

FANUC 20-FA CONTROL SPECIFICATIONS

- Fanuc 20-FA Industry Standard CNC
- 9” monochrome monitor & 44 key keypad
- 3-axis (X ,Y, & Z) digital readout screen
- Simultaneous 3-axis interpolation
- Manual operation via four (4) handwheels
- Machine guidance operation via handwheels
- Conversational graphics programming
- Teach-in / Playback operation: manually run 1st part, then Playback for automatic operation
- Automatic generation of G-code from Geometry data during teach in operation
- Full CNC G-code, M-code, T-code, and S-code Functions
- Simultaneous multiple M-code processing (Up to 3 M-codes)
- 6 CNC Modes: MEM, EDIT, MDI, Machine Guidance, Manual/handwheel, Ref Return
- 8 Auxiliary CNC Modes: Dry Run, Single Block, Optional Blk Skip, Z-Axis Cancel, Aux. Function Lock, X-Axis Mirror Image, Y-Axis Mirror Image, Manual Handle Interrupt
- Manual Interrupt of automatic operations: Handwheel Interrupt and Spindle Interrupt
- Diameter / Radius programming
- Absolute and incremental programming
- Inch / Metric input and display
- On-line calculator function to aid in data input
- On-line help pages to aid you in the CNC operation
- On screen tool path graphics to verify part program
- User programmable “Software Travel limits” to limit the travel for X , Y& Z axes
- Intelligent hardware travel limits – only stops movement in the over-traveled direction
- Inch / Metric feed rate input: inch/min or mm/min
- Gear indicator lights on status panel
- Auto spindle jog during gear changes
- Spindle load meter: 0% - 180% of rated load
- Supervisor key lock switch for disabling parameter and program modification
- Conveniently mounted machine Control Panel - E-Stop, Playback, Start, Stop
- Aux. Functions on Control Panel: work lamp and coolant
- Spindle control on Control Panel: forward, reverse, stop, & speed dial
- User selectable Jog / Feedrate override profiles: Linear or Exponential
- Auto/Jog feedrate override: 0% to 200%
- Spindle override: 50% to 150%
- Rapid Traverse override: 12.5%, 25%, 50%, & 100%
- Incremental / continuous jog for X, Y, & Z axes
- Intelligent Bi-directional home search for X ,Y, & Z axes
- Four electronic handwheels for manual and automatic turning operations
- Multiplier switch for handwheel sensitivity: 0.0001”, 0.001”, & 0.01”
- CNC “**RUN VERIFY**” by Joystick or handwheel for all automatic operations
- Easy one touch X, Y, & Z Part Coordinate System setting
- Full CNC control of coolant on-off functions via M-codes
- Full CNC control of work light on-off functions via M-codes
- Three coordinate systems: Machine, Absolute, & Relative
- Program storage 63 part program storage
- Scaling, Rotation, and Mirror functions
- Run-Timer / Parts Counter function

- Backlash error compensation
- Ballscrew pitch error compensation (for Laser Calibration)
- Single direction positioning (optional)
- Helical interpolation (optional)
- Background Program Editing (optional)
- Rigid Tapping (Available on CNC rigid head only) (optional)
- Spindle Orientation (optional)
- Custom Macro B programming language (optional)
- Built-in RS-232 port for loading/unloading of part programs and other CNC data
- 32 Tool length offsets & diameter offset data locations (64 offset data locations optional)
- Self diagnostics with error messages on screen