

Quotation No.: x2013AMT0020-00 WORLDMAQ-3 S.L.

Date: 21/08/2013

## PMMA EDGE POLISHER TABLETOP MODEL: AMT



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## **1 MAIN DESCRIPTION:**

### **1.1 *DESIGN:***

The machine is designed using a 3-D computer-aided-design program (parametric drawing).

This program may be used to draw the different components of the machine and its assembly in 3D, so that the machine is built with the same parts that will be installed.

This method guarantees optimum layout of all elements and avoids any interference between them. Simulation of its main movements and mechanisms is also possible.

### **1.2 *DESCRIPTION, APPLICATION AND COMPOSITION:***

The AMT Polishing Machine has been specially designed and manufactured for polishing acrylic and methacrylate (PMMA) to a high quality finish.

With this model, we can polish flat parts at 90° and position the table to polish bevels or angles of up to 60°.

The machine operates through the action of the part for polishing moving along the front part of the cutter. The machine is equipped with a fixed head and parts are held by a clamp. The part is dragged in front of the polishing disk via a moving belt.

Diamond tools guarantee maximum finishing quality with a minimum level of maintenance and costs. The cutting angles of the diamond tool have been studied thoroughly to ensure a long operating life and effective performance, avoiding excessive tool sharpening and changing costs.

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## 2 MECHANICAL SPECIFICATIONS:

The main mechanical specifications of the AMT model are as follows:

### Dimensional characteristics:

|  |                          |
|--|--------------------------|
| Total outer dimensions: LxWxH (with clamp) | 806 x 539 x 268 (370) mm |
| Table length                               | 700 mm                   |
| Table width                                | 250 mm                   |
| Table height                               | 143 mm                   |
| Packing dimensions: LxAxH                  | 900 x 650 x 350 mm       |
| Weight                                     | 70 kg                    |
| Weight with packing                        | 91 kg                    |

### Cutting specifications:

|                                      |                               |
|--------------------------------------|-------------------------------|
| Feeding system                       | Automatic                     |
| Part securing system                 | Manual, with clamp            |
| Maximum thickness of the part        | 35 mm                         |
| Tool diameter                        | 83 mm                         |
| Cutter type                          | EURACRYL XS                   |
| Number of diamonds                   | 2                             |
| Type of diamond for pre-cutter       | diamond for pre-cutter, black |
| Type of diamond for finishing        | synthetic diamond, red        |
| Speed adjustment of rotational motor | variable                      |
| Nominal feed speed                   | adjustable                    |
| Feed speed                           | adjustable                    |
| Depth cut                            | 0,5 mm                        |
| Tool changer via the front part      |                               |

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Smooth adjustment of tool position

**Mitre table specifications:**

|                           |                           |
|---------------------------|---------------------------|
| Minimum / maximum tilting | from -3° to +60°          |
| Position of fixed angles  | 15° 22,5° 30° 45° and 60° |
| Tilting system            | lateral nonius            |
| Tilting adjustment        | manual                    |

**Clamp specifications:**

Clamp adjustable in height and belt

**Electrical specifications:**

|                       |           |
|-----------------------|-----------|
| Tension               | 230 V 1PH |
| Frequency             | 50/60 HZ  |
| Total installed power | 0,5 kW    |
| Intensity             | 2,5 A     |
| Cycle exit            | ON        |

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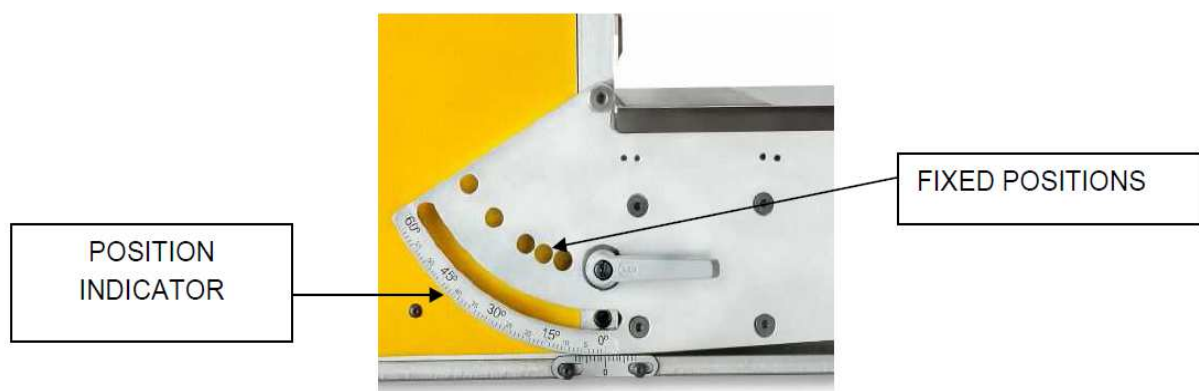
### 3 HEAD:

The head consists of a milling motor and tilting table of  $-3^{\circ}$  to  $+60^{\circ}$  inclination, with fixed positions at  $15^{\circ}$ ,  $22.5^{\circ}$ ,  $30^{\circ}$ ,  $45^{\circ}$  and at  $60^{\circ}$ .



### AMT TILTING

The tilting table allows us to position the pieces easily at angles ranging from  $-3^{\circ}$  to  $+60^{\circ}$ , with fixed positions at  $15^{\circ}$ ,  $22.5^{\circ}$ ,  $30^{\circ}$ ,  $40^{\circ}$  and at  $60^{\circ}$ .



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## **4 SETTING AND SECURING SYSTEM:**

The AMT model is equipped with a clamp. Once the part is correctly placed, supported by the positioning screen and the belt, the height of the clamp can be adjusted to adapt it to the workpiece. The working cycle is then ready to start.

## **5 SAFETY:**

At BERMAQ we believe that accident prevention is not only a legal matter, but also the duty of every technician who uses our machines.

The safety measures applied to our machines ensure any potential dangers to people and installations are kept to a minimum, without placing any unnecessary restrictions on production.

The electronic and programmable components installed on our machines offer a high level of safety, which improves the functionality of conventional methods. Additionally, intelligent systems can have access to electric drives, ensuring the safety system.

Our safety measures are based on the installation of different protection measures in any place that may pose a potential risk. For this purpose, emergency stops and photoelectric guards have been placed in the front part of the machine. Using these safety measures, an operator cannot enter the danger area until the state of risk is eliminated.

All safety protection installed in the machine meet EC Regulations on machinery safety:

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Direction of Machinery RL98/37/EG

Direction of Low Tension 73/23/CE

Direction of Electromagnetic Compatibility 89/336/CE

For the design and building of the machine, the following standards have been applied:

**EN292-1** Machinery safety. Basic terminology, methodology **EN292-2**

Machinery safety. Technical Direction and specifications

**EN60204-1** Machinery safety. Electrical equipment of industrial machinery

## 6 ELECTRICAL SYSTEM:

**Specifications on the electrical installation:** Supply

|                    |                 |
|--------------------|-----------------|
| voltage:           | 230 V           |
| Frequency:         | 50 / 60 Hz.     |
| Number of phases:  | 1 PH            |
| Electrical output: | approx. 0.5 kW. |

The customer's installation must be equipped with a selective earth leakage protection circuit-breaker (A Series).

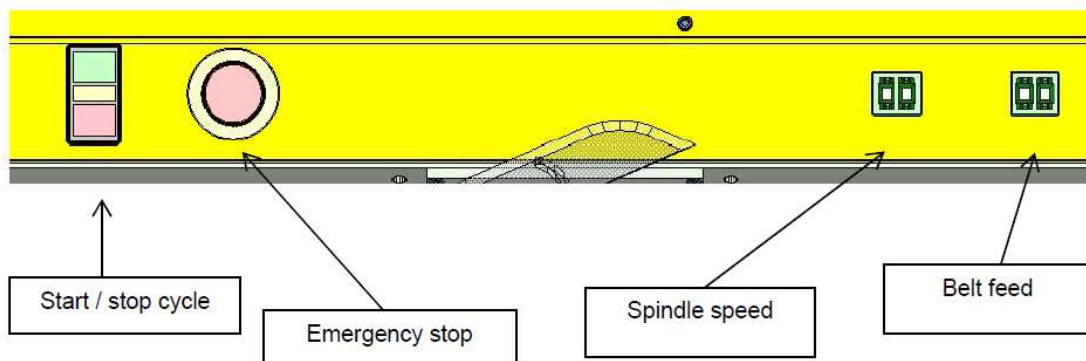
## 7 CONTROL PANEL:

This machine is equipped with a control panel in which the main elements of the machine are found: start/stop cycle, belt feeding speed, cutter feeding speed and emergency stop.

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## 8 AFTER-SALES SERVICE:

BERMAQ provides a technical service to assist in solving any problem that may occur in the machine, offering personalised support to best suits your needs. For this purpose, the BERMAQ Assistance Service (SAB) offers you our specialised technicians who will travel to your premises in case any breakdown.

We also offer the opportunity to contract a preventive maintenance service in order to increase the working life of your machine and to avoid possible breakdowns due to lack of maintenance. **This service is not included in this quotation.**

## 9 QUALITY CONTROL:

Our Quality Control Department, which controls all steps during the building of the machine, checks the machining of parts, assembly and correct machine function.



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The general functioning of the machine is verified by the Quality Control Department through several tests carried out under normal working conditions. Thus, the machine's design characteristics are re-verified.

Follow-up on quality control is carried out during statistical quality inspections, which optimise the most important aspects of the machine.

## **10 GENERAL TERMS OF BUSINESS:**

### ***10.1 TRANSPORT, INSURANCE AND PACKING:***

The transport, insurance and packing of the machine are not included in this quotation (EX WORKS)

Transport to destination can be arranged by either the customer or by BERMAQ.

### ***10.2 INSTALLATION AND ASSEMBLY:***

The installation of the machine at its destination will be carried out by the customer themselves or by our specialised dealers.

### ***10.3 DOCUMENTATION:***

BERMAQ will supply an operating manual containing operating instructions, maintenance, diagrams, spare parts list, software and the CNC manual, if applicable. The customer can choose from the following languages: English, Spanish, Catalan or

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French. If the customer requires translation into any other language, these documents will be sent to a specialised translation service.

#### **10.4 GUARANTEE:**

BERMAQ, guarantees the correct function and quality of this machine for 12 months or 1,800 working hours from the time of delivery.

The guarantee includes faulty manufacture materials and labour during repairs. Damages and defects resulting from incorrect electrical connection, lack of experience machine operating experience, misuse, inadequate lubrication and/or lack of maintenance are excluded from our guarantee. Materials subject to normal wear and tear, such as bearings, belts, bands, oils, filters, etc. are also excluded.

Parts found to be clearly defective should be returned to our company after prior authorisation. BERMAQ undertakes to return them promptly to the customer, duly replaced or repaired. The customer will pay the transport expenses.

Travelling expenses, subsistence allowance, accommodation and travelling hours are not included in the guarantee.

Once the machine is installed and accepted by the customer, any technical assistance requested for extending the customer's computer knowledge will be invoiced by BERMAQ.

Failure to fulfil payment conditions will result in the immediate termination of the guarantee.

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## MAINTENANCE

The customer will undertake preventive maintenance of the machine. For an additional cost, BERMAQ offers a maintenance service contract that may be carried out either by BERMAQ or its dealers in the customer's geographical area.

### **10.5 EXCLUSIONS APPLIED:**

The customer will carry out any necessary building work, electrical, hydraulic, pneumatic and mechanical installation and any other requirement for the correct installation and operation of the machine.

Supplies for machine installation.

The analogue telephone line needed for installation of the *Teleservice* system or additional systems. (In the case of a CNC machine)

Machine configuration to the company network.

Connection of the machine to the company's electrical network, electric safeguards and the machine's differential input.

Equipment needed for the correct pneumatic operation of the machine.

Chip/dust suction equipment.

Cranes for loading, unloading or assembly of the machine.

Milling cutters and their respective sharpening.

Anything else not specified in this quotation.

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**10.6 AUTHORITY:**

This sale is carried out under a clause, which entitles BERMAQ to reserve property of the product until full payment, or settlement of all bills. Until such time, the buyer is considered the depositary and BERMAQ the owner. If partial or full payment is not settled, BERMAQ may take the matter to be settled in a court of law in order to recover this payment as well as goods and any accessories as damages or as rent for the use of the machine and for all payments made thus far.

**The present quotation cancels all the previous ones**

**QUOTATION VALIDITY: 4 MONTHS**

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## **11 COST OF THE MACHINE:**

### ***ACRYLIC EDGE POLISHER: AMT TABLETOP MODEL***

Machine equipped with an interchangeable synthetic diamond tool for transparent finish, ref. EIMQ-127120/01, equipped with two diamonds:

- 01 synthetic diamond for pre-cutter, black, ref. EIMQ-131001-LA
- 01 synthetic diamond for transparent finish, red, ref. EIMQ-131003-LA

Clamp included

**COST OF THE MACHINE.....9.932 €**

### **OPTIONS:**

Diamonds to be used in the EIMQ-127120/01 interchangeable tool:

|   |       |
|---|-------|
| Ref. EIMQ-131001-LA synthetic diamond for pre-cutter, black   | 330 € |
| Ref. EIMQ-131002-LA natural diamond transparent finish, blue  | 840 € |
| Ref. EIMQ-131003-LA synthetic diamond transparent finish, red | 360 € |
| Ref. EIMQ-131004-LA synthetic diamond matt finish, green      | 330 € |

### ***TRANSPORT & INSTALLATION NOT INCLUDED***

In accordance with the Constitutional Law 15/1999 and its Royal Decree 195/2000 on data protection, the holder authorizes BERMAQ S.A. to use the data specified in this document (quotation or mailing). This can be used in order to maintain a contractual relationship as well as to carry out market research, promotions, campaigns and, generally, for all commercial actions and services that may be undertaken by BERMAQ S.A.

The photographs shown here are for illustration purposes only and do not necessarily represent the actual machine described in this offer