

FANUC MACHINING SIMULATOR

FANUC

The FANUC Machining Simulator encompasses the complete manufacturing process from part design and engineering to CNC programming to virtual production simulation.

FANUC CNC Simulator

The core of the system is the flexible and powerful FANUC CNC Simulator. Based on the industry standard FANUC Series 0i Model F PLUS, the CNC Simulator can be operated as either a 3-axis mill or a 2-axis lathe. Users can run programs, manage tooling and make any modifications on the control just like they would in a manufacturing environment. The FANUC CNC Simulator also includes FANUC Manual Guide *i* conversational programming software for users who would like to learn shop floor programming.

Integrated PC

A PC is installed inside the FANUC CNC Simulator to decrease the footprint required for the system. Running Windows 11 IoT Enterprise with a 4-core CPU, 8 GB RAM and 32 GB SSD, the PC has the power and space to meet most needs.

CAD/CAM

The PC built into the simulator can host a CAD/CAM system of your choice. Once you have posted a G-code part program, the FANUC CNC will use G-code to command the machine tool. Users can easily import their programs directly to the CNC using the FANUC FASBacCNC user interface, as well as backup the critical CNC data, in addition to the usual data loading and saving methods.



Machining Simulation

Users can virtually manufacture parts in milling or turning environments with realistic kinematics and structure. There are several virtual mill and lathe models available; the models are built from the same CAD files the real machines are built from for extreme realism. The simulation is based on actual CNC position data, not on the G-code program, so the virtual machine reacts exactly like the real machine tool. Manual machine functions like jog, hand-wheel and reference cycles also work exactly like a real machine. Color-coded tool paths, back-plot and cut locations make it easy for users to identify the tool, path and cutting result. Real-time collision detection uses visual and audio signals to notify users of collisions. Milling tool data can be freely assigned or imported from the CNC Simulator; turning uses a predefined set of turning tools that cover a wide range of applications.

