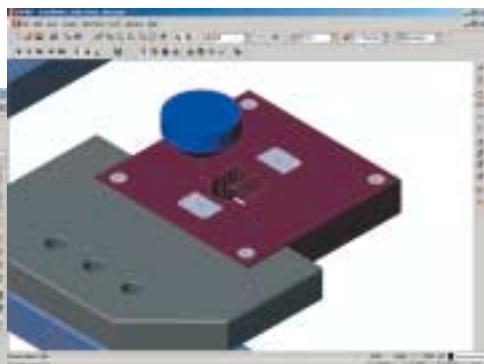


Contouring with Complete Machine Control

ESPRIT provides a universal 2-axis cutting cycle for all styles of EDM machining, including any shape or profile for molds, dies, cores, cavities and machined parts. This machining cycle provides great flexibility in assigning wire thread and retract locations, selecting methods for approaching and retracting from the material, and the automatic creation of glue tabs for part retention. It's all topped off with the ability to support any number of cuts (one rough and multiple skim cuts) on multiple features of any number of parts.

ESPRIT optimizes machine travel and offers strategies for all styles of EDM including land and relief taper cuts. When moving between cuts ESPRIT

automatically handles all the necessary Wire Cut and Wire Thread instructions. And ESPRIT provides control of all tapering and part handling functions of the machine: flushing, tank fill, tank drain, and slug evacuation.

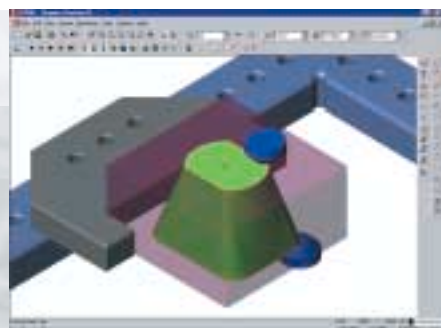


dies, and cutting tools. Here's how it works. When cutting a radius while tapering, the Advanced Conics capabilities allow you to alternate between Cylindrical constant radius corners and Conical constant taper corners. The Program Radius capability provides independent radius control for the upper and lower profile. When cutting a sharp corner while

tapering, the advanced conics control provides the ability to maintain a completely sharp corner top and bottom, or alternately a blended radius on the secondary end. Most importantly, ESPRIT delivers all this functionality while still programming in 2-axis mode. The part programming process is dramatically simplified, part accuracy is significantly increased, and the length and complexity of the G-Code program is greatly reduced.

Advanced Conics Tapering

Use ESPRIT's advanced conics tapering option in the Contour cycle for easy programming of the complex tapers often needed when EDM machining mold components, forming



XY UV 4-Axis Machining

Parts with extremely complex tapers or completely independent freeform shapes on top to bottom are easily programmed with ESPRIT using XY UV 4-axis programming. ESPRIT lets you select any two three-dimensional profiles to create a 4-axis program.

The cutting process is automatically synchronized, and includes the option of adding an unlimited number of additional synchronization lines between the upper (UV) and lower (XY) profiles. A major benefit is ESPRIT's support of 4-axis EDM programming for any geometric shape with any number of elements: 3D, non-planar, XY and UV profiles, and non-planar fixturing. Glue tabs are automatically added and skimming cuts may be created for unattended machining.

Pocketing, No-Core Cutting

When your parts are small it becomes difficult and inefficient to manually handle the slugs which result from the EDM process. To solve this problem ESPRIT provides a specialized EDM Pocket machining cycle that erodes all the material inside a given cavity, eliminating the slug. A start hole is usually pre-drilled into the work piece; to prevent wire breakage and minimize machining time ESPRIT will recognize and automatically machine only the slug.

Factory Certified Solutions with Machine Specific Technology

Only ESPRIT offers a complete tool set to exploit the full capabilities of your make/model EDM machine. Tools which make it possible to achieve higher part quality while minimizing cycle times. These tools come in the form of specialized input screens for each brand of EDM you own. Each manufacturer's unique cutting technology and methodologies are integrated into ESPRIT's Knowledge Based Machining (KBM). While the machine specific KBM technology provides access to the full range of the machine's cutting features, it also includes a "Factory Certified" post processing system resulting in G-Code file(s) that maximize your machine's performance.

Only by providing KBM input screens specific to each machine model is ESPRIT able to provide complete control over the advanced and unique functionality of all the leading EDM machines on the market.

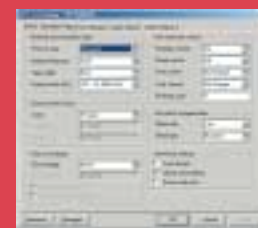
Agie



Every make and model of Agie machine is supported by ESPRIT. Unique machine capabilities such as dual tapering,

upper and lower tapers, and sophisticated advanced conics are covered. For the AgieVision, the KBM accepts the technology settings Ra, Tkm, and Te to create the job (G-Code) file. The Agie 123 KBM technology screens include D offset, P taper, S flush, and T power. Reach maximum machine performance by individually selecting different technology settings for the upper taper, lower taper, and land zones of your work piece.

Mitsubishi



ESPRIT includes a Mitsubishi technology database, in Microsoft Access

format, which contains the factory recommendations for E-Pack (power setting), feedrates, and offsets for a wide variety of cutting situations. By entering the machine model, work piece material and thickness, and desired surface finish ESPRIT will automatically tell you the number of skim cuts required along with the factory recommendations for the technology. The ESPRIT KBM for Mitsubishi provides access to the machines' advanced features: Z1 – Z5 5-axis control, flushing and tank controls, along with the Power Master.

Charmilles



Charmilles users can count on complete control over the advanced and unique functionality of the Charmilles family

of machine tools. The ESPRIT KBM for Charmilles, including the Charmilles control and the Fanuc control, provides support for Charmilles's unique capabilities in advanced tapering, the programming of "twist" parts, and material handling functions such as slug evacuation. The Charmilles control requires three separate files to operate: ISO, the G-Code program; CMD, the command file; and TEC, the technology file. ESPRIT automatically generates all three; the third, TEC, is created through ESPRIT's integration with CT-Expert, Charmilles's database system for cutting technology.

ONA



Get the most out of your Ona machine with ESPRIT's built-in KBM technology. It provides individual

control over the 10 generator parameters including off-time, voltage, and servo to increase machining efficiency for unique individual situations. You can also divide the cutting process into 3 zones - land, taper, and glue tab, and for each zone choose to apply up to 6 cuts (one rough cut with up to 5 skim cuts). The result is a simple mechanism to maximize work piece quality and minimize machining time.

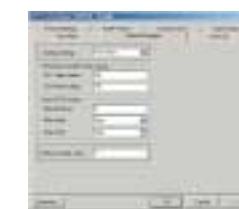
Fanuc



For Fanuc EDM machines, ESPRIT provides the flexibility to

control the cutting conditions with a set of user definable technology parameters such as S power and F feedrate for each cut. Selecting one of the cutting strategies will then create a complete machining process including all the rough cuts, skim cuts, and wire thread/cut instructions.

Sodick



The ESPRIT Sodick KBM provides a flexible cutting system where up to 10 cuts

may be defined in any combination of forward and reverse cutting strategies to produce a complete process. For each cut a full suite of conditions and cutting technologies may be specified, including control over the machine's advanced features, powered Z- axis, tank control, and wire control. Meanwhile, global scale, axis exchange, and rotate functions also may be applied to the work piece.

And more...

Other EDM machines supported by the ESPRIT KBM system described above include: Brother, Current, Hansvedt, Hitachi and Makino.