# GE Fanuc Automation

Series 15-B CNC

The GE Fanuc Series 15-B is one of the new generation of modular CNCs using leading-edge CNC technologies. It is a top-end, high-performance CNC for the most demanding machines.

The GE Fanuc Series 15-B features include:

- *A powerful, compact dual 68EC040-based control unit with high density printed circuit boards mounted in a multi-slot rack*

- *Up to 24 axes controlled to 0.0001mm, 0.00001" increments (optionally 0.00001mm, 0.000001" or 0.000001mm, 0.0000001") and traverse speeds up to 240m/min.*

- *A variety of monochrome and color CRTs along with a variety of flat panel LCD displays*

- *Improved display screens including Help, History, Servo/Spindle waveform scope trace, and up to 5 subscreen windows*

- *An optional machine operator panel with sealed pushbuttons with MTB definable labels*

- *Choice of built-in high speed PMCs to control machine functions using advanced Ladder Diagram programming or the C programming language*

- *Convenient built-in PCMCIA card slot for backup storage of part programs, parameters, offsets, and ladder logic*
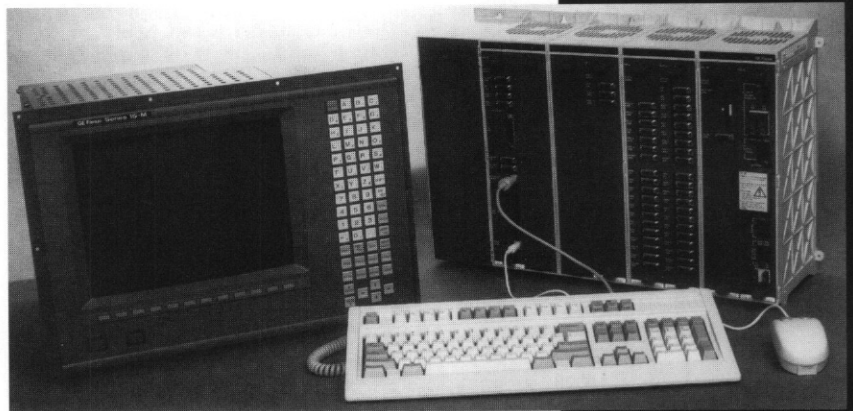
The GE Fanuc Series 15-B is an advanced CNC for high speed, high precision, and specialized machine tools in both manned and unmanned production applications.

The Series 15-B has the speed and features to meet the most difficult machine configurations such as 5 axis machining which dynamically adjusts tool offsets as the tool is rotated to any angle in space and permits 3-D tapping, 3-D circular interpolation, and 3-D handle feed.

The Series 15-B features easy-to-understand displays for improved operation and maintainability. The History display presents operator keystrokes, interface I/O transitions, and time stamped alarms. On the servo and spindle setting screens, the operator can easily set parameters while viewing the actual motor waveforms.
Easy-to-use function keys assist the operator in selecting the correct screen, while a specially designed help key supplies instructions for the user to follow.

Technical

Specification

Guide

Machine precision can be remarkably improved through such features as bi-directional interpolated pitch error compensation, which finely corrects leadscrew pitch error, and interpolated straightness compensation to precisely correct axis orthogonal alignment.

Programming is simplified by features such as:

· *Cutter Compensation, which automatically generates the tool center path by offsetting the tool radius from the programmed path, thus avoiding the need for tedious calculations*

· *Canned Cycles, which automatically perform common machining operations with only one command*

· *Background Editing, which allows programming and machining to be performed simultaneously*

Up to 5120m of built-in part program storage is available. Individual part programs and control parameters can be conveniently stored on MS-DOS® compatible 3.5" floppy disks using the GE Fanuc Handy File, a factory hardened portable file transfer and storage unit.

Connecting the Series 15-B to a communication link via DNC2 or OSI Ethernet enables this control to be embedded in a machining cell, thus providing unmanned operation for extended periods of time. Automation functions, including part program transmission, the reading and writing of CNC and PMC data, and remote operation are available via DNC2 or OSI Ethernet.

Quality has been ensured by careful design and extensive testing of components and systems. Reliability has been proven by installations all over the world.

Max Controlled Axes	
1-path	8+2Cs
2-path	8+2Cs
15-MB(MA2)	24
15-TTB(MP) 4/6-path	8/15
Simultaneous Controlled Axes	
1-path	10
2-path	8
15-MB(MA2)	24
15-TTB(MP) 4/6-path	8/15
PMC Controlled Axes	
1-path	8
2-path	8
15-MB(MA2)	24
15-TTB(MP) 4/6-path	8/15
Resolution(best available option)	0.000001 mm
	0.0000001 in
	0.000001 deg
PMC (µS per step/max steps)	
NA	1.5µS/16K
NB	0.1µS/24K
PMC C Language	option
Macro Executor	option
Custom Macro	option
Open System CNC	MMC-IV
Graphic Display	option
Background Graphics	option

MS-DOS® is a registered trademark of Microsoft.

Conversational Programming	option
Part Program Storage (max)	5120m
PCMCIA Memory Card	standard
Program Load/Store	RS232/422
Remote Buffer	option
Data Server	later
CRT Display	
Ladder Monitoring	standard
Ladder Editing	standard
Servo/Spindle setup	standard
Alarm/Operation History	standard
Stored Pitch Error Comp.	option
Linear/Circular Interpolation	standard
Helical Interpolation	option
Involute Interpolation	option
Spline Interpolation	option
Cylindrical Interpolation	option
Polar Coordinate Interpolation	option
Polar Coordinate Command	option
Rigid Tapping	option
Cutter/Tool Nose Comp.	option
3-D Cutter Compensation	option
Canned Cycles	option
Scaling	option
Simple Synchronous Communications	option
DNC2	option
OSI Ethernet	option
HPCC	option

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