



Advanced
Manufacturing
Solutions

PartMaker

Bar-Fed Mills

Bar-Fed Mills are unique machine tools with unique programming requirements. These machines are literally “machine shops in a box.” They are ideal for parts in the 15 to 80 mm diameter range and thus are well suited to the medical device, aerospace, fluid power and other critical tolerance markets that require small parts. A Bar-Fed Mill is a machine tool that at its heart is a Vertical Machining Center, with the important exception that a bar-feeder, similar to that found on a production lathe, is used to introduce the stock into the working environment. The machining table found on a traditional VMC is essentially a second spindle on a Bar-Fed Mill where work can be handed off after being completed on the primary spindle. As a result of this important change in architecture, these machines are able to achieve the continuous production of a bar-fed Turn-Mill or Swiss-type lathe, while offering all the machining benefits of a VMC such as large tooling carousels, milling horse power and other benefits. PartMaker offers a dedicated, specialist solution to automate the programming of these unique machines. PartMaker’s solution for Bar-Fed Mills includes a user interface specifically dedicated to their unique programming requirements, a highly realistic 3D Full Machine Simulation and robust, well supported, user customizable post processors.

“PartMaker is a very powerful yet easy to use tool for allowing us to harness the capability of our Bar-Fed Mills and program them in a productive manner. The ease of post processor customization has enabled us to output edit free NC code direct from PartMaker. The ability to do complex surfacing and simultaneous 5 axis machining sets Delcam’s solution apart from others.”

**Craig Michaud, Engineering Manager - Implants
Seabrook International**

Do you need a complete solution to program your Bar-Fed Mill?

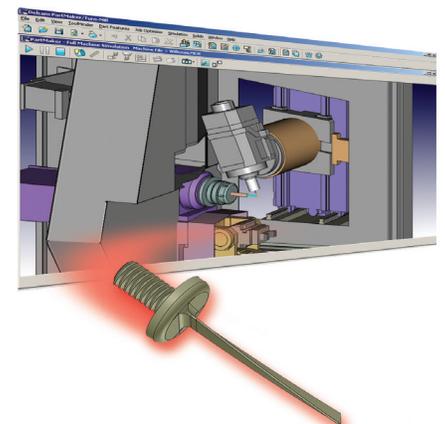
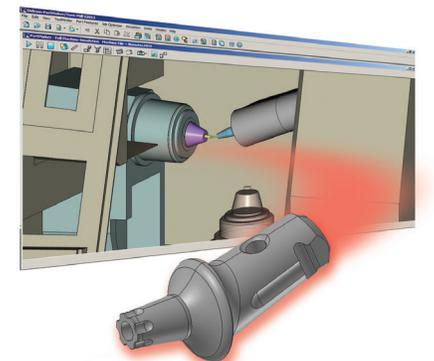
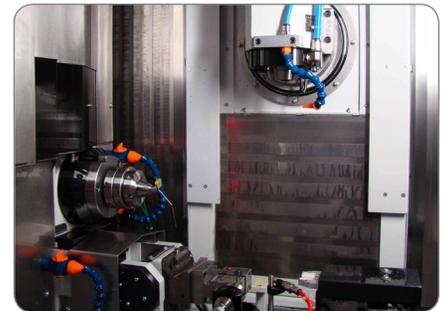
PartMaker’s Patented Visual Programming approach makes it easier to program parts complex parts on a Bar-Fed Mill with number of turned and milled features. PartMaker makes special provision to support the unique programming requirements and architectural features of today’s complex Bar-Fed Mills.

PartMaker supports the programming of virtually every Bar-Fed Mill on the market. PartMaker’s Bar-Fed Mill post processors have been developed for each Bar-Fed Mill model based on the machine’s specific architecture and machine control, assuring you that the software will generate accurate NC code for your machine.

PartMaker’s 3D Simulation has been developed to simulate the kinematic motion of Bar-Fed Mills including support for such unique Bar-Fed Mill features like inverted sub spindles and programmable sub spindle vices. PartMaker’s Full Machine Simulation simulates the operation of your Bar-Fed Mill in a very vivid, photo-realistic 3D simulation to detect any errors or collisions before sending a program to the machine.

Compatibility:

- Willemin-Macodel
- Bumotec
- Chiron
- Star
- Mori-Seiki
- Mazak
- ... and others



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Patented Divide and Conquer Programming Approach

PartMaker's solution for programming Bar-Fed Mills employs a powerful 'Divide and Conquer' programming approach to simplify the programming of multi-axis Bar-Fed Mills. This unique technology allows the programmer to break a part with a number of turned and milled features into a series of much simpler operations. The software automatically sets the coordinate system in which features are being machined and applies the appropriate tool motion. The 'Divide and Conquer' approach makes programming even the most complex parts on multi-tasking Bar-Fed Mills much quicker and easier than ever before.

Powerful, Flexible Machining Strategies

The PartMaker solution for programming Bar-Fed Mills employs the most powerful, most sophisticated machining algorithms on the CAM market today. With PartMaker, you can perform a wide variety of 2.5 axis milling operations in any plane, 3D surface machining or even 5-axis simultaneous milling in combination with a variety of integrated turning strategies. PartMaker's unique tools for part handling and process organization give you the ability to utilize the full capability of your Bar-Fed Mill.

Vivid 3D Simulation

With the cost of a typical Bar-Fed Mill, collisions can be down-right catastrophic. To avoid such expensive problems, PartMaker's solution for Bar-Fed Mills simulates machining of the part with vivid 3D graphics. PartMaker's simulation will perform full collision detection between the tools in the work and the part in addition to allowing the user to see what the part will look like before sending the program to the machine. PartMaker's Full Machine Simulation will provide a comprehensive simulation of the machine's entire working environment, detecting any collision between tool holders, tool heads, sub spindle vices and any other machine components.

Robust, Flexible and Accurate Post Processors

PartMaker has a large library of robust, well documented, developer supported post processors for today's Bar-Fed Mill offerings. PartMaker supports virtually every multi-tasking Bar-Fed Mill on the market today including popular models from such leading builders such as Willemin-Macodel, Bumotec, Chiron, Star, Mori-Seiki, Mazak. All PartMaker Bar-Fed Mill post processors are fully user customizable, giving you the ability to tailor the format of your NC code.

