



GE Fanuc Automation

Series 21-TB CNC

The GE Fanuc Series 21-TB provides a compact, state-of-the-art CNC control for basic lathes. It provides up to two simultaneous axes of control in a highly reliable package.

The GE Fanuc Series 21-TB features include:

- A compact, highly reliable, complete control in a 2-slot configuration, implemented with leading-edge SMD technology and an 80386-SX microprocessor
- Two axes controlled to within 0.001mm or 0.0001" and traverse speeds up to 240m/min.; two more axes may be controlled via PMC for turret or parts handling control
- A 9" monochrome CRT display
- Built-in PMC and I/O to control machine functions using familiar Ladder Diagram programming
- A control station and an optional machine operator's panel
- Operation and alarm history displays, which simplify trouble-shooting and improve maintenance
- Convenient built-in PCMCIA card slot for backup storage of part programs, parameters, offsets, and ladder logic



The GE Fanuc Series 21-TB CNC is especially suited to basic lathes. It controls two high-performance digital servo drives and one spindle drive for the lathe, and a further two for turret or loader control.

Innovative new generation control technology employs very high density circuitry that minimizes the size and maximizes the reliability of the control unit. In addition, thinner cables are used to connect the control unit to the machine tool. The result is a control unit that is compact and takes up minimal space when installed in the power magnetics cabinet.

Machine precision can be remarkably improved through such features as stored pitch error compensation, which corrects leadscrew pitch error and other mechanical positioning errors.

**An Innovative
New
Generation of
Control
Technology**

**Quality
has been
ensured by
careful
design and
extensive
testing**

Programming is simplified by features such as:

- *Common lathe functions such as threading, feed-per-revolution and diameter/radius programming*
- *Compensation for tool nose radius, tool wear and tool geometry: the CNC automatically generates the tool center-path by offsetting the tool from the programmed path, thus avoiding the need for tedious calculations*
- *Canned Cycles, which automatically perform common machining operations with a single command*
- *Background Editing, which allows programming and machining to be performed simultaneously*

Up to 160m 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.

Quality has been ensured by careful design and extensive testing of components and systems.

<i>Max Controlled Axes</i>	2CNC+2PMC
<i>Simultaneous Controlled Axes</i>	2
<i>PMC Controlled Axes</i>	2
<i>Resolution (best available option)</i>	0.0001 mm 0.00001 inch 0.0001 deg
<i>PMC (µS per step/max steps)</i>	
RA1	5µS/5K
RA3	1.5µS/12K
<i>Macro Executor</i>	option
<i>Custom Macro</i>	standard
<i>Part Program Storage (max)</i>	160m

<i>PCMCIA Memory Card</i>	standard
<i>Program Load/Store</i>	RS232
<i>CRT Display</i>	
Ladder Monitoring	standard
Ladder Editing	option
Servo /Spindle setup	standard
Alarm/Operation History	standard
<i>Stored Pitch Error Comp.</i>	option
<i>Linear/Circular Interpolation</i>	standard
<i>Tool Nose Compensation</i>	standard
<i>Canned Cycles</i>	standard

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