

NX Electrode Design

The fastest and most complete electrode design process

Siemens PLM Software

www.siemens.com/plm

► Summary

NX™ Electrode Design software delivers a state-of-the-art solution to the shrinking lead times and tighter cost controls facing tool manufacturers today. By combining industry knowledge and best practices with process automation, NX Electrode Design streamlines modeling and design of electrodes for any tool project that requires EDM. NX Electrode Design excels at the most complex and challenging electrodes, providing a time-saving, step-by-step solution that automates and helps toolmakers effectively design, validate, document, manufacture and manage the entire EDM process from design through production.

Business challenges

- Job turnaround and project time
- Cost control
- Process efficiency
- Waste and human error
- Tool quality
- Process connectivity between tool design and machining

Benefits

- Highly automated electrode design process
- Specialized electrode modeling tools
- Standard component libraries and intelligent blank selection
- Fast and efficient design change propagation across entire process (tool design through machining)
- Reduced electrode design errors
- Automated drawing creation
- Effective data and process management
- Decreased EDM programming time

NX Electrode Design offers a wealth of industry best practices and process solutions for:

Manufacturing geometry identification. Automate the process of specifying the manufacturing processes for surfaces on the core and cavity.

Automatically search, recognize, group and color faces that are to be burned, roughed, etc. (EDM, WEDM, milling, grinding).

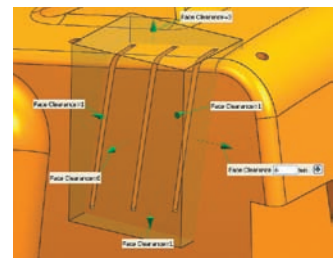
Design the electrode working area and blanks. Leverage specialized and efficient features to model the shape of the electrode head/burn area. Highly complex shapes are easily achieved and are associative – design changes made to the core and cavity properly propagate to the electrode, drawing and into machining.

Intelligently add and generate the blank based on standard sizes predefined within a knowledge-enabled table. Copy and mirror modeled electrodes to new positions and orientations.

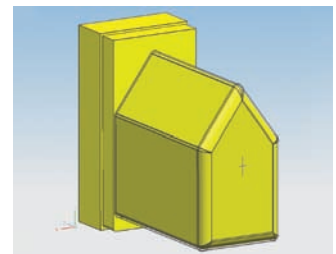
Electrode undersizing. Use the Undersize Electrode command to create undersized electrode geometry. Compensate for spark gap and orbital motion. Out-of-the-box orbit types include: circular, square and spherical. User-defined orbits can also be easily created.

Electrode validation. Check for interferences and calculate the sparking area – useful in defining downstream manufacturing operations and determining proper EDM machine settings.

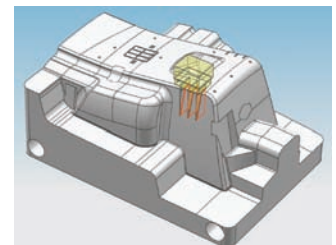
Documentation and manufacturing information. Automatically document electrodes using predefined drawing templates and BOM tools.



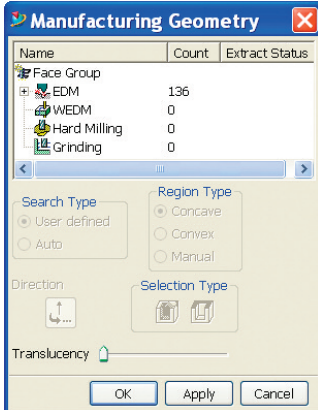
Electrode modeling functions are highly functional and simple to use – drag to size. Enables easy extraction of the sparking regions.



Undersized electrode includes compensation for spark gap and user-defined orbit



Electrode validation – graphically visualize the sparking faces and the faces to be burned.



Design change management. Swap design versions of the manufacturing surfaces and efficiently update related electrodes, electrode drawings and toolpaths.

Concurrent design. Enable team-oriented current design by enabling multiple electrode designers to work concurrently. This approach is an extension of the traditional concept of product/tooling concurrency.

Enable electrode machining. Integrate with any of the NX Machining products and automate the NC programming of electrodes.

NX Electrode Design add-on content

Electrode design

- Manufacturing geometry identification (EDM, WEDM, milling, grinding, as-specified)
- Box
- Trim solid
- Replace solid
- Extend solid
- Reference blend
- Intelligent blank design
- Spark area and type specification
- Copy to new positions and orientations
- Mirror
- Undersize geometry based on spark gap and orbital motion

Electrode documenting

- Automated drawing creation
- BOM

Standard catalog offerings

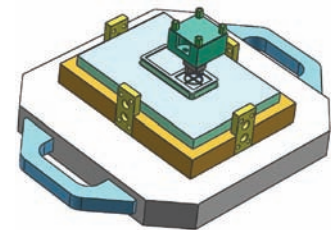
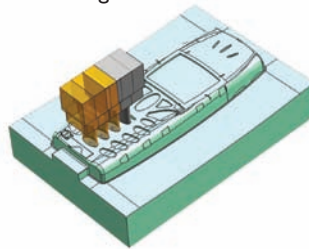
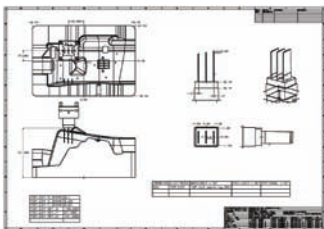
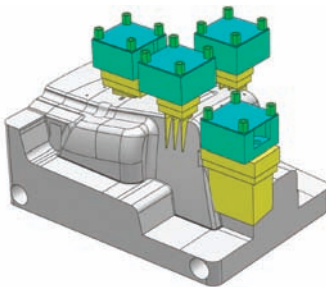
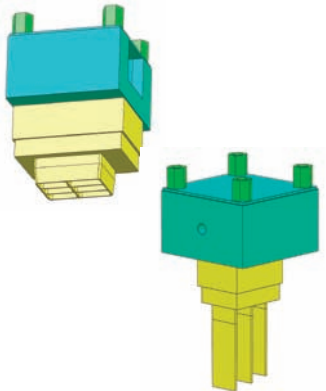
- Holders
- Creation of special fixtures
- Machining pallets

Validation

- Projection area
- Burn area
- Interference validation

NX Electrode Design can add-on to and integrate with Siemens product bundles and NX Mach Series products including:

- NX NC Machining
- NX Mold Design
- NX Progressive Die Design



Contact

Siemens PLM Software

Americas 800 498 5351

Europe 44 (0) 1276 702000

Asia-Pacific 852 2230 3333

www.siemens.com/plm

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