

# 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
<p data-bbox="79 920 430 954"><b>CNC Controller Function</b></p> 	<ul style="list-style-type: none"> <li>● CNC Controller Simulation Fanuc Oi-TF Turning</li> <li>● The Operation Panel Function is the complete emulation based on the actual CNC machine operation panel                             <ol style="list-style-type: none"> <li>(1) Position Display [POS]: machine coordinate, absolute coordinate, relative coordinate</li> <li>(2) Program function[PROG]:                                     <ol style="list-style-type: none"> <li>(a) Automatic mode [AUTO]: Program content display, check, current block, next block</li> <li>(b) Program Edit [EDIT]: [ALTER][INSERT][DELETE], program lock</li> <li>(c) Background Edit</li> <li>(d) Data Transfer, [F input] ,[F output]</li> </ol> </li> <li>(3) Tool compensation[OFS/SET]: work shift, coordinate system, tool geometry, tool wear, MACRO, Metric/Inch mode setting</li> <li>(4) System parameters [SYSTEM]: transmission, machine, edit</li> <li>(5) Alphabetic and Numeric keys, [INPUT], [RESET], [CANCEL]</li> </ol> </li> <li>● Alarm display, the alarm codes show the same codes as in the machine                             <ol style="list-style-type: none"> <li>(1) 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</li> <li>(2) E.g.: 1211 EMG ESTOP, pull up the emergency button to clear alarm</li> <li>(3) System records the time and the error codes whenever the alarm message is displayed</li> </ol> </li> <li>● To transmit the program by using RJ45 interface information transmission function</li> </ul>
<p data-bbox="140 1570 373 1653"><b>CNC Machine Operation Panel</b></p> 	<ul style="list-style-type: none"> <li>● Mode Select Function                             <ol style="list-style-type: none"> <li>(1) [EDIT] Program edit mode – Edit program content</li> <li>(2) [AUTO] Auto execution mode – Program executes automatically</li> <li>(3) [MDI] Manual Data Input – For parameter settings and temporary input program</li> <li>(4) [HANDLE] Handle mode – Using handwheel move and adjustment position</li> <li>(5) [JOG] Cutting feed mode – Using axis key to feed</li> <li>(6) [RAPID] Rapid mode – Using axis key to move rapidly</li> <li>(7) [ZRN] Zero Point Return – X, Z axis return to Machine Home Position</li> </ol> </li> <li>● Rapid Speed adjustment button, Feeding speed adjustment button, Spindle speed adjustment button</li> <li>● Optional block skip [B.D.T], Single block execution [S.B.K], Optional stop [M01], Start [CYCLE START], Stop [FEED HOLD]</li> <li>● Spindle forward, Spindle stop, Spindle reversal</li> <li>● Program lock, Emergency stop, Tool change button, Coolant</li> <li>● Axis movement buttons: X+, X-, Z+, Z-, Reset button, axis return signal</li> <li>● Physical manual handle, manual handle rate button, manual handle axis button</li> </ul>



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Description	Specification
<p>CNC Machine Simulation for Turning</p>	<ul style="list-style-type: none"> <li>● 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 20 m/min, Z axis 24 m/min Max Feedrate: X axis 6 m/min, Z axis 8 m/min</li> <li>● Simulate whole CNC machine with physical machine controlling panel and dynamic interactive simulation</li> <li>● 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</li> <li>● Simulation Speed Adjustment: 50%, 100%, 160%, 250%, 500%</li> <li>● Audio on/off, system volume adjustment</li> <li>● Workpiece material setting, Diameter, Max Diameter = 250mm Length, Max Length = 450mm</li> <li>● Turning tool setting: Diamond (80°, 55°, 35°), Triangle (60°), Thread, Groove, Round, Drill, Trigon, Radius corner groove, Center drill, Screw tap, End Mill</li> <li>● Turret setting: Tool install, modify, delete</li> <li>● Standard view : Top (XY), Front (ZX), Side, (YZ), 3-Dimension (ISO)</li> <li>● Common zoom view: Material view, Table view, Machine view</li> <li>● Free operation view: Shift, Rotate, Zoom in/out</li> <li>● Simulated design including coolant fluid, cutting the workpiece until chips spattering, audio (tool movement, cutting sound effect, spindle rotation, alarm</li> <li>● Workpiece linear measurement function: diameter, thickness, length</li> <li>● Quick reset to Factory Setting</li> <li>● CNC Program import/export function</li> </ul>
<p>CNC Turning Program Simulation</p>	<ul style="list-style-type: none"> <li>● G Code function <ul style="list-style-type: none"> <li>(1) Interpolation: G00, G01, G02, G03</li> <li>(2) Dwell: G04</li> <li>(3) Plane Selection: G17, G18, G19</li> <li>(4) Tool Radius Compensation: G40, G41, G42</li> <li>(5) Workpiece dimension: Input in inch/mm: G20, G21</li> <li>(6) Return to reference position: G28, G30</li> <li>(7) Feed per minute/ revolution: G98, G99, Constant surface speed control: G96, G97</li> <li>(8) Workpiece Coordinate: G54, G55, G56, G57, G58, G59</li> <li>(9) Support G01 axis right angle of auto Chamfering/ corner R</li> <li>(10) Cutting cycle G71, G72, G73, G74, G75, G76, G90, G92, G94</li> <li>(11) Canned cycle for drilling &amp; tapping: G80, G83, G84, G85</li> <li>(12) Coordinate system setting or max spindle speed clamp: G50</li> <li>(13) Chamfer command settings using comma (parameter)</li> <li>(14) Omitting the use of decimal point of address (parameter)</li> <li>(15) Using G Code group setting (parameter)</li> </ul> </li> <li>● M Code auxiliary function <ul style="list-style-type: none"> <li>(M00)Program stop (M03)Spindle forward (M08)Coolant fluid on (M98) Subprogram call</li> <li>(M01)Optional stop (M04)Spindle reversal (M09)Coolant fluid off (M99) Subprogram end</li> <li>(M02)Program end (M05)Spindle stop (M30) program end &amp; Rewind</li> </ul> </li> </ul>