

HX630i

2. MACHINE SPECIFICATIONS

2.1. STANDARD SPECIFICATIONS

(1) TABLE

TABLE WORK AREA (WIDTH×LENGTH)
630 × 630 mm
(24.8 × 24.8 inch)

TABLE INDEXING

4th axis 0.001°

MAX. WORK SIZE

φ 1000 × 1100 mm
(φ 39.5 × 43.3 inch)

TABLE LOAD CAPACITY

1200 Kg
(2640 pounds)

2) TRAVEL

X AXIS

1000 mm
(39.37 inch)

Y AXIS

800 mm
(31.5 inch)

Z AXIS

820 mm
(32.28 inch)

DISTANCE FROM TABLE CENTER TO SPINDLE NOSE

130 - 950 mm
(5.12 - 37.4 inch)

DISTANCE FROM TABLE SURFACE TO SPINDLE CENTER

50 - 850 mm
(1.97 - 33.5 inch)

3) SPINDLE

SPINDLE TAPER

NST NO.50

SPINDLE SPEED

35 - 12,000 min⁻¹
(OP: 5,000 min⁻¹)

Directly specified by a 5-digit S code

		HX63
(4) FEED	RAPID FEED (X AXIS) AUTO	50,000 mm/min (1968.5 inch/min.)
	RAPID FEED (Y AXIS) AUTO	50,000 mm/min (1968.5 inch/min.)
	RAPID FEED (Z AXIS) AUTO	50,000 mm/min (1968.5 inch/min.)
CUTTING FEED		50,000 mm/min. (1968.5 inch/min.)
(5) ATC	TOOL STORAGE CAPACITY	50 TOOLS (OP:100, 150, 200 TOOLS)
	TOOL SELECTION METHOD	RANDOM, TOOL IDENTIFIED AT MAGAZINE
TOOL SHANK		MAS. BT 50 CATERPILLAR NO.50 DIN 50
MAX. TOOL SIZE		φ 125 × 450 mm (φ 4.92 × 17.72 inch)
·TWO NEIGHBORING TOOL POTS SHOULD BE EMPTY:		
		φ 200 × 450 mm (φ 7.87×17.72 inch)
MAX. TOOL WEIGHT (WITH TOOL HOLDER)		20Kg (44 pounds)
TOOL CHANGE TIME (TOOL TO TOOL)		3.0 sec.
CHIP TO CHIP (WITH TOOL ORIENTATION)		MINIMUM 7.0 sec.

MOTOR
SPINDLE MOTOR
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ATC MOTOR

COOLANT MOT

LUBRICATION

HYDRAULIC M

MACHINE WEI

ELECTRIC POW

MAIN CIRCU

Digital po

Auxiliary f

Label skip

Optional b

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CONTROL CI

Sequence

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Auxiliary

Machine

Machine

Manual

Reader /

Fundat

Rapid tra

Jog mot

Spindle

(6) MOTOR

SPINDLE MOTOR

(30 min. RATIO)

(CONTINUOUS OPERATION)

SPECIFICATIONS

AC 26 kW

Quill feed ratios

AC 22 kW

Spindle feed ratios

AC 1500 W

Pneumatic port

ATC MOTOR

COOLANT MOTOR

LUBRICATION POMP MOTOR

HYDRAULIC MOTOR

(7) MACHINE WEIGHT WITH NC

AC 730(50Hz) / 1210(60Hz) W

AC 20 W

Spindle oil cooler

AC 2.2 kW

20,700 kg

(45,540 pounds)

(8) ELECTRIC POWER SOURCE

MAIN CIRCUIT THREE PHASE CURRENT

AC 200/220 V

(If the machine has a transe former, this is secondary voltage.)

50/60 Hz

AC 100 V

(Made from AC 200/220V by a transe former)

DC 24 V

CONTROL CIRCUIT SINGLE PHASE

SEQUENCE NUMBER CURRENT

Dry run

Single block

Automatic operation (memory)

MIDI operation

Tape code (EIA / PS/2)

Start pitch error compensation

Auxiliary function lock

Machine lock (all axes)

Machine lock (Z axis)

Manual override (0 - 100%)

Reader / puncher interface (RS232C)

Fountain switch (0 - 254%)

Rapid traverse override (1, 25, 50, 100%)

Joy override

Spindle override (50-100%)

2.2. STANDARD ACCESSORIES		1 set
1 : Spanner wrench		
2 : Cutting fluid device		1 set
2.3. OPTIONAL ACCESSORIES		
1 : Foundation bolt		
2 : 3-Step automatic change over coolant		
3 : Illumination unit (work light)		
4 : Spindle oil cooler		
5 : Warming-up timer		
6: Machining cycle finish indicator lamp		
7 : Week timer		
8 : Run hour display		
9 : Oil mist coolant device		
10: Additional M-function		
11: Automatic power stop		
12: Special cooler		
13: Tool holder with pull studs (N. S. T. 50) Spring collet Face mill Side lock		
Collet Pull stud		
14: MDI memory input device		
15: Automatic tool breakage sensor		

C STANDARD SP	
NO.	
1	Controlled axis
2	Simultaneous
3	Tangential speed
4	Least input in
7	Cutting feedrate
8	Linear acceleration
9	Fine Acceleration
0	HRV control
1	Follow-up
2	Simple high
3	Automatic acceleration
4	Automatic deceleration
5	Manual reference
6	Buffer register
7	Program number
8	Sub program
11	Decimal point
12	Auxiliary function
14	Label skip
15	Optional block
26	Backlash compensation
27	Program number
28	Sequence number
30	Dry run
31	Single block
32	Automatic
34	MDI operation
35	Tape code
37	Stored pitch
38	Auxiliary function
39	Machine language
40	Machine language
41	Manual alarm
42	Reader / printer
46	Feedrate
47	Rapid traverse
48	Jog override
49	Spindle operation

4.4 NC STANDARD SPECIFICATIONS

FANUC 16iMB

NO.	SPECIFICATIONS
F6501	Controlled axis (3 axes)
F6502	Simultaneously controlled axes expansion
F6503	Tangential speed constant control
F6504	Least input increment 0.001mm / 0.001inch
F6507	Cutting feedrate clamp
F6508	Linear acceleration / deceleration before cutting feed interpolation
F6509	Fine Acceleration & Deceleration control
F6510	HRV control
F6511	Follow-up
F6512	Simple high-precision contour control
F6513	Automatic acceleration / deceleration
F6514	Automatic coordinate system setting
F6515	Manual reference position return
F6516	Buffer register
F6517	Program number
F6518	Sub program call
F6521	Decimal point programming / pocket calculator type decimal point programming
F6522	Auxiliary function (S,T,M code)
F6524	Label skip
F6525	Optional block skip
F6526	Backlash compensation
F6527	Program number search
F6528	Sequence number search
F6530	Dry run
F6531	Single block
F6532	Automatic operation (memory)
F6534	MDI operation
F6535	Tape code (EIA / ISO)
F6537	Stored pitch error compensation
F6538	Auxiliary function lock
F6539	Machine lock (all axes)
F6540	Machine lock (Z axis)
F6541	Manual absolute on and off
F6542	Reader / puncher interface (RS232C)
F6546	Feedrate override (0 – 254%)
F6547	Rapid traverse override (1, 25, 50, 100%)
F6548	Jog override
F6549	Spindle override (50-120%)

SPECIFICATIONS

NO.	
F6550	Mirror image
F6551	Programmable mirror image
F6552	JOG feed
F6554	Manual handle feed (0.001, 0.01, 0.1)
F6555	Override cancel (M49 / M48)
F6556	Positioning (G00)
F6557	Linear interpolation (G01)
F6558	Circular interpolation (G02,G03)
F6560	Dwell (G04)
F6561	Exact stop (G09)
F6562	Reference position return (G28,G29)
F6563	Reference position return check (G27)
F6566	Canned cycles (G73,G74,G76,G77,G80～G89,G98,G99)
F6567	Absolute / incremental programming (G90 / G91)
F6568	Tool length compensation (G43,G44,G49)
F6569	Skip (G31)
F6570	High-speed skip
F6571	2nd reference position return (G30)
F6572	Helical interpolation (G02,G03)
F6573	Programmable data input (G10 / G11)
F6574	Stored stroke check 1
F6575	Cutter compensation C (G40,G41,G42)
F6576	Inch / metric conversion(G20, G21)
F6580	Addition of workpiece coordinate system pair (48pair)
F6581	Exact stop mode (G61)
F6582	Automatic corner override (G62)
F6583	Tool offset pairs (99 pair)
F6586	Tool offset
F6588	Tool length measurement
F6589	Part program storage length 320m
F6590	Number of registerable programs 200
F6591	Custom macro B
F6592	Data protection key
F6593	Extended part program editing
F6594	Background editing
F6595	Tool life management
F6597	Clock function
F6598	Self-diagnosis function
F6599	Periodic maintenance screen

NO.	SPECIFICATIONS	NO.	
F6600	Maintenance information screen		
F6601	Alarm display	F6001	Small dimension display (G99)
F6602	Alarm history display	F6002	Large dimension display
F6603	Operation history display	F6008	Tool coordinate position
F6604	Help function	F6009	Help position axis interpolation
F6605	Current position display	F6001	Help position II
F6606	Run hour and parts count display	F6006	Help position axis interpolation
F6607	Actual cutting feedrate display	F6007	One-digit F code feed
F6608	Directory display and punch for each group	F6003	Two-digit X-axis position return
F6610	Emergency stop	F6008	High-speed edge cutting
		F6009	Return of high-speed edge cutting
		F6010	Position leader
		F6011	Position stroke cycle 2
		F6012	Stroke stroke cycle 3
		F6013	Stroke limit switch move
		F6014	Small part back cutting cycle
		F6015	Innovation interpolation
		F6016	Extrusion interpolation
		F6017	Help-position control control
		F6018	Instruction to the custom macro
		F6019	Addition of custom macro common variables
		F6020	Prepare
		F6021	Setup
		F6022	Configure screen location
		F6023	Addition of multiple coordinates system bits (800bits)
		F6024	Large odd
		F6025	Tool offset bits 200bits
		F6026	Tool offset bits 100bits
		F6027	Tool offset bits 500bits
		F6028	Tool offset bits 300bits
		F6029	Tool offset position 8
		F6030	Tool offset position C

SPECIFICATIONS

NO.	SPECIFICATIONS	NO.	SPECIFICATIONS
F6600	Maintenance information screen		
F6601	Alarm display	L6001	Screen display position (G80)
F6602	Alarm history display	L6002	Display history position
F6603	Operation history display	L6003	Position coordinate interpolation
F6604	Help function	L6004	Home position axis interpolation
F6605	Current position display	L6005	Home position axis interpolation
F6606	Run hour and parts count display	L6006	Open-close E axis feed
F6607	Actual cutting feedrate display	L6007	Feed rate selection position setting
F6608	Directory display and punch for each group	L6008	High-speed cycle output
F6610	Emergency stop	L6009	Rate of pitch-based cycle cutting
		L6010	Program control
		L6011	Storage storage spec 3
		L6012	Storage limit spec 3
		L6013	Storage limit spec 2
		L6014	Small-size basic cutting class
		L6015	Tool radius interpolation
		L6016	Exponentiation interpolation
		L6017	High-resolution control control
		L6018	Instruction (the control macro)
		L6019	Abbreviation macro common area
		L6020	Display
		L6021	Scanning
		L6022	Configurable system selection
		L6023	Application of wordsize combination system bus (300bytes)
		L6024	Jump offset bytes 480bytes
		L6025	Jump offset bytes 360bytes
		L6026	Jump offset bytes 200bytes
		L6027	Jump offset bytes 100bytes
		L6028	Jump offset bytes 90bytes
		L6029	Jump offset bytes 80bytes
		L6030	Jump offset memory B
		L6030	Jump offset memory C

2.5. NC OPTIONAL SPECIFICATIONS

FANUC 16i

NO.	SPECIFICATIONS	NO.
F6001	Signal direction positioning (G60)	31
F6002	Cylindrical interpolation	32
F6003	Polar coordinate interpolation	33
F6004	Helical interpolation B	34
F6005	Hypothetical axis interpolation	35
F6006	One-digit F code feed	36
F6007	3rd / 4th reference position return	37
F6008	High-speed cycle cutting	38
F6009	Retract of high-speed cycle cutting	39
F6010	Program restart	40
F6011	Stored stroke check 2	
F6012	Stored stroke check 3	
F6013	Stroke limit check before move	
F6014	Small-hole peck drilling cycle	
F6015	Involute interpolation	
F6016	Exponential interpolation	
F6017	High-precision contour control	
F6018	Interruption type custom macro	
F6019	Addition of custom macro common variables	
F6020	Playback	
F6021	Scaling	
F6022	Coordinate system rotation	
F6023	Addition of workpiece coordinate system pair (300pairs)	
F6024	Figure copy	
F6025	Tool offset pairs 200pairs	
F6026	Tool offset pairs 400pairs	
F6027	Tool offset pairs 499pairs	
F6028	Tool offset pairs 999pairs	
F6029	Tool offset memory B	
F6030	Tool offset memory C	