



Thomas RECORDING GmbH

*„We have the solution!“*

## ***Electrode Polishing Machine (EPM-3)***

### **Product Features**

- Rotating disc polishing machine
- Disc rotation, direction and speed adjustable
- Light source, disc motor control unit, xyz manipulator, monoscope and power supply included
- Unique rotating disc precision
- Crafted in Germany with the well know quality “Made in GERMANY”
- Quality, versatility and ability to perform are guaranteed by Thomas RECORDING
- Permits accurate and reliable polishing of microelectrode tips in electrochemical applications
- System can be adapted to customer’s requirements



 Made in  
Germany

Certified  
ISO 9001



TÜVRheinland®  
Precisely Right.

[Feel free to ask for more information...](#)

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## Innovative Products for Electrochemistry



Figure 1: Electrode Polishing Machine (EPM-3)



Figure 2: Electrode polishing Machine (EPM-3) control unit front panel

Keeping the surfaces of **electrochemical microelectrodes** clean will ensure more active and longer useful lifetime of your Thomas RECORDING electrochemical microelectrodes. Depending on the variation of usage, methods and compositions for maximum results it is recommended to polish the electrode regularly especially when the voltammetric data begin to deteriorate. The most common method for surface preparation is mechanical polishing. Therefore Thomas RECORDING has developed the precision microelectrode polishing machine **EPM-3**. This machine usually is used with diamond grinding discs with different particle sizes. The grinding and polishing are carried out on a horizontally rotating disc with 50mm diameter for special polishing paper. The device consists on a motor driven rotating grinding disc. Parts of this type typically require flatness and parallelism tolerances of approximately some micron. Rotating the part in a controlled motion by using a special disc driving motor and precision mechanic **Made in Germany** are the keys to achieving this level of accuracy. The working microelectrode usually needs polishing if response has declined and one suspects that the microelectrode is fouled. Then one can insert the electrode in the **EPM-3** electrode holder. A manual micromanipulator is used to move the electrode down on the rotating polishing disc. This is done under microscopic control with a monocular microscope that is part of the **EPM-3**.

The micromanipulator also allows an electrode movement in the lateral direction to ensure evenly use of the grinding disc surface to guarantee high reproducibility of the tip geometry.

The grinding disc rotation speed and the rotation direction is controlled by a special electronic motor control device that is also mounted on the **EPM-3** base plate (see figure 2).

The **EPM-3** is delivered together with micromanipulator, motor control unit, grinding unit, monocular microscope (monoscope) and an ac power supply unit.

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