

30 days FREE full version

To evaluate the full potential of BAMBOO.



betwin.it

BASIC CHARACTERISTICS

Minimum system requirements

- Pentium Processor 4/AMD
- RAM Memory 512 MB
- 17" Monitor

Operating systems

Windows 2000® / XP®

Operating environment

Rhinoceros 3.0 SR3 or later

EASY TO LEARN

It only takes one day to learn how to use Bamboo!

The structure of commands and usage methods are conceived and created to allow customers to use Bamboo's potential in the shortest time possible.

FLEXIBILITY

- It can be used both in technical offices alongside CAD systems, or in workshops directly by the CNC operator, allowing for multiple installations at moderate expense.
- It can be supplied as an autonomous station in the technical office, able to converse with the widest range CAD/CAM systems.
- It can be supplied as an autonomous station on the machine.

EVERYTHING INCLUDED

Bamboo is provided with all the necessary post-processors without additional cost.

MODERATE INVESTMENT

Bamboo makes elevated performance possible at moderate expense in all phases: purchase, learning, and management.

INTEGRATED ENVIRONMENT CAD/CAM

Thanks to integration with Rhinoceros, Bamboo provides all the necessary CAD/CAM functions.

All brands cited are the property of their respective owners.



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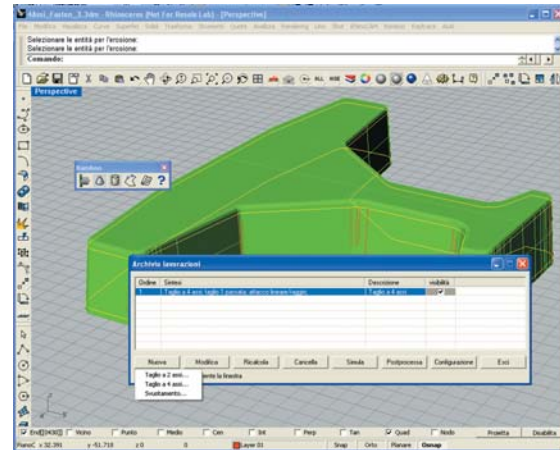
Wire EDM CAM

Embedded in  **Rhinoceros®**

THE TOOL

Bamboo is a software that makes it possible to develop wire EDM toolpaths both on 2 and 4 axes, starting from two-dimensional profiles, two synchronized profiles, or from 3D models composed of solids or surfaces.

Combined with the Rhinoceros CAD system, it offers an extremely effective tool to meet any requirements in programming wire EDM machines. In practice, working from any format, whether on paper or electronic, with special designs for cutting, simple or complex, Bamboo allows you to use all the strategies needed to achieve the results you want. With the CAD section built into Rhinoceros, you can design 2D or 3D objects, and if necessary, also create dimensioned drawings for use in the workshop. In the event that drawings come from other CAD systems, the various file formats readers makes it possible to always be compatible, and therefore to be operative immediately with all your clients. In the technological area, particular care was paid to the optimizations and automations. This is vital for achieving a tool that is simple to use for any operator, and immediate as a final result, that is, in the creation of programs to drive the CNCs. From the investment perspective, note the presence of countless post-processors and the option to customize them however you like.



MAIN FEATURES

These are the Bamboo main features:

- With the help of the machining tree, you can create a series of machining operations and modify them, copy them, or reprogram the sequence with which they are processed.
- The cutting strategies are driven by a customizable archive that establishes the technological relations between the materials to be cut, the material of the wire, the height of the piece, and the number of cuts to be made. This way, the programs for the CNC will include the correctors, the oversize, the tension, and the regime.
- In order to facilitate the creation of 3D objects with profiles drawn with constant or variable degrees, the software includes an easy-to-use taper command.
- Where post-processors are concerned, they can be customized using just a few concepts, making changes through a simple editor.

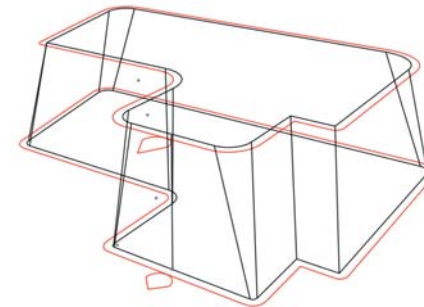
USE

The machining tree makes it extremely easy to use. That way, you're operational in a few hours, without the need for in-depth training.

The dynamic simulation in wireframe or with rendering allows the cuts calculated to be checked instantaneously so the process of creating the programs can be conducted with the utmost security. The machining operations simulated are those selected in the tree, making it possible to display each individual cycle. In the display with rendering, it is possible to select various display modes and to hide the cut sections (swarfs or stock), making the display as effective and intelligible as possible.

FUNCTIONS

Draft angle creation



Bamboo provides the user with a tool for defining draft angles for cuts on 4 axes, beginning from a two-dimensional profile. During definition, which can be done for each individual element of the profile, when using fillets the user can indicate whether the radius should be kept constant as the tapered surface develops or whether it should be variable in relation to its own angle.

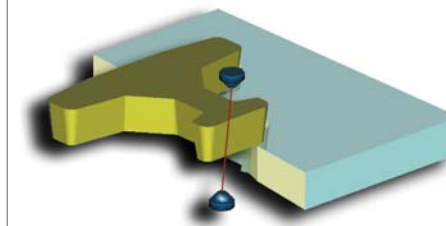
2 axis wire edm



2 axis machining makes it possible to make cuts using automatic strategies that manage multiple passes with the corresponding technologies for roughing, semi-finishing, finishing, or cut swarf, up to 7 cuts/repasses. It manages: double swarf, cutting downloaded plates, the automatic creation of offsets on edges of the dies, the set rake, the constant or variable degrees, and the raw part height, which also determine the technological data. The cuts can be stopped or interrupted at the distance of the set swarf, the cut direction can be clockwise or counter-clockwise, and in the case of multiple passes, unidirectional or bidirectional. For each cut, it can manage the oversize to let, the type of rugosity, the GAP parameters, the correctors to use for the CNC, the feed rates, the tensions and/or the regimes. In order to adapt to all situations or practices, multiple types of approach/detach can be managed

that also anticipate automations for seeking holes or threading points. In fact, if the circles that identify these points are drawn, they will be captured automatically by Bamboo. Programs for the CNCs can be developed by entering the compensation of the G41/G42 wire; otherwise the offset is calculated by the software. Identical profiles for machining can be processed using the subroutines technique; this way the programs will be shorter and more manageable on the machine and by the CNCs using little memory. The profiles can be partially machined, in order to rework an area or achieve a portion of the piece designed.

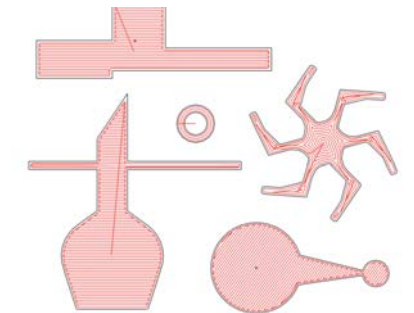
4 axis wire edm



4 axis machining can be generated beginning from two synchronized profiles, from a three-dimensional mathematical model, or a two-dimensional profile where the tapered surface has been applied with the corresponding command. In this case too, it is possible to make cuts using the same automatic strategies described for 2-axis cuts. It manages: the swarf, the angle of each surface, the constant or variable fillets, and the raw part height, which also determines the technological data. In addition to all the other characteristics in common with the 2-axis cuts, the fillets in the profiles or the model to cut can be managed as circular interpolations or divided in segments.

Pocketing

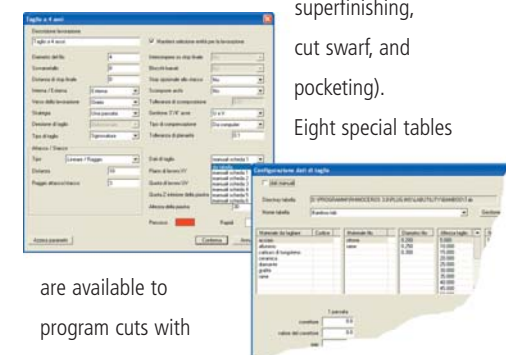
In the case of small profiles, where the detaching swarf could create wire breakage problems, the pocketing strategy can calculate a path that makes it possible to distribute the internal material in a pocket. In this strategy it is also possible



to associate a series of cuts to semi-finish and finish the pocket.

Managing the technological tables

In order to best adapt the generation of programs for the various CNCs on the market, Bamboo provides for the creation of technological tables that can be customized for each machine. These tables allow you to enter cut data, including: corrector, corrector value, GAP, Offset, oversize, regime, approach/detach regime, feed rates and distances between passes for pocketing. These parameters are configured by the type of cut material, the wire material, the wire diameter, the height of the cut, and clearly for each cut that will be made (roughing, semi-finishing, repasses, superfinishing, cut swarf, and pocketing). Eight special tables



are available to program cuts with special parameters.

In practice, the user can perform 2- or 4-axis machining operations, specifying only the geometrical data, and then when creating the program it is possible to select the material, the type of CNC, and the corresponding technological table to use. This way, the program developed will contain all the information regarding the cut parameters to be used.