

ElectroWorks Product Overview

ElectroWorks® the foremost electrode creation solution within **SOLIDWORKS®**

ElectroWorks allows you to create electrodes with just a few mouse clicks.

FEATURES

- Automatic electrode sizing and positioning according to face selection.
- Exact surface option allowing the electrode to span non-connected areas w/o holes, including hole closing.
- Advanced clearance functionality.
- Modification through specific electrode feature tree.
- Geometric Spark and Pattern gap.
- Simulation of electrode movement.
- Copy electrode by feature recognition.
- Instant setup & burn sheet drawings.
- EDM technology definition and output.



ElectroWorks automates all aspects of extraction, design, management, documentation and manufacturing of EDM electrodes. Fully integrated into the **SOLIDWORKS** environment **ElectroWorks** guides you through the electrode design and production process. You design the electrode through a comprehensive yet easy to use user interface; the electrode manufacturing and EDM positioning drawings, and the machining files are created automatically.

Choose the holder and electrode blank shape from the standard, user extendable parametric shape library through the **Add Electrode** environment and select the burn faces. The electrode is **automatically placed** and **sized** according to customizable factory setup parameters. An **exact face** option allows electrodes to span disjointed areas w/o holes (**automatic hole closure on request**), avoiding the need for clearance operations. **Parameter** and **Position** dialogues allow you to fine tune the electrode positioning and orientation. On validation the electrode is then cut, showing clearly the burn faces.

Add Clearance enables you to create tangent, normal and draft offsets at the electrode/part interface through integrated *solid* trim functionality, powered by our ease of use dialogue system.

Spark & Pattern gap can be created on the geometry to create an exact replica of the electrode.

Animate the electrode movement to check for interference.

Copy the electrode automatically to the same or similar features on the part in preview and allow the user to select or de-select the electrode positions.

Drawings are instantaneous and complete including sheets for electrode manufacturing and EDM burn process.

Technology is defined through a dedicated dialogue which defines material and allows you to scroll through the built in surface finish standards according to E, Rmax and Ra.

Process setup of the rough to finish spark gaps and the pattern method and definition are defined through the same dialogue, as well as safety z-level penetration. The exact burn area is also calculated.

Manufacturing information including the zero point for machine positioning and orientation as well as the previously defined technology is managed and stored within the electrode as an **EXCEL** report.

ElectroWorks /Technical Specifications

SINGLE ENGINEERING MODEL FOR ADVANCED CORE/CAVITY DESIGN DEVELOPMENT

- Based on SOLIDWORKS tools.
- Seamless ensemble to perform modeling, detailing, and core/cavity development.
- Desktop integrated solution without external file translation.
- Integration takes place quickly and efficiently in a tight loop.

PARAMETRIC HOLDER LIBRARY

- Includes standard elements from Erowa and 3R library.
- Integrates any user created SOLIDWORKS parametric shapes, automatically displaying parameters in electrode dialogue box.

ELECTRODEWORKS FUNCTIONALITY

Creation

- Automatic positioning and sizing according to burn geometry.
- Exact surface option spanning disjointed areas w/o holes.
- Fine tune positioning and manual shape parameter adjustment.
- Automatic surface extraction and electrode creation.

Clearance

- Solid offset of electrode/part interface through special dialogue including, tangent, normal and draft trimming.

Modification

- RHM button modifications and manipulations through a dedicated ElectroWorks property manager tree.

Geometric Gap Creation

- Creation of spark and pattern gap on the actual electrode.

Electrode Copy

- Analysis of electrode burn faces to automatically find all similar topological areas.
- Automatic preview and (de)selection of all possible electrode positions.

Technology

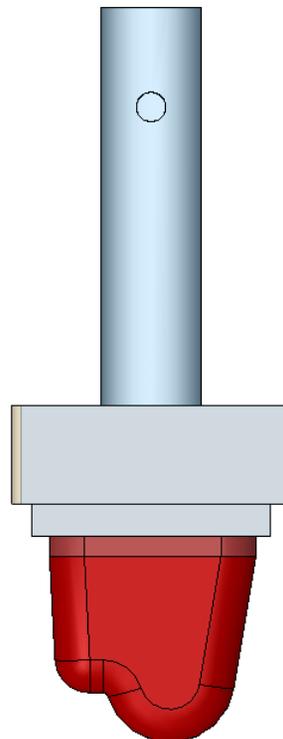
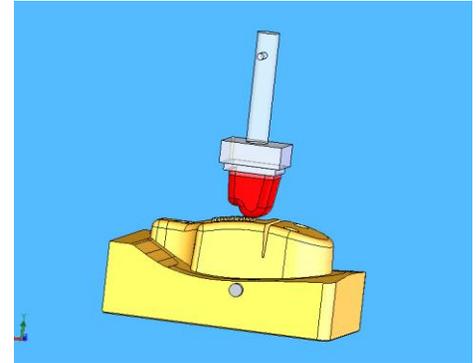
- Material selection.
- Surface finish definition.
- Pattern method definition.
- Rough and finish spark gap series definition.
- Safety z-level definition for each spark gap series.
- Storage of technology as part properties.

Drafting

- Electrode manufacturing drawings.
- EDM burn sheet drawings include position coordinates relative to inserts.

Output

- Excel report file containing EDM technology information, and burn positioning either per electrode or for all the electrodes in a project.
- EDM pre-processor data for different EDM machines.



System requirements

- Microsoft Windows 7/10 - 64 bit.
- 16 GB RAM or greater recommended.
- Prerequisites: SOLIDWORKS.

Authorized Reseller

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