PC Semi-Automatic

Utilising the ME3000T Advanced Marking Unit the ME3000PC can mark serial numbers, part numbers, date/ batch codes, datamatrix codes and even logos all in one operation. Ideal for nameplates and other flat surfaced components. Plus now available with cylindrical component fixture.

- > Used with PC and UMS Stencil Software
- > Pump fed electrolyte delivery which is clean and mess free
- > Auto winds the stencil material directly from the printer and rewinds automatically after marking
- > An automatic timer ensures the marking cycle time is correct giving consistent marks
- > Only manual intervention to place the part
- > System footprint is 700 x 550mm



Semi-automatic machine fitted with SMV marking head applying a black oxide mark to the shank of a cutting tool.



Stencil cap fitted to a bespoke con rod marking machine.



ME3000PC



ME3000P



ME3000T



A quick and efficient marking process

STENCIL OPTIONS

The four stencil types available ensure there is a stencil to suit your needs exactly.

1 Print On Demand High Resolution Disposable Stencils

- > Produce your own high quality disposable stencils instantly
- > Easy to use fully featured software, ideal for variable information including Data Matrix codes
- > Produced using 300dpi thermal printer
- > Stencils widths of 2", 4" and 8"

2 BRSK High Resolution Disposable Stencils

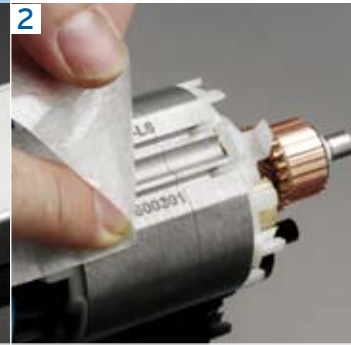
- > Disposable thermal stencils up to 360dpi
- > Produced using BRSK stencil printer
- > Stencil widths of 18mm, 24mm and 36mm
- > Suited to variable information such as serial numbers
- > Mainly suited to oxide marking

3 Photographic Stencils

- > Long life stencils typically used for non variable information
Ideal for logos and fine detail
- > Hand applied or semi-automatic
- > Wide range of formats for ease of use
- > Very high quality resolution up to 2500dpi

4 Die Impression Stencils

- > Disposable wax paper stencils produced on typewriter or dot matrix printer
- > Suited to short batch runs or for variable information marking
- > For simple marks where a higher resolution is not required



Choose your Stencil, Marking Head Electrolytes and Marking Unit and we create your kit - truly a modular system



A solution for a wide range of components

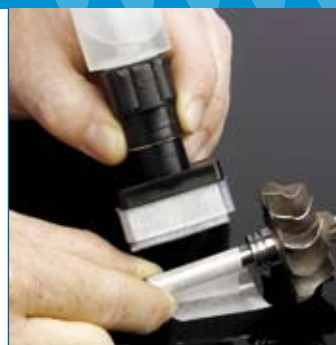
ELECTROLYTES/NEUTRALISERS

UMS have manufactured their own high quality water based electrolytes for over 50 years which are used in most industries and approved for Aerospace, Nuclear and Medical applications.

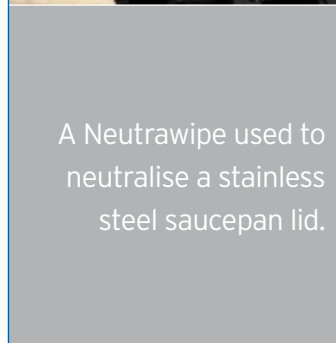
- > UMS has the most extensive range of electrolytes available, both commercial and high purity Aerospace & Nuclear grades for most types of metal
- > UMS quality test each batch manufactured

A neutraliser is required for some metal types and is applied after marking to balance the pH and to remove any residual salts.

- > Available as liquid or handy Neutrawipes
- > Immersion neutraliser or spray available for production line marking with inbuilt corrosion inhibitor



A carbon marking head with reservoir assembly marking a high speed steel shaft with a batch number.



A Neutrawipe used to neutralise a stainless steel saucepan lid.



Marking Heads

A wide range of types and sizes of marking heads or electrodes are available depending on the size of the mark, the marking location and the shape of the component.

- > **HM Hand marking heads** are suited to low or high volume and deep etching
- > **Carbon marking heads** can be machined to suit the marking area of the component
- > The **Saddle marking head** is specially designed for marking onto curved surfaces
- > The **Remote start handle** is a marking handle which integrates the timer start button, earth connection and reservoir assembly enabling the complete marking operation to be carried out with one simple press of the button. Can be used on the ME3000T/ME3000S and removes the need for a footswitch. Uses standard M series carbon marking heads or the Saddle Marking Head for marking curved surfaces

RSH Saddle Marking Head



RSH 8 Series Head

A broad range of standard and custom accessories are available from UMS



Technical specification and application examples

TECHNICAL SPECIFICATION FOR HAND APPLIED KITS

Technical Features	ME3000T	ME3000S	ME3000B
Programmable	✓		
Pre-Set programs	✓		
Oxide output	✓	✓	✓
Etch output	✓	✓	✓
Etch + oxide output	✓		
5 Amp model			✓
10 Amp model	✓	✓	✓
20 Amp model	✓		
Voltage output settings	6	3	3
Timer	**	***	
LCD display	✓		
Resettable usage counter	✓		
Audible buzzer indicates end of cycle	****		
Multi-lingual	✓		
Rear accessory socket	✓		
USB Interface	✓		
110-230V mains input voltage	✓	✓	✓
Output delay function for curved surfaces	✓		
Use with Metaetch Air Jigs			
(ME3000P & semi-automatic marking)	✓	✓	
Electronic overload/reset function	✓	✓	✓
Continuous output	✓	✓	✓
Timed output	✓	✓	



A permanent black oxide mark was applied to this die-cast mazac electric motor part in 1 second. No post marking treatment needed.

A high contrast Data Matrix code was applied in 0.75 secs to this Titanium aerospace component using UMS's POD stencil.



	ME3000TK	ME3000SK	ME3000BK
Complete kit weight	12kg	11kg	Same as ME3000SK
Marking unit weight	5.5kg	4.7kg	Same as ME3000SK
Kit dimensions with lid down	45cm x 26cm x 35cm	Same as ME3000TK	Same as ME3000TK
Kit dimensions with lid up	45cm x 34cm x 54cm	Same as ME3000TK	Same as ME3000TK

** Dual Programmable

*** Variable 0-10 secs

**** Programmable length & on or off

All "Electrochemical" equipment range guaranteed for 2 years



A **BRITISH COMPANY**, Universal Marking Systems has over 50 years experience in the design, manufacture and supply of industrial marking systems, with representation worldwide. We are committed to technical innovation and service excellence. As well as providing standard systems, UMS are specialists in bespoke applications. UMS also manufacture and supply a range of other marking technologies including dot peen, laser, dot paint and manual marking.



MOVING MARKING TECHNOLOGY FORWARD

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