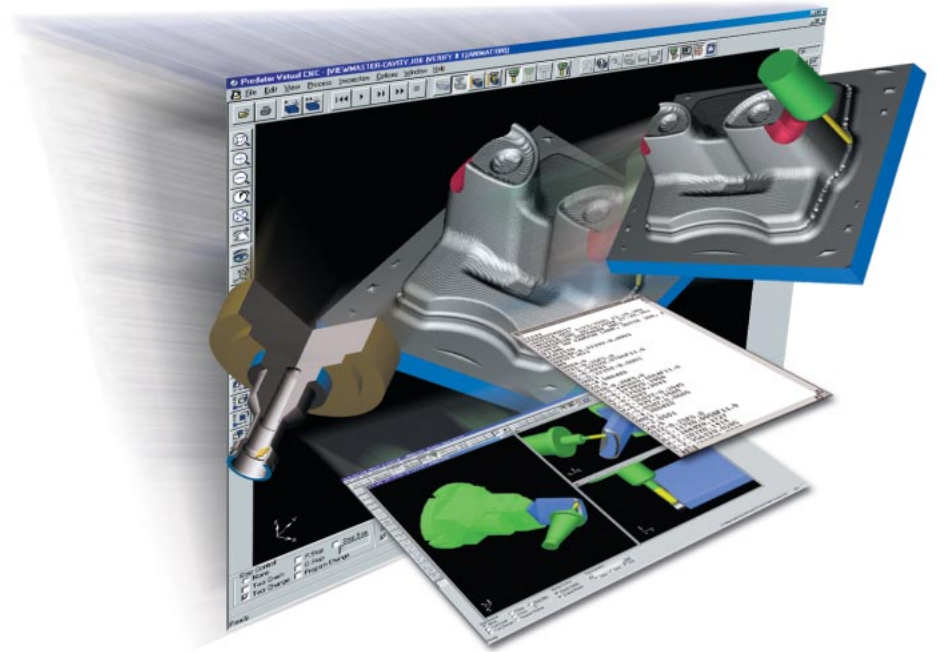




# Predator VIRTUAL CNC™

CNC VERIFICATION & SIMULATION



#### Reduce or Eliminate:

- Scrapped parts
- Broken tools
- Damaged CNC machines
- First article setups
- Programming errors
- Wasted time

#### Automatic Collisions and Error Detection:

- Tools
- Tool shanks
- Tool holders
- Tool changes
- Spindle
- Rapid motion
- Stock
- Fixtures
- Clamps
- Rotary tables
- CNC syntax
- Offsets
- Travel limits

# Verify your CNCs before making parts



GEARED FOR MANUFACTURING™

# Predator VIRTUAL CNC™



## Available in Four Upgradeable Configurations:

- 3-Axis Milling
- 4-Axis Milling
- 5-Axis Milling
- 2-Axis Turning

## Standard Features:

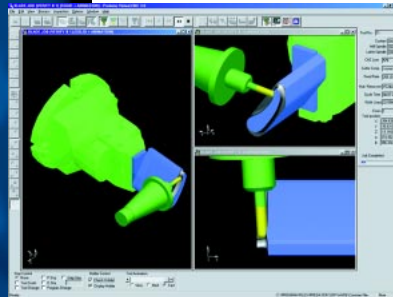
- CNC Verification and Simulation
- 3-, 4- and 5-Axis Milling
- 2-Axis Turning
- 150-Plus CNC Translators
- Custom Reverse Posts
- Complete Error Detection
- Visual Inspection
- Feature Inspection
- Advanced Tooling
- Stock and Fixtures
- STL Output
- Predator CNC Editor™
- On-line Help

## Optional Features:

- 3-, 4- and 5-Axis Virtual Machine
- STL Compare Machined vs. Designed

## Verify and Simulate

**Ever break a tool, scrap a part, destroy a clamp or gouge a fixture in the prove-out process?** We believe the most powerful tool any discrete part manufacturer can utilize today is CNC verification and simulation. No other application can save you more money, generate better quality, or increase the overall productivity of your entire manufacturing process. To many manufacturers, this is no secret. Think about the time you waste proving out parts on your CNCs. How many tools have you gone through? How many work pieces have you had to sacrifice to prove-out bad CNC programs? Predator Virtual CNC's true



solid modeling technology provides an exact representation of your "as-manufactured" part so you can quit wasting resources immediately.

## 3-, 4- and 5-Axis Milling

### Need full milling verification capabilities?

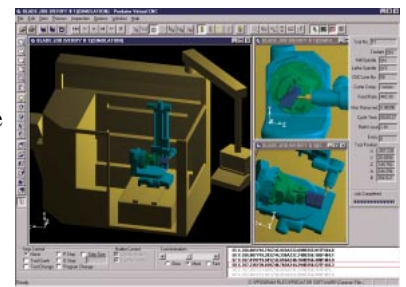
Predator Virtual CNC supports more milling machine configurations with true 3, 4 and 5 simultaneous axes of motion. User definable Reverse Post Processor files coupled with our CNC controller specific translators allows an almost unlimited number of milling machine or machining center configurations to be supported. Unlike many systems, Predator Virtual CNC comes with a totally customizable Reverse Post Processor at no extra charge.

## Machine Simulation

### Need to verify an entire machine?

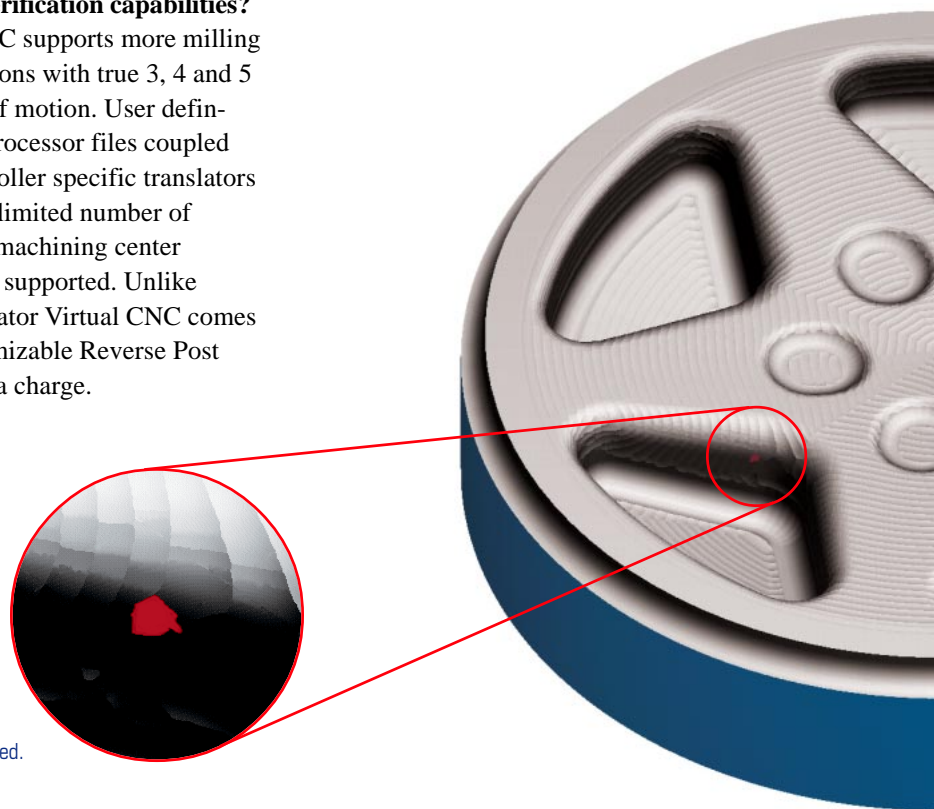
Predator Virtual Machine™ is an option that simulates 2 through 5-Axis mills, routers, lasers and grinders directly from G-code. Collision detection between all moving parts, fixtures and part shapes will identify problems before they occur on the shop floor. Machine components can be designed with every major CAD system that supports STL output. An interactive machine preview with machine jogs, zooms, and 3D rotations

insure that the imported STL files and the machine definitions are complete and accurate.



## 2-Axis Turning

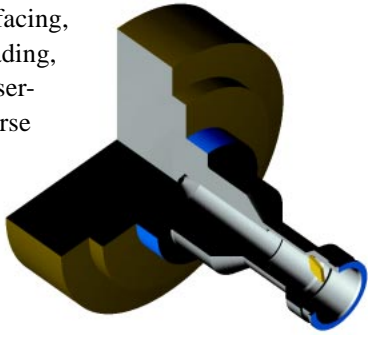
**Need to verify turned parts?** Predator Virtual CNC supports standard turning application, including: OD and ID rough-



Even subtle tool collisions are automatically detected.

# CNC VERIFICATION & SIMULATION

ing, finishing, facing, grooving, threading, and drilling. User-definable Reverse Post Processor files combined with our comprehensive library of standard CNC controller specific translators allows most turning machine configurations to be supported.



**150-Plus CNC Translators**  
**Want immediate support for your CNCs?** Predator Virtual CNC includes more than 150 CNC translators. These components have a ten year history and are used by thousands of customers every day.

**Custom Reverse Posts**  
**Have unique CNC requirements?** Predator Virtual CNC supports easy customization for a wide range of unique CNC applications. A library of custom reverse posts are included to get you started.

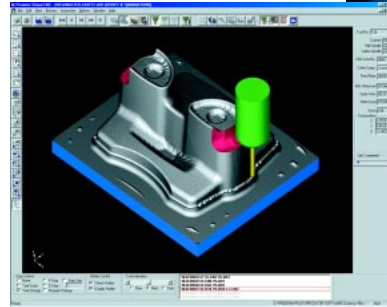


## Complete Error Detection

**Tired of wondering if last minute changes are going to work?** Predator Virtual CNC

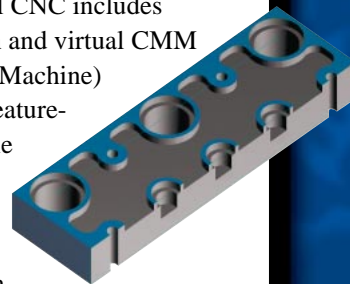
detects numerous errors before they can cause problems on the shop floor, including:

- Errors within the CNC program
- Raping into stock and fixtures
- Short flute lengths
- Tool holders colliding with stock and fixtures
- Tools colliding with fixtures
- Collisions during tool changes
- Errors with fixture, diameter and length offset values, and usage
- Exceeding the machine's travel limits



**Visual Inspection**  
**Need to visually monitor how your code will actually cut?** Predator Virtual CNC provides fully animated simulation of the machining process. Seeing how the tool will behave with Predator Virtual CNC ensures there are no unexpected errors. Even subtle and hidden errors inside the part are easily identified by using dynamic rotate, zoom, pan and cross sectioning of your solid model. Deep Zoom allows you to create a separate solid model of a specific section of your part for closer inspection.

**Feature Inspection**  
**Wish you could measure your verified model?** Predator Virtual CNC includes feature based inspection and virtual CMM (Coordinate Measuring Machine) inspection capability. Feature-based inspection uses the accuracy of solid models to measure feature dimensions and the relationship between separate features. Predator Virtual CNC recognizes edges, arcs, cylinders, spheres, planes and cones. To select a feature, just click on the feature and the appropriate information is displayed.



## Partial List of Manufacturers Using Predator Virtual CNC:

- Coors Brewing Co.
- Delta Faucet Co.
- Eaton Corp.
- Focus Hope
- Ford Motor Company
- General Motors
- Harley-Davidson
- Hitachi Nissin Electronics
- Honeywell International Inc.
- Ingersoll-Rand Co.
- MASCO Corp.
- Mattel Inc.
- Motorola, Inc.
- Packaging Corp. of America
- Parker Hannifin
- Snap-On Inc.
- U.S. Dept. of Energy
- Westinghouse Electric Company

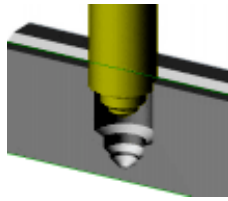


#### CNC Compatible:

- Allen Bradley
- Anilam
- Bandit
- Bendix
- Bridgeport
- Bosch
- Bostomatic
- Centurion
- Centroid
- Cincinnati Milacron
- Deckel
- Dynapath
- Emco
- Fadal
- Fagor
- Fanuc
- Fidia
- General Electric
- Giddings & Lewis
- Haas
- Heidenhain
- Hurco
- Kerney & Trecker
- Light
- Maho
- Mazak
- MDSI
- Mitsubishi
- Moog
- NUM
- Okuma
- Prototrak
- Roland
- Sharnoa
- Siemens
- Toshiba
- Vickers
- Yasnac

## Advanced Tooling

**Have complex tooling requirements?** Predator Virtual CNC's tool library includes more than 1,100 fully defined tools and tool holders. Over 25 standard tool and tool holder shapes, including user-definable tool shapes, are supported. Tool kits can also be used for specific part families. Tooling information can also be automatically extracted from comments within the CNC program. Dynamic tooling previews show the exact tool shape and orientation for every tool.



## Stock and Fixtures

**Have specific stock and fixture setups?** Predator Virtual CNC includes a stock and fixture library. Over a dozen standard stock and fixture shapes, including custom shapes that can be imported from every major CAD system, can be combined to create complex material shapes, pallets, chucks and fixtures. Stock and fixture information can also be automatically extracted from comments within the CNC program. Dynamic stock and fixture previews show the exact setup prior to simulation.

## Predator CNC Editor™

**Need to edit errors found within the CNC code?** Predator Virtual CNC automatically identifies the specific lines that contain errors, and the integrated Predator Editor includes numerous editing features to fix each error and reprocess the simulation.

## On-line Help

**Need help and don't have time to read the manual?** Predator Virtual CNC includes on-line help providing concise and up to date documentation.

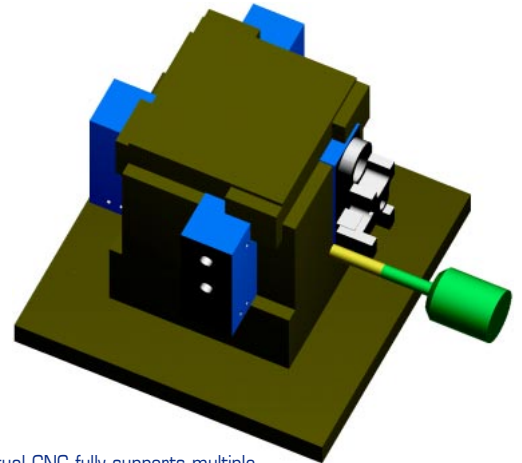
## Service and Support

**Who will provide the help I need to get started and stay running?** Predator Software products and services are available through a global network of 100 value-added resellers. As part of the Predator family, they can provide the expertise necessary to maximize your productivity with Predator Virtual CNC.

## System Requirements

### Windows® 98/2000/Me and NT

- Intel® Pentium®-based processor or equivalent
- Internet Explorer® 5.5 or later
- 64 MB RAM
- 40 MB hard disk space



Virtual CNC fully supports multiple parts, fixtures, offsets, rotary tables and operations with automatic in-process stock.

## CONTACT INFORMATION

Local Authorized Sales and Service:

For more information, or for the name of a Predator Reseller near you, contact us at:

8835 SW Canyon Lane, Suite 300

Portland, OR 97225

Phone: (503) 292-7151

Fax: (503) 292-7671

info@predator-software.com

ftp.predator-software.com

www.predator-software.com

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