



Operating Instructions EU 100

Ostling / Tykma Marking Systems

P.O. Box 917

95 North Bridge Street

Chillicothe, Ohio 45601

Toll Free: 877-318-9562

Fax: (740) 779-9910

www.permanentmarking.com

Safety Instructions



- The unit should be opened only by qualified personnel. Pull the main plug before opening the unit.
- The used electrolytes are an inorganic and organic, oxidizing appearing substance in mineral water matrix.
- The substances are poisonous when swallowed (R25) and dangerous when in bad health. (Xn).

Please read and follow electrolyte safety data sheets in accordance with 91/155/EWG.

General Information

The described machine is designed to mark products made of steel and other electrically conductive surfaces, with electric current and electrolyte. Proper functioning and lifetime use of this product depends on the correct treatment and maintenance of the systems. The operation manual and maintenance instructions must be carefully studied by all operating personnel before the system is used.

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Liability

For any error in shipment or damage caused during shipping our liability is limited to those conditions outlined in the Terms of Delivery. The duration of warranties are described in the Terms and Conditions specified. We are not responsible for any damage caused by improper handling of equipment nor for damage caused by disregarding operating instructions as outlined in this owner's manual.

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1.0 Functions

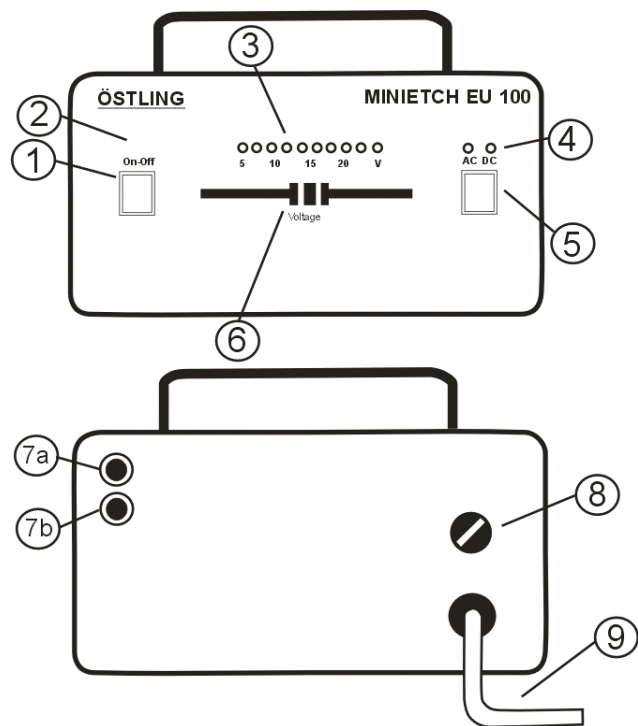
The EU 100 is for marking small production series of steel and other electrically conductive surfaces. It does not matter whether the product is made of hardened steel, steam homo black finished, nickel plated, chromed, large or small, flat or round. The input voltage is 115V or 230V (AC), the output voltage is infinitely variable from 0 – 24 V (AC or DC), or installed with 100 VA power.

2.0 Technical Data

Input Voltage	115V or 230V, AC
Output Voltage	0 – 24 V (AC or DC)
Power	100 VA
Circuit Breaker	T 2 A
Dimensions (L x W x H)	155 x 200 x 150 mm
EMV	EN 500081-1; EN50082-1

2.1 Controls

- Pos. 1 Power On/Off Switch
- Pos. 2 “On” LED Indicator
- Pos. 3 Output Voltage Indication
- Pos. 4 “AC”/“DC” LED Indicator
- Pos. 5 AC/DC Selector Switch
- Pos. 6 Etching Voltage Adjustment
- Pos. 7a Connection–Positive Cable
- Pos. 7b Connection–Negative Cable
- Pos. 8 Circuit Breaker T 2A
- Pos. 9 Power Cord



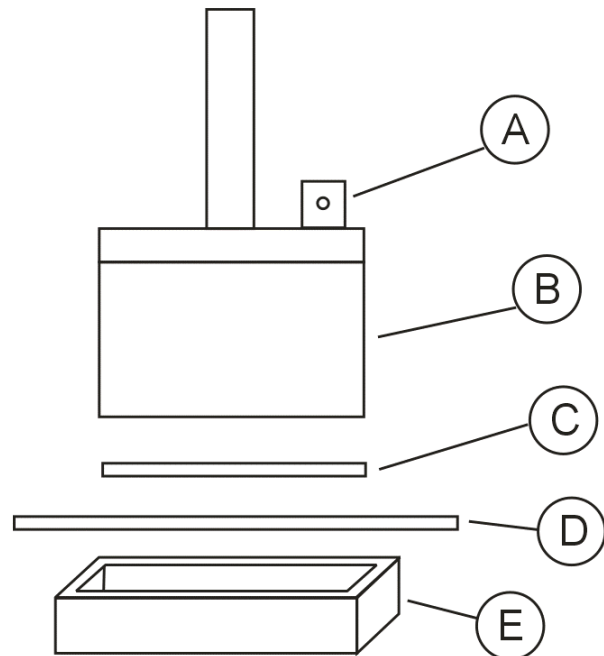
3.0 Programming Procedure

- Plug the banana plug with the red cable in the red plug insert (Pos. 7a).
- Attach the other end of the red positive cable with the connector on the marking head (Pos. A).
- Plug the banana plug with the blue cable in the black plug (Pos. 7b).
- Put the other end of the blue negative cable on an electrically conductive base, or directly on the product.
- Plug in the power cord (Pos. 9) with 230 V AC – alternating current.

3.1 Preparing The Marking Head

Prepare a piece of black felt in the same size as the surface of the marking head. Fit a piece of conductive net (Pos. D) so that the net covers the edge of the marking head (Pos. B) approximately 15mm. Now place the felt (Pos. C) on the marking head, and place the conductive net over the felt in order that you may fasten the cassette felt (Pos. E) with the net. Slip an o-ring over the net and around the marking head so that everything is secure.

- | | |
|--------|------------------------------|
| Pos. A | Connection to Positive Cable |
| Pos. B | Marking Head |
| Pos. C | Felt |
| Pos. D | Conductive Net |
| Pos. E | Cassette |



3.2 Moistening The Felt With Electrolyte

Before you use the marking head, we recommend that you rinse it with clean water so that the felt is soaked. After you have wrung out the felt to get rid of excess water, you may operate with the electrolyte.

3.3 Stencils

In order to make your own stencils quickly and professionally, ask about our customized stencil printing systems. This includes the Ostling PT 220, 550 and 24 pin printer as well as all software.

4.0 Marking Process

- Turn on the machine (Pos. 1).
- Select AC for black / white etching or DC for deep etching (Pos. 5).
- Set your desired voltage (Pos. 6), the voltage you choose will be lit (Pos. 3).
- Place the product to be marked on a base plate or other device. Place the stencil on the product. After that push the prepared marking head lightly on the product.
The marking time normally takes 1 – 1.5 seconds for black marking.

Hint: After marking it is a good idea to rinse the marking head and stencil with clean water.

Attention: If you notice the etching quality begin to slip, re-check the felt and the conductive net. Under normal use the felt will begin to collect carbon. For this reason replace the felt as needed.

5.0 Maintenance

Regular maintenance of the marking machine is not necessary. If you do experience difficulty, however, please turn to our service department. Unauthorized opening of the machine will void the warranty.

6.0 Accessories

In order to make a more efficient operation we offer a marking station for the hand operated unit. This consists of a base plate with T-nuts, two jiggings for attaching your product, and an X-Y-Z stencil holder. With this hand marking station, the product is laid on the affixed jiggings and the stencil is affixed properly with the X-Y-Z stencil holder.

For further technical help you may turn to our technicians in order that they may answer your specific questions about different marking heads and other accessories such as customized construction or integrating the unit into your assembly line.

7.0 Troubleshooting

7.1 Problem: No Mark

Try the following:

- Is the power cord plugged in?
- Are all the cables properly installed?
- Has a voltage been set?
- Is the circuit breaker (Pos. 8) on the back side in order?
- Is the marking head soaked with electrolyte?

Please Observe:

- Electrolytic marking works for electrically conductive surfaces only.
- Laquered, anodized, or other protected surfaces cannot be marked electrolytically.

7.2 Problem: Mark Is Unclear

- Make sure that the stencil is clean.
- Rinse the stencil with water to get rid of oxides.
- Make sure that the surface to the product is clean. Clean off excess dirt or oil with a dry cloth before you begin marking.

7.3 Problem: Black Marks Around The Mark

The stencil has not been handled properly. It has been nicked and has a hole or is torn in some other way. In order to correct the problem, the best solution is to replace the stencil in an emergency, you may cover the holes with adhesive tape until another stencil arrives.

Please call us when:

- You experience technical difficulties.
- You would like sample materials marked.
- You would like more information regarding accessories such as different marking head, felt, electrolyte, conductive net, or you need any other assistance.
- You would like information about additional Ostling products such as pin marking, pad printing, laser marking or inkjet printing.

ÖSTLING - Worldwide



ÖSTLING Markiersysteme GmbH

Brosshauserstraße 27

D-42697 Solingen

Tel.: +49 212 - 2696-0

Fax: +49 212 - 2696-199

Internet: <http://www.ostling.com>

Email: info@ostling.com

Schweiz

ÖSTLING

Markiersysteme AG

Eichenweg 16

CH-4900 Langenthal

Tel.: +41 - 62 - 922 80 20

Fax: +41 - 62 - 922 66 17

Frankenrich

ÖSTLING

Système de Marquage

Z.A. Route De Colligny

F-57645 Retonfey

Tel.: +33 - 387 - 76 83 39

Fax: +33 - 387 - 76 83 29

Schweden

ÖSTLING

Märksystem AB

Box 10 24

Industrivägen 10 B

S- 17121 Solna

Tel.: +46 - 8 - 51490510

Fax: +46 - 8 - 51490529

Singapur

ÖSTLING

Marking Systems Pte Ltd

32 Wallich Street

#01-64 Wallich Building

SGP - Singapore 078880

Tel.: +65 - 323 - 6901

Fax: +65 - 323 - 6903

USA

Ostling/Tykma Marking Systems

95 North Bridge Street

P.O. Box 917

Chillicothe, Ohio 45601

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8.0 Electrolytes

Type of Marking	Current	Voltage	Felt	Material	Electrolyte	Remarks
Black Marking	AC	8V	Black with Conductive Net	Stainless Steel	6744, 70, 72, SP1	
				Steel	676, 74, 67/10/3, 676R74	
				Chrome, Nickel	75	
				Zinc Coated	639	
				Tungsten Carbide	332/2	
White Marking	AC	8V	Black with Conductive Net	Black Oxidized (Homp Steamed)	114 Soft	Neutralize with NB
					119 Medium	
					117 Strong	
Deep Marking	DC	Ca 20-24V	Green or Grey	Brass	DE20, DE40, DE90	Neutralize with NB
				Aluminum	DE20, DE40, DE90	

Electrolyte must be discarded after the marking process is complete!