

CNC Operation Simulation Workstation

Interchangeable Multi-System



Fanuc Oi-TF

Dimension

- Panel stand dimension : L438(±10%) * W284(±10%) * H107(±10%) (mm)
Can install in common classroom
- Touch screen 21.5" or above (Optional), resolution 1920*1080
- Operation System : Windows 10

Description

Specification

CNC Controller Function



- CNC Controller Simulation Fanuc Oi-TF Turning
- The Operation Panel Function is the complete emulation based on the actual CNC machine operation panel
 - Position Display [POS]:
machine coordinate, absolute coordinate, relative coordinate
 - Program function[PROG]:
 - Automatic mode [AUTO]: Program content display, check, current block, next block
 - Program Edit [EDIT]: [ALTER][INSERT][DELETE], program lock
 - Background Edit
 - Data Transfer, [F input] ,[F output]
 - Tool compensation[OFS/SET]: work shift, coordinate system, tool geometry, tool wear, MACRO, Metric/Inch mode setting
 - System parameters [SYSTEM]: transmission, machine, edit
 - Alphabetic and Numeric keys, [INPUT], [RESET], [CANCEL]
- Alarm display, the alarm codes show the same codes as in the machine
 - E.g.: X axis is over travel, the alarm code indicates:
"500 OVER TRAVEL:+X", The way to clear the alarm ,
move X axis to the proper position and press [RESET] to clear the alarm
 - E.g.: 1211 EMG ESTOP, pull up the emergency button to clear alarm
 - System records the time and the error codes whenever the alarm message is displayed
- To transmit the program by using RJ45 interface information transmission function

CNC Machine Operation Panel



- Mode Select Function
 - [EDIT] Program edit mode – Edit program content
 - [AUTO] Auto execution mode – Program executes automatically
 - [MDI] Manual Data Input – For parameter settings and temporary input program
 - [HANDLE] Handle mode – Using handwheel move and adjustment position
 - [JOG] Cutting feed mode – Using axis key to feed
 - [RAPID] Rapid mode – Using axis key to move rapidly
 - [ZRN] Zero Point Return – X, Z axis return to Machine Home Position
- Rapid Speed adjustment button, Feeding speed adjustment button, Spindle speed adjustment button
- Optional block skip [B.D.T], Single block execution [S.B.K], Optional stop [M01], Start [CYCLE START], Stop [FEED HOLD]
- Spindle forward, Spindle stop, Spindle reversal
- Program lock, Emergency stop, Tool change button, Coolant
- Axis movement buttons: X+, X-, Z+, Z-, Reset button, axis return signal
- Physical manual handle, manual handle rate button, manual handle axis button



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Description	Specification
<p>CNC Machine Simulation for Milling</p>	<ul style="list-style-type: none"> ● Based on 3D physical construction, the machine model of Horizontal Turning-Single spindle and turret including: chuck, jaw, turret, tool, tailstock, live center Rapid :X axis 20m/min,Z axis 24 m/min Max Feedrate:X axis 6 m/min,Z axis 8 m/min ● Simulate whole CNC machine with physical machine controlling panel and dynamic interactive simulation ● Collision detection function: tool and material. If the tool isn't rotating, the contact between the tool and the material will be considered a collision ● Simulation Speed Adjustment: 50%, 100%, 160%, 250%, 500% ● Audio on/off, system volume adjustment ● Workpiece material setting, Diameter, Max Diameter= 250mm Length, Max Length = 450mm ● Turning tool setting: Diamond (80°, 55°, 35°), Triangle (60°),Thread, Groove, Round, Drill, Trigon, Radius corner groove, Center drill, Screw tap, End Mill ● Turret setting: Tool install, modify, delete ● Standard view : Top (XY), Front (ZX), Side, (YZ), 3-Dimension (ISO) ● Common zoom view: Material view, Table view, Machine view ● Free operation view: Shift, Rotate, Zoom in/out ● Simulated design including coolant fluid, cutting the workpiece until chips spattering, audio (tool movement, cutting sound effect, spindle rotation, alarm ● Workpiece linear measurement function: diameter, thickness, length ● Quick reset to Factory Setting ● CNC Program import/export function
<p>CNC Machine Simulation for Milling</p>	<ul style="list-style-type: none"> ● G Code function <ul style="list-style-type: none"> (1) Interpolation: G00,G01,G02,G03 (2) Dwell: G04 (3) Plane Selection: G17,G18,G19 (4) Tool Radius Compensation: G40,G41,G42 (5) Workpiece dimension: Input in inch/mm: G20,G21 (6) Return to reference position: G28,G30 (7) Feed per minute/ revolution: G98,G99,Constant surface speed control: G96,G97 (8) Workpiece Coordinate: G54, G55, G56, G57, G58, G59 (9) Support G01 axis right angle of auto Chamfering/ corner R (10) Cutting cycle G71, G72, G73, G74, G75, G76, G90, G92, G94 (11) Canned cycle for drilling & tapping: G80, G83, G84, G85 (12) Coordinate system setting or max spindle speed clamp: G50 (13) Chamfer command settings using comma (parameter) (14) Omitting the use of decimal point of address (parameter) (15) Using G Code group setting (parameter) ● M Code auxiliary function <ul style="list-style-type: none"> (M00)Program stop (M03)Spindle forward (M08)Coolant fluid on (M98) Subprogram call (M01)Optional stop (M04)Spindle reversal (M09)Coolant fluid off (M99) Subprogram end (M02)Program end (M05)Spindle stop (M30) program end & Rewind