

: wire edm

Advanced 2 and 4-Axis Wire EDM solutions

Surfcam Wire EDM is the industry leading Wire EDM CAD/CAM system developed specifically for precision engineering industries. It offers an intuitive environment for the comprehensive programming of all Wire EDM machine tools.

Surfcam's Wire EDM solution provides you with the flexibility and confidence to manufacture 2 and 4-Axis parts accurately and efficiently. Advanced functionality enables manufacture of complex shapes and irregular tapers with ease.

Extensive range of CAD interfaces

Surfcam Wire EDM comes with an extensive range of integrated CAD data translators that allow the direct import of CAD drawings in their native form or as industry standards. The standard system configuration includes interfaces for DXF, AutoCAD DWG, IGES and VDA.

Options include: AutoCAD Inventor, VISI, Solid Works, Solid Edge, CATIA V5, Unigraphics, Creo, IGES BREP Solid and STEP loaders are available.

Surfcam Wire EDM can display the CAD data as simple wireframe, solids and surfaces or a combination of both; which can be used as the source for all cut-path programming.

Comprehensive machine and Postprocessor database

Surfcam Wire EDM contains a comprehensive database of Wire EDM machines from the leading machine tool manufacturers; including JOB and Script for Agie, CMD and CT Expert for Charmilles, Brother, Fanuc, Hitachi, Makino, Ona, Sodick, Seibu and Mitsubishi. The advanced postprocessors aren't just limited to the use of generic G and M Codes; posts are easily configured to suit different machine models and configurations.

intuitive graphical user interface

extensive range of CAD interfaces for both import and export

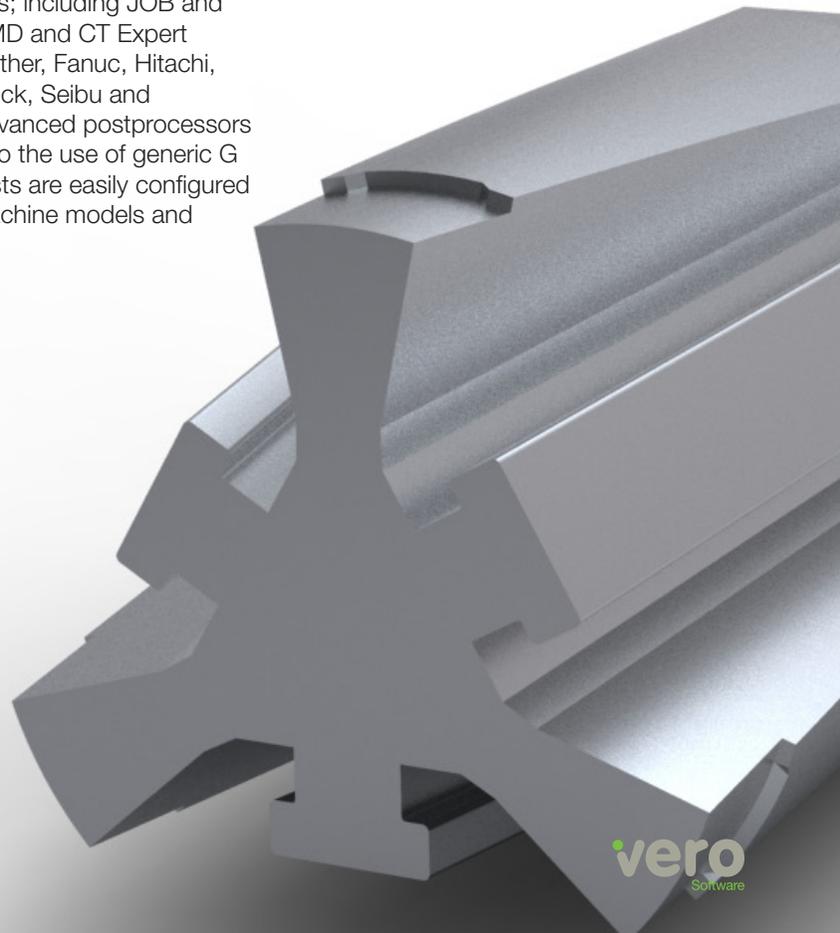
comprehensive machine and postprocessor database

roughing and finishing cuts easily applied to multiple punches or dies

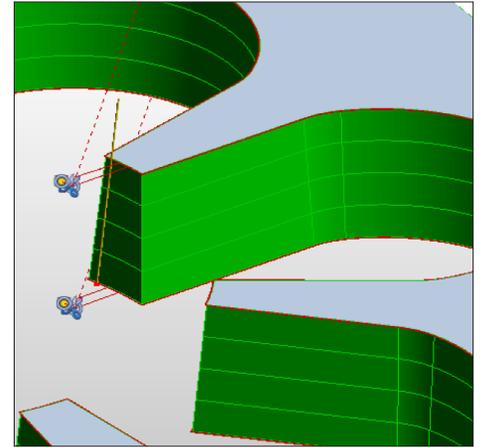
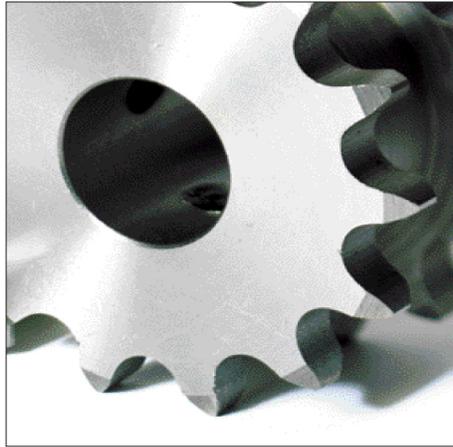
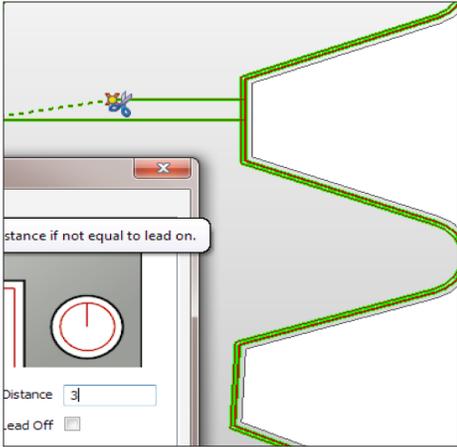
multiple tagging options with auto tag removal

reverse cutting on roughing, finishing and tag removal passes

no-core pocket destruction of round, irregular and tapered apertures



By using Surfcam Wire EDM, your programming time will decrease and your toolpaths will become more efficient, saving time on the machine.



Applying cutting technologies

Geometry drawn in or imported into Surfcam Wire EDM is used to create 'Wire Features' ready for the application of cut technologies. Wire Features are used whether a single component profile or no-core section is being programmed, or as upper and lower sections for 4-Axis machining. Individual Wire Features can be generated by directly interrogating wireframe or solid geometry and Surfcam Wire EDM can be used to quickly find linked items.

Multiple punch or die profiles can be generated by selecting a set of lines and arcs representing the profiles, as typically appears on a press tool plate. Surfcam Wire EDM will automatically and rapidly create discrete profiles from the large amounts of data. 4-Axis Upper and Lower profiles can be automatically synchronized. Surfcam Wire EDM also benefits from full manual override and the use of 3D constraint lines, which define how the upper shape will be matched to the Lower shape.

Multiple tagging and auto removal

In Surfcam Wire EDM it is possible to select from several different methods of unattended machining. If your machine is equipped with automatic wire threading, then running unattended as long as possible is desirable. Unattended machining is performed by leaving the slugs attached while all of the preliminary cuts are taken. Numerous strategies are available to cut the part. For example, taking all of the rough cuts before finishing. In this case all rough cuts are taken while leaving the tags attached, then the tags are removed, and finally the finish cuts are taken. Alternatively, take the rough and finish cuts while leaving the component or waste material in place and then remove the tag and finish this area.

Automatic Cutting Strategies

Surfcam Wire offers predefined cutting strategies for automatic ordering of rough, finish and tag removal passes to accommodate common shop floor needs such as 'attended day cutting' and 'unattended night cutting'. Other features include :

- 4-Axis 'zero span' support including reliable offsetting where small spans are eliminated.
- Square, conic and constant radius corner modes for variable taper.
- Separate clearance for main cuts and tag removal available.
- Additional M Codes including 'Stop/Optional stop', 'Power on/off' and 'Wire cut/Thread'.
- Automatic start hole creation.
- Incremental lead on points to help eliminate 'witness marks' on finished component.
- Automatic approach and retract technology to allow power to be 'ramped' up and down gradually.