

SMARTElectrode 12.0.4.0

What's New



Improvement

What

- Added threshold to show a warning if contact area covers more than defined percentage of blank area
[\[https://redmine.buw-soft.de/issues/10357\]](https://redmine.buw-soft.de/issues/10357)

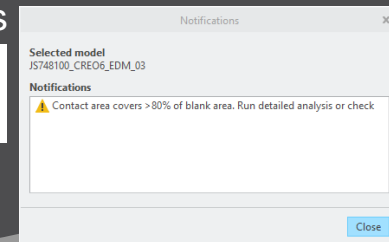
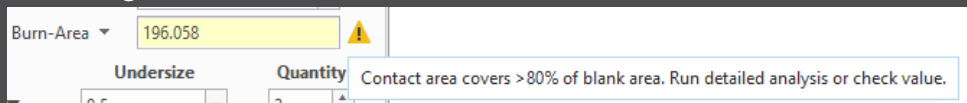
Who needs it

- Users who output effective contact area for EDM programming

Details/Usage

- SE performs a fast contact area calculation when Base UI is opened and contact area is 0
- Slower more exact calculation can be started by user in UI
- Check UI always performs the exact calculation
- Option “CONTACT_AREA_MAX_COVERAGE” defines valid percentage
- Warnings are shown in Base UI and Burnsheet notifications

CONTACT_AREA_MAX_COVERAGE	80	Maximum valid coverage of the blank area with contact areas in percent.
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Fixed error

Description

- Edited base values are reset on next change
[\[https://redmine.buw-soft.de/issues/10218\]](https://redmine.buw-soft.de/issues/10218)

A_BASE	17.500	▲▼	D1	5.128	▲▼
B_BASE	15.000	▲▼	D2	40.000	▲▼
LENGTH	48.000	▲▼	D3	0.022	▲▼

A_BASE	15.000	▲▼	D1	5.128	▲▼
B_BASE	15.000	▲▼	D2	35.000	▲▼
LENGTH	43.000	▲▼	D3	0.022	▲▼

Cause

- Edited values are not correctly saved to template data

Solution

- Problem is fixed

Fixed error

Description

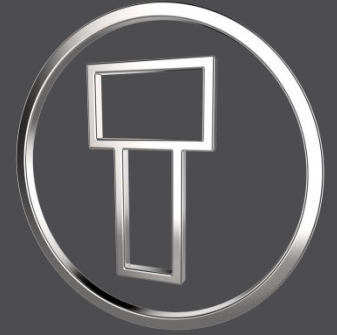
- Some electrodes are not processed during output [<https://redmine.buw-soft.de/issues/10191>]

Cause

- SE validates every electrode during export and skips suppressed, disabled or incomplete components.
- Check for completeness includes a check of electrode base group
- Check for completeness fails on imported or legacy electrodes as base is not created by UDF.

Solution

- SE now looks for existence of mandatory EDM coordinate system
- Legacy electrode use “EDM_ORIGIN” or “EDM_ORIGIN_TOP” depending on option value “USE_POS_CSYS_TOP”
- Electrodes beginning with version 8.0 use csys name defined in option “EDM_ORIGIN_NAME”



SMARTElectrode 12.0.3.1

What's New



Fix: Export options not working

What

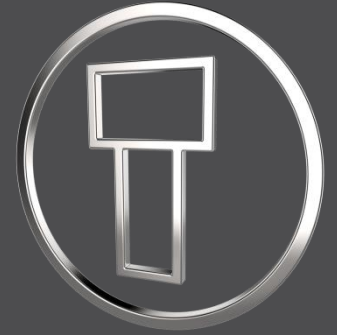
- Export options SE_DECIMAL_SEPARATOR and SE_EXPORT_GAP

Description

- This option settings are ignored during output

Solution

- Issues are fixed
- Use SE_DECIMAL_SEPARATOR to set . or , as decimal separator in output.
- Use SE_EXPORT_GAP to convert undersize values for output
 - 0: uses overburn value without conversion (1:1)
 - 1: duplicates overburn value (2:1)
 - 2: halves overburn value (1:2)



SMARTElectrode 12.0.3.0

What's New



Enhancement: Separate Templates

What

- Allow separate templates for all model types in SMARTElectrode. These templates will be used instead of default templates in Creo Parametric.

Who needs it

- Use separate templates to preset additional parameters and layers or to realize MBD-settings

Details/Usage

Available templates:

- Electrode assembly: `configuration\model\se_assembly.`
- Reference assembly: `configuration\model\se_reference.asm`
- Reference part: `configuration\model\se_reference.prt`
- Electrode: `configuration\model\se_electrode.prt`
- Analysis model: `configuration\model\se_analysis.prt`
- Manufacturing assembly: `configuration\model\se_mfg.asm`
- Workpiece: `configuration\model\se_mfg_workpiece.prt`

Improvement: Blank Selection

What

- Improved automatic selection of blank if different lengths are available for same section.

Who needs it

- Useful if blanks with fixed size and length are prepared in data files

Details/Usage

- Electrode blanks are defined in configuration\electrode\- Add several lengths for a blank size. For example:
 - 15x15x50
 - 15x15x75
 - 15x15x100
- SMARTElectrode tries to select best fitting template when base is created

Save Export to Workspace

What

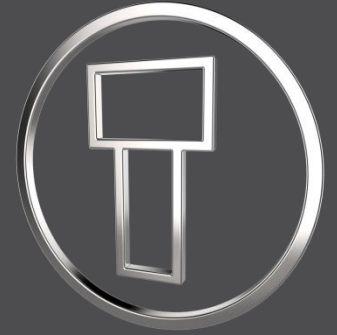
- Created output files can be saved to workspace automatically now

Who needs it

- Necessary if all manufacturing information is passed via PDMLink

Details/Usage

- To activate this feature open export configuration file
configuration\export\<<format name>\export.cfg
- Add option “WM_COPY_TO_WORKSPACE YES” to add document as primary content
- Add option “WM_ADD_AS_SECONDARY_CONTENT YES” if document should be attached to electrode assembly as secondary content.



SMARTElectrode 12.0.2.0

What's New



Enhancement: UI Start Position

What

- Interactively define the start position of electrode
- Command is available if electrode component is activated

Who needs it

- Users who want to optimize start positions for EDM

Details/Usage

- Defined start position overrides default start position and csys feature STARTPOS in electrode model

- Learn more:
- <https://www.buw-soft.de/en/2020/02/21/new-user-interface-start-position/>
- <https://youtu.be/254n3AtqQDA>

Axis	Value
X	0.000
Y	0.000
Z	0.000
A	0.000
B	0.000
C	0.000

Enhancement: Selection by Toolpath

What

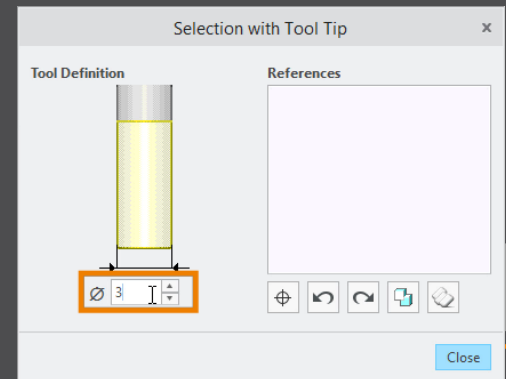
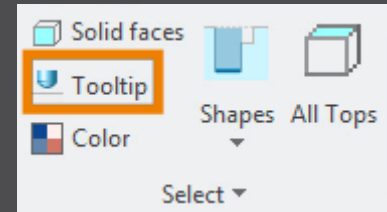
- New tool to interactively check manufacturability and select surfaces

Who needs it

- Customers who want to select surfaces with a brush styled tool
- Helps to capture even small patches within path

Details/Usage

- Learn more:
- <https://www.buw-soft.de/en/2020/02/21/new-selection-tools-for-electrodes/>
- <https://youtu.be/OctjK6Usgo8>



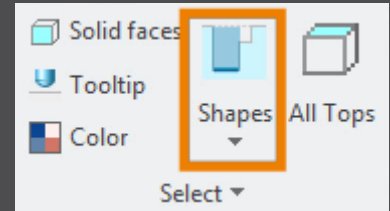
Improvement: Shape-based Selection

What

- Integrated Shape-based selection filters from Flexible Modeling Extension in electrode design ribbon

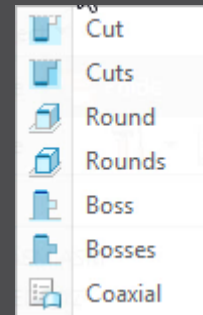
Who needs it

- Customers who want to use FMX features



Details/Usage

- Learn more:
- <https://www.buw-soft.de/en/2020/02/21/new-selection-tools-for-electrodes/>
- <https://youtu.be/OctjK6Usgo8>



Dynamic Editing of Cutout

What

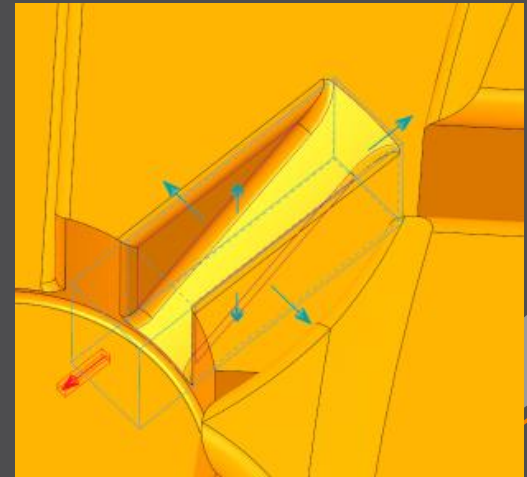
- Size and position can be changed dynamically after selecting the geometry

Who needs it

- Customers who want to interactively change cutout

Details/Usage

- Learn more:
- <https://www.buw-soft.de/en/2020/02/21/dynamic-editing-of-cutout-features/>
- <https://youtu.be/hg2yxot2-bo>



Workpiece dimensions on drawing

What

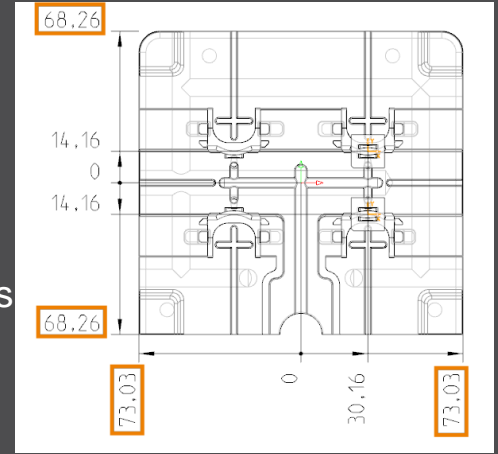
- Add workpiece dimensions to any drawing sheet

Who needs it

- Customers who want to create workpiece dimensions on electrode documentation

Details/Usage

- Update of my_drawing_format.cfg necessary to use this feature
- Learn more:
- <https://www.buw-soft.de/en/2020/02/21/add-workiece-dimensions-automatically/>
- https://youtu.be/iH1Ou_HutEY



Improvement: Import 3rd party EDM

What

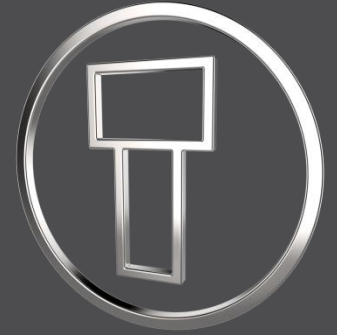
- New import workflow is available for Creo part files or neutral formats STEP/IGES
- SMARTElectrode adds datums to imported electrode to enable most of the functionality

Who needs it

- Customers who need to work with existing electrodes not designed in SMARTElectrode

Details/Usage

- Due to the variety of design approaches, there may be restrictions in use
- Learn more:
- <https://www.buw-soft.de/en/2020/02/21/improved-workflow-for-import-of-third-party-electrodes/>
- <https://youtu.be/vq-TaOuVh8>



SMARTElectrode 12.0.1.3

What's New



Enhancement: Redefine Operation

What

- Electrode position data is automatically updated if zero point is redefined interactively

Who needs it

- Customers who prefer to incorporate changes without opening the UI

Details/Usage

- Learn more:
- <https://www.buw-soft.de/en/2019/11/18/automatic-update-when-operation-zero-is-changed/>
- <https://youtu.be/1M9pefJJyWA>

Notifications in Burnsheets

What

- Introduced additional notifications in Burnsheets UI

Who needs it

- Users who want to evaluate electrode status

Details/Usage

- Learn more:
- <https://www.buw-soft.de/en/2019/11/18/notifications-in-burnsheets/>
- <https://youtu.be/7MqPr5hVnEI>

Improvement: Multiprog Output

What

- Added output of electrode type

Who needs it

- Customers using output for Ingersoll Multiprog

Details/Usage

- Learn more:
- <https://www.buw-soft.de/en/2019/11/18/data-output-improvements-for-ingersoll/>

New Templates for Creo NC

What

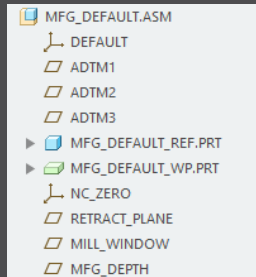
- Empty template MFG_DEFAULT
- Template for 3-axis milling MFG_3AXIS
- Template for ModuleWorks MFG_MODULEWORKS

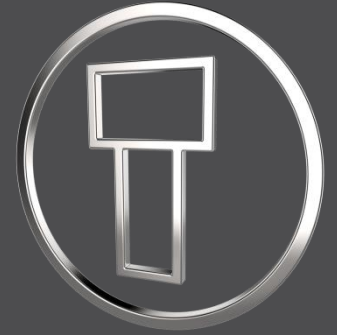
Who needs it

- Customers who do NC programming in Creo

Details/Usage

- Learn more:
- <https://www.buw-soft.de/en/2019/11/18/new-manufacturing-templates-for-use-with-creo-nc/>





SMARTElectrode 12.0.0.0

What's New



Enhancement: UI Post-Processor

What

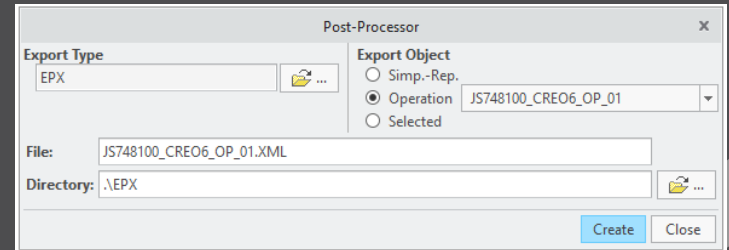
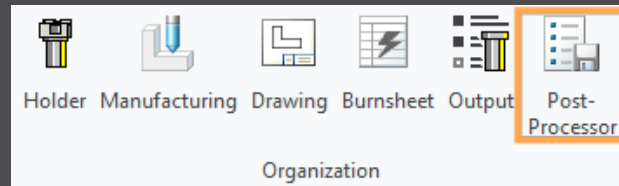
- Added a new user interface to output data for EDM
- All custom formats are still accessible in output UI
- Several controls/formats like AC Form, AgieVision, Ingersoll Multiprog, Makino EPX, Exeron Exoprog, Zimmer & Kreim, ... can be offered on request

Who needs it

- Customers who want to simplify and speed up EDM programming

Details/Usage

- UI is accessible in ribbon UI
- Select control/format, object for export and start with 'Create'



Enhancement: UI Cutout

What

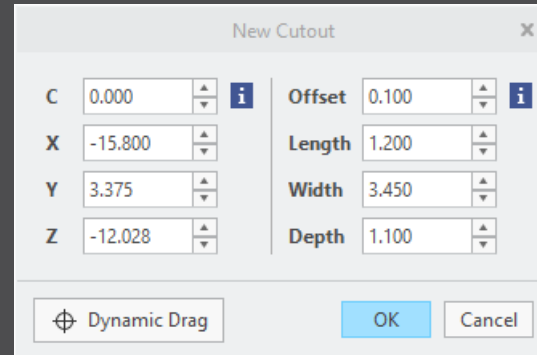
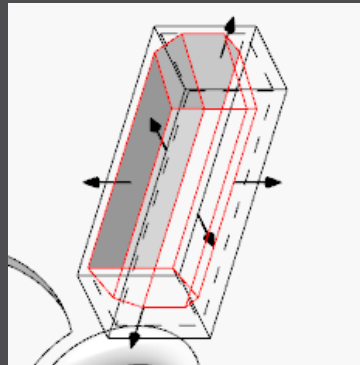
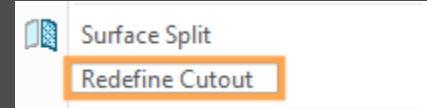
- Added a new user interface define or redefine the solid for cutout
- Position, size and rotation can be adjusted in

Who needs it

- Customers who need to set size/position of solid

Details/Usage

- Start definition via ribbon or context menu
- Start redefinition via context menu in modeltree
- UI replaces 'user-defined cutout'



A screenshot of the 'New Cutout' dialog box. The dialog contains the following parameters:

Parameter	Value	Info Icon
C	0.000	Yes
X	-15.800	No
Y	3.375	No
Z	-12.028	No
Offset	0.100	Yes
Length	1.200	No
Width	3.450	No
Depth	1.100	No

At the bottom of the dialog, there is a 'Dynamic Drag' checkbox (unchecked), an 'OK' button, and a 'Cancel' button.

Enhancement: Redefine Assembly

What

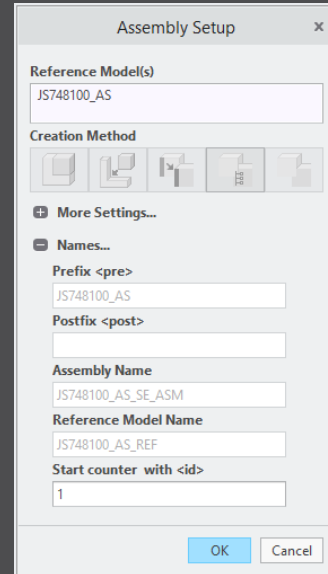
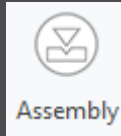
- Definition of electrode assembly can be changed

Who needs it

- Customers who need to add or remove models from definition of reference parts

Details/Usage

- Start redefinition via ribbon
- More functionality like renaming of assembly may be added later

A screenshot of a software dialog box titled "Assembly Setup". The dialog has a title bar with a close button (X). It contains several sections: "Reference Model(s)" with a text field containing "JS748100_AS"; "Creation Method" with five icons representing different assembly methods; "More Settings..." with a plus sign; "Names..." with a minus sign, containing fields for "Prefix <pre>" (JS748100_AS), "Postfix <post>" (empty), "Assembly Name" (JS748100_AS_SE_ASM), "Reference Model Name" (JS748100_AS_REF), and "Start counter with <id>" (1). At the bottom right are "OK" and "Cancel" buttons.

Improvement: Burn-Area in Base UI

What

- Added effective contact area and workpiece material to Base UI

Who needs it

- Customers who need calculated and output contact area
- Customers who get undersize/burngap from database

Details/Usage

- SMARTElectrode performs a fast calculation if no burn-face value available
- Exact calculation can be started using the Burn-Area menu
- Calculation of undersize values can also be started directly from this UI
- Definition of values in overburn_calc.txt necessary to use 'Query Undersize'

Workpiece	ST37
Material	Graphite
Quality	-
Burn-Area	3.93559
Fast Calculation	1
Exact Calculation	1
Query Undersize	1

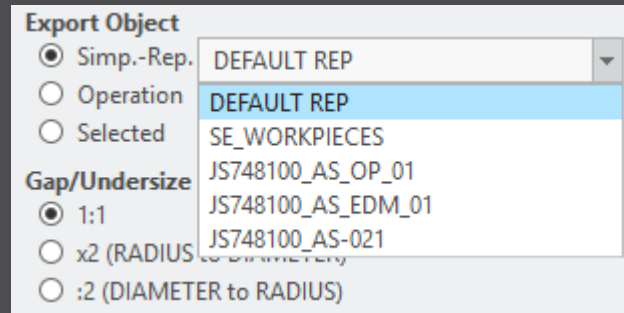
Improvement: Output Files

What

- Exports are named like selected operation by default

Advantage

- This allows export of operations one after another without changing the name interactively



Improvement: Simpreps in Output UI

What

- Allow output by simplified representation

Who needs it

- Customers who want to output a subset of electrodes

Details/Usage

- Use simplified representations for repair or new electrodes necessary through design change

