



CNC FANUC Series Oi-TF

Most advanced CNC controller of FANUC series Oi-TF is applied on the machine.

Most of functions including optional functions in Fanuc's classification are specified as standard.

In addition to common operational functions, the machine is provided with such operator friendly functions as help function, alarm display, and display of operation status to assist operator.

Manual operation

The "TUE series machine can be operated in manual very easily, in addition to automatic operation.

Many operation buttons to be used in manual mode are located on the operation panel, which are "Table CW/CCW" including jogging, Feed selection switch for X and Z including jogging, "Table speed overrideswitch", "Feed override switch" "Operation mode selection buttons", and Manual pulse generator (MPG)".

Basic Specifications

1. Axis control	
Controlled path	1 path
Controlled axis (total)	2 axis (※3 axis)
Simultaneous controllable axis	2 axis (※3 axis)
Axis name	X,Z and C
Spindle	1 unit
Least input increment	0.001mm (※0.001 deg), 0.0001inch
Flexible feed gear	Optional DMR
Inch/metric conversion	
Interlock	All axes / each axis / each direction /block start / cutting block start
Machine lock	All axes/each axis
Emergency stop	
Over travel	
Stored stroke check 1	
Stored stroke check 2	
Stored stroke check 2,3	
Stroke limit check before move	
Chuck and tail stock barrier	
Mirror image	Each axis
Follow-up	
Servo off	
Chamfering on/off	
Backlash compensation	
Backlash compensation for each rapid traverse and cutting feed	
Stored pitch error compensation	
Position switch	
Unexpected disturbance torque detection function	

2. Operation	
Automatic operation (memory)	
DNC operation	
DNC operation with Memory card	CF card and PCMCIA Card attachment is required
MDI operation	
Schedule function	
Program number search	
Sequence number search	
Sequence number comparison and stop	
Program restart	
Buffer register	
Dry run	
Single block	
JOG feed	
Manual reference position return	
Reference position return speed set	
Manual handle feed	1 unit
Manual handle feedrate	x1, x10, x100
Manual handle interruption	

3. Interpolation functions	
Positioning	G00
Linear interpolation	G01
Circular interpolation	G02,G03
Dwell	G04
Polar coordinate interpolation	
Cylindrical interpolation	
Thread cutting, synchronous cutting	
Multi threading	
Thread cutting retract	
Continuous threading	
Variable lead threading	
Skip	G31
High speed skip	
Reference position return	G28
Reference position return check	G27

4. Feed function	
Rapid traverse rate	X: 15m/min, Z: 12m/min
Rapid traverse override	0~100%, 10% step
Feed per minute	
Feed per revolution	
Cutting feedrate clamp	
Automatic acceleration/deceleration	Rapid traverse: linear, Cutting feed: exponential
Rapid traverse bell-shaped acceleration/deceleration	
Linear acceleration/deceleration after cutting feed interpolation	
Feedrate override	0~200%, 10% step
Jog override	
Override cancel	
Manual per revolution feed	
External deceleration	

5. Program input	
Program code	EIA / ISO
Label skip	
Parity check	Horizontal and vertical parity
Control in/out	
Optional block skip	max. 9 pieces
Max. programmable dimension	-9 ~ +9 digit
Program file name	32 characters
Sequence number	N8 digit
Absolute/incremental programming	Combined use in the same block
Decimal point programming/ pocket calculator type decimal point programming	
Diameter/radius programming (X axis)	
※Plane selection	G17, G18, G19
※Rotary axis designation	
Coordinate system setting	
Automatic coordinate system setting	
Coordinate system shift	
Workpiece coordinate system	G52~G59
Workpiece coordinate system preset	
Direct input of workpiece origin offset value measured	
Direct drawing dimension programming	
G code system	A(※B)
Chamfering/corner R	
Programmable data input	G10
Sub program call	4 folds nested
Custom macro	
Addition of custom macro common variables	#100~#199, #500~#999
Canned cycles	
Multiple repetitive cycle	
Multiple repetitive cycle 2	pocket profile
※Canned cycles for drilling	
Circular interpolation by R programming	
Coordinate system rotation	
Programmable mirror image	G50.1/G51.1
G code preventing buffering	
Program format for FANUC Series 10/11	
Coordinate system shift	
Direct input of coordinate system shift	
Pattern data input	
Conversational programming with graphic function	

6. Auxiliary/Spindle speed function	
Auxiliary function	M2-digit
Auxiliary function lock	
Multiple command of auxiliary function	3
Spindle speed function	S5-digit
Spindle serial output	S5-digit, serial output
Constant surface speed control	
Spindle override	50~120 %, 5% step
Actual spindle speed output	
Spindle orientation	All spindle
※Multi spindle control	
※Rigid tapping	
Spindle speed fluctuation detection	

7. Tool function/Tool compensation	
Tool function	T4-digit
Tool offset pairs	99 pairs
Tool offset	
Tool nose radius compensation	
Tool geometry/wear compensation	
Tool offset value counter input	
Automatic tool offset	
Direct input of tool offset value measured	
Direct input of tool offset value measured B	
Tool life management	
Extended tool life management	

8. Editing operation	
Part program storage size	512kbyte
Number of registerable programs	400
Part program editing	
Extended part program editing	
Program protect	
Password function	
Playback	
Background editing	
Multi part program editing	
Memory card program edit & operation	

9. Setting and display	
Status display	
Clock function	
Current position display	
Program comment display	Program name 31 characters
Parameter setting and display	
Parameter check sum function	
Self-diagnosis function	
Alarm display	
Alarm history display	
Operator message history display	
Operation history display	
Help function	
Run hour and parts count display	
Actual cutting feedrate display	
Display of spindle speed and T code at all screens	
Directory display of floppy cassette	
Operating monitor screen	
Servo setting screen	
Spindle setting screen	
Servo waveform display	
Display of hardware and software configuration	
Periodic maintenance screen	
Maintenance information screen	
Trouble diagnosis	
Software operator's panel	
Software operator's panel general purpose switch	
Extended software operator's panel general purpose switch	
Multi-language display	English, Japanese, Chinese, Spanish, Portuguese, etc.
Dynamic display language switching	
Data protection key	
Erase CRT screen display	
Parameter setting support screen	
Servo information screen	
Spindle information screen	
Graphic display	

10. Data input/output	
RS232C Interface	Channel1
Memory card input/output	
USB Memory input/output	
Screen hard copy	
Power mate CNC manager	

Optional Accessories (to be selected by users)	
1	Dynamic Graphic display The function is not allowed to be selected together with "Manual guide" listed below.
2	Data server The function is not allowed to be selected together with "Fast Ethernet" listed below.
3	FAST Ethernet
4	Manual guide i Manual guide i basic Manual guide i turning cycle ※Manual guide i milling cycle Manual guide i animation
5	※Helical interpolation
6	Part program storage size 2Mbyte ※100(S)