

# STEALTH 1060



## Stealth 1060 Vertical Machining Center



## Machine Features Overview

FANUC OiMF PLUS CNC Machine Control

High Speed – 25 HP - 12,000RPM Direct Drive Spindle – Big Plus CAT40 Spindle Taper

(30) Thirty Pocket Standard Automatic Tool

Precision Hand Scraped Machine Metal to Metal Contact Points for Long Term Accuracy, Vibration Dampening and Extended Machine Life

Built in WELE iSmartTune Controller Package with Tool Life Monitoring and ATC Recovery Suite

Standard FANUC Package Includes 200 Block Look Ahead Function and 2MB Memory Standard

Embedded Machine Operator and Maintenance Manuals Resident on Controller

Dual Chip Auger with X-Axis Auger as Standard Feature. Includes Coolant Wash Down

300 PSI Coolant Through Spindle System Included

BLUM ZX-Speed ATLM & TC50 Probe Included



# FANUC



## FANUC OiMF PLUS Controller

15 Inch Touch Screen Platform with Built in Operation Supporter Package from WELE

FANUC's Upgraded Platform Includes a Full Suite of Machine Monitoring and Operation Support Functions

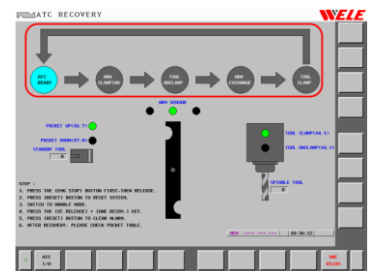
Uses a Full Keyboard CNC Pendant with Hard Push Buttons



# FANUC

## Standard FANUC OiMF PLUS Features

- AI Contour Control II, Smooth Tolerance Control, and Control Nano Interpolation
- Built in Reporting that Monitors Productivity and Tool Life
- Built-In Maintenance functions to access machine I/O list, M Code list, PLC Status Data, and machine component layout
- Built-In Probe & Tool Setter GUI for fast setup and macro integration to CNC programs
- FANUC Picture Allows Generation of Custom Control Objects – WELE iSmartTune
- Upgraded CNC Operation screen with access to cutting M codes, tool data, & servo load monitoring
- A Simplified Repair Process with Step-Through Procedure for Common Issues such as ATC Recovery
- On Board Storage and Display of all Machine Maintenance and Operation and Tooling Manuals



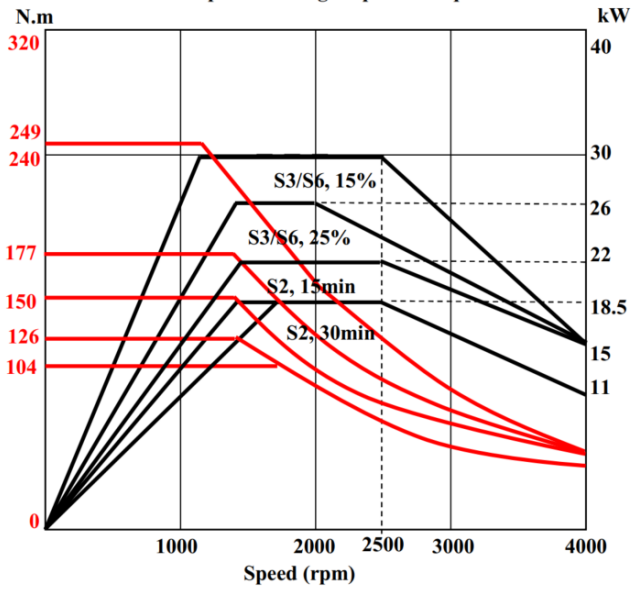
**Machine Specifications**

X Axis Travel	1,020 mm (40.2")
Y Axis Travel	600 mm (23.6")
Z Axis Travel	600 mm (23.6")
Distance from Spindle Nose to Table Top	105 - 705 mm (4.1" – 27.7")
Table Height From Plant Floor	920 mm (36.2")
Spindle Taper	CAT40 ( Big Plus)
Spindle Motor	25HP
Spindle Speed	12,000RPM
Spindle Type	Direct Drive Motor
Rapid Feedrate (X & Y Axes)	36 m/min (1,417 ipm)
Rapid Feedrate (Z Axis)	30 m/min (1,181 ipm)
Chain Type ATC	30 Pockets
Maximum Tool Diameter with Tool in Adjacent Pocket	76 mm (2.99")
Maximum Tool Diameter with Adjacent Pocket Empty	127 mm (5.0")
Maximum Tool Length from Gage Line	250 mm (9.8")
Maximum Tool Weight	7 kg (15.4 lb)
Tool Taper	CAT40 Big Plus
Pull Stud	ANSI CAT40
Tool Selection	Random
Tool Access	Bi-Directional
Positioning Accuracy (JIS)	±.005 mm (±.0002")
Repeatability (JIS)	±.003 mm (±.0001")
Total Power Required	3 Phase ±10% 220 V (35 kVA)
Power Supply Frequency	50 / 60 Hz
Axis Guideways	Linear Roller Guideway
Coolant Tank Capacity	147.2 gal
Flood Coolant (Gallons per Minute)	20 gal
Coolant Through Spindle	20Bar (300 PSI)

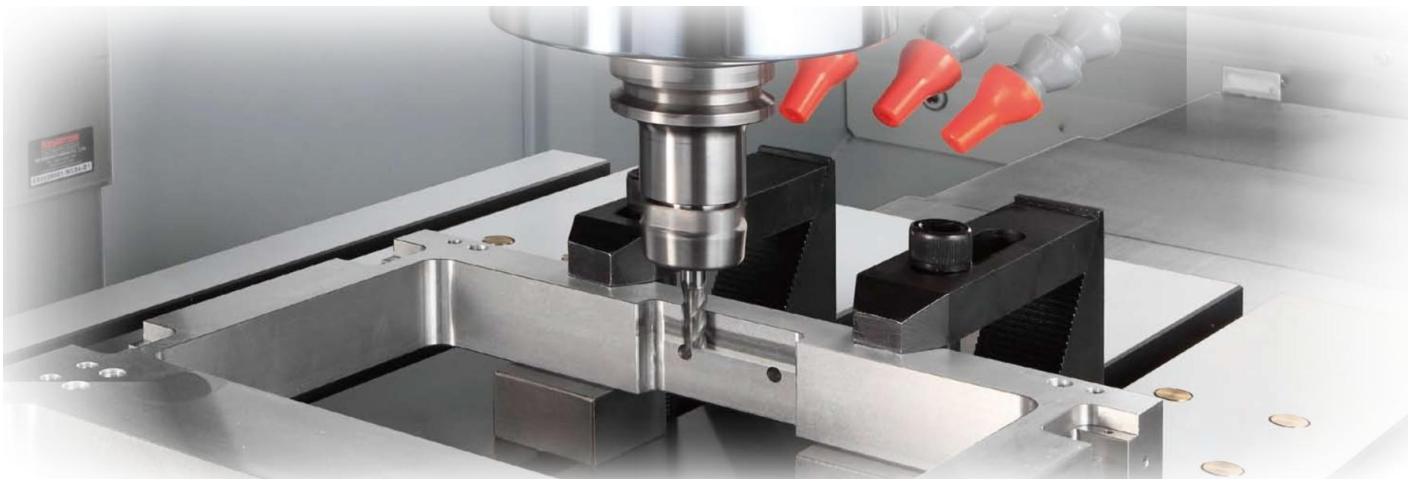
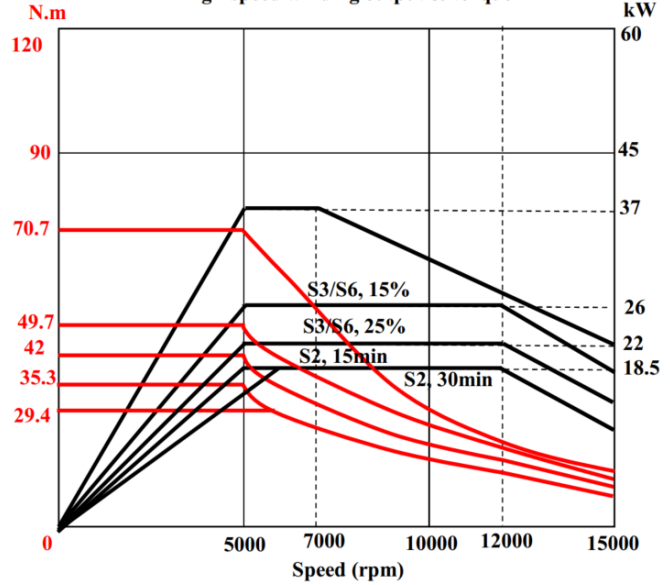
**Power & Torque CAT40 12,000 Direct Drive Motor**

**Spindle speed for FANUC  $\alpha$ 18iT/15000**

Low-speed winding output & torque

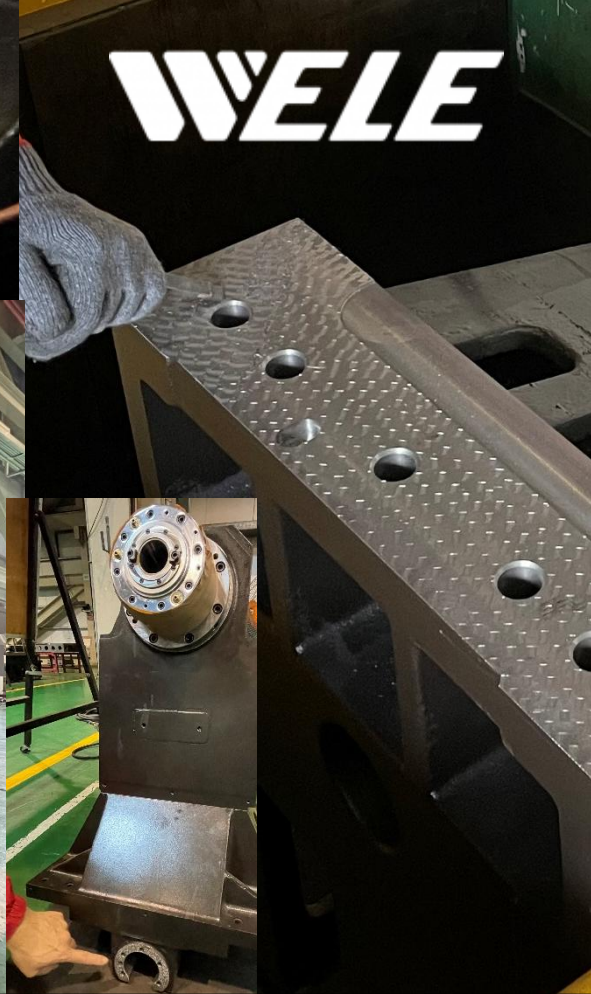
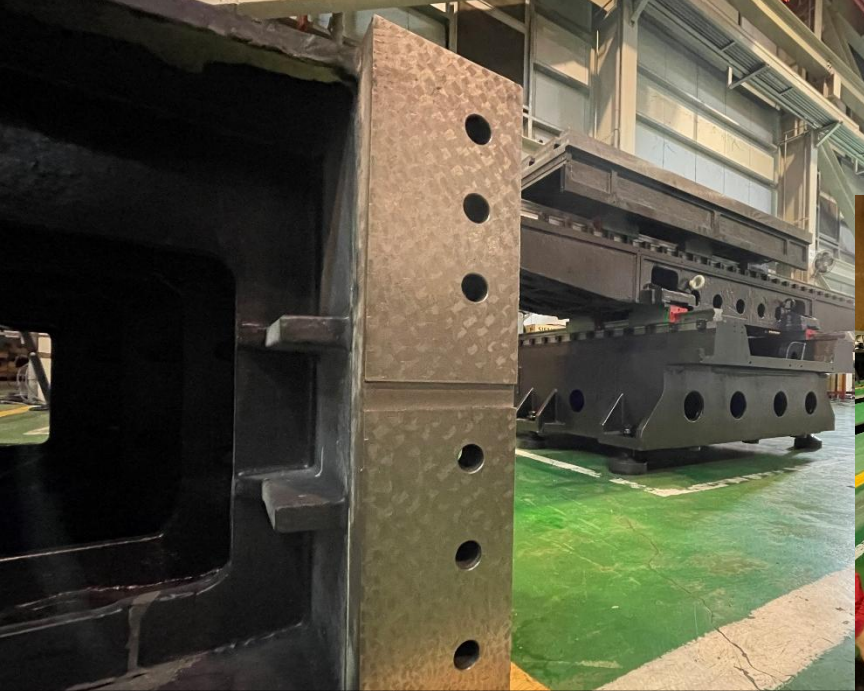


High-speed winding output & torque





**WELE**



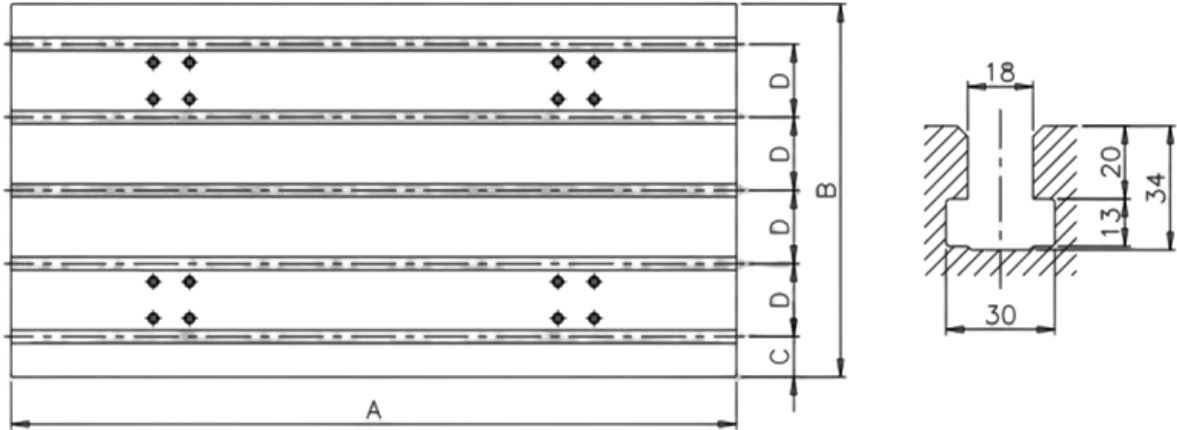
**WELE Precision Hand Scraping – All Metal Contact Surfaces**



## Fanuc OIMF-PLUS Control Package

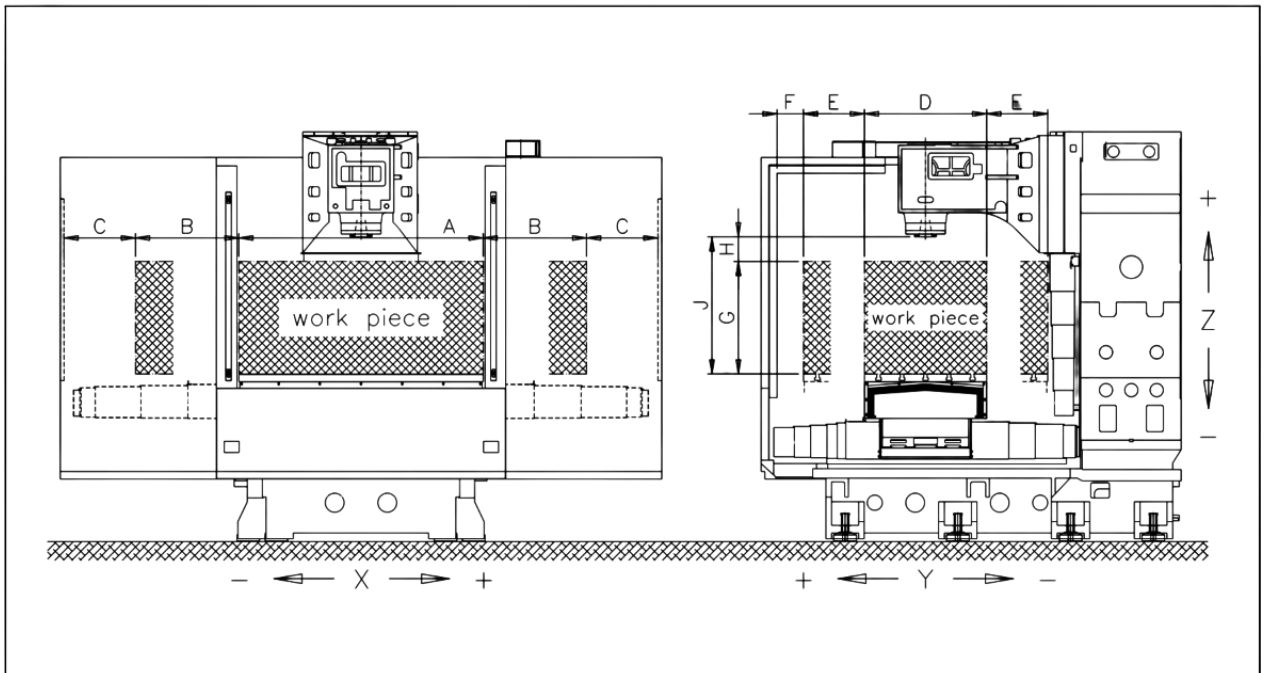
Absolute or incremental programming	G90, G91	Memory card interface	CF card and PCMCIA card attachment is required.
Actual cutting feedrate display		Multi-language display	
Addition of Custom macro common variables	#100~#199, #500~#999	Number of registerable programs	1000 programs
Addition of Workpiece coordinate system	48 pairs	Operator message display	
AI contour control II	Look-ahead blocks 200	Operator message history display	
Air blow on	M07	Optional block skip	
Alarm display		Optional chamfering/corner R	
Alarm history display		Overtravel	
Auto power off		Parameter setting and display	
Automatic acceleration/deceleration	linear	Parameter setting support screen	
Automatic corner deceleration		Parity check	
Automatic corner override	G62	Part program editing	
Automatic return to reference position	G28	Part program storage size	2M byte
Backlash compensation		Peck drilling cycle	G73, G83
Backlash compensation for each rapid traverse and cutting feed		Plane selection	G17, G18, G19
Bell-type acceleration/deceleration after cutting feed interpolation		Playback	
Calling subprogram stored in external memory	M198	Polar coordinate command	G15, G16
Circular interpolation cw(ccw)	G02, G03	Positioning	G00
Helical interpolation cw(ccw)		Program cide	EIA/ISO
Clock function		Program comment display	Program name 31 characters
Constant surface speed control		Program end	M02, M30
Control axes	4 axes (Option to 5 axes)	Program file name	32 characters
Control axis detach		Program protect key	
Coordinate system rotation mode	G68, G69	Program restart	
Current position display		Program stop / Optional stop	M00, M01
Custom macro		Programmable data input	G10, G11
Cutter compensation	G40, G41, G42	Programmable mirror image	G50.1 / G51.1
Cutting feedrate override	0, 10%, 20%, 30%, ... 200%	Rapid traverse bell-shaped acceleration/deceleration	
Decimal point programming/pocket calculator type decimal point programming		Rapid traverse override	F0, 25%, 50%, 100%
Direct input of workpiece origin offset value measured		Reference position return function	
Display of hardware and software configuration		Rigid tapping	M29
DNC operation	CF card or RS-232C or Data Server attachment required	Rigid tapping bell-shaped acceleration/deceleration	
Dry run		Rotary axis designation	
Dwell, exact stop	G04	RS-232C interface	
Dynamic display language switching		Run hour and parts count display	
Dynamic graphic display		Scaling cancel	G50 / G51
Emergency stop		Screen hard copy	
Ethernet interface	Program transfer	Self-diagnosis function	
Exact stop	G09	Sequence number	N8 digit
Exact stop mode	G61	Servo information screen	
Extended part program editing		Servo setting screen	
External deceleration		Simultaneously controlled axes	4 axes
External machine zero point shift		Single block	
External message		Single direction position	G60
Feed per minute	G94	Skip function	G31
Feed per revolution	G95	Software stroke check 1	
Feedrate override reset		Software stroke check 2, 3	
Fine surface machining		Special fixed cycle	G34, G35 (macro control is required)
Fixed cycle	G74, G76, G80, G81, G84-G89	Spindle axes	1 axes
Follow up		Spindle information screen	
FSSB High speed rigid tapping		Spindle orientation	M19
Handle interruption		Spindle output switching function	
Help function		Spindle override	50%, 60%, 70%, ... 120%
High-speed and high-precision machining	HRV3 Control	Spindle serial output	
Illelcal interpolation		Spindle setting screen	
Increment system C	0.001mm / 0.0001 inch / 0.001 deg	Spindle speed function	
Input in mm or inch	G20, G21	Spindle synchronous control	
JOG feed		Status display	
Linear interpolation	G01	Stored pitch error compensation	
M, S, T function		Stroke check before movement	
Machine lock	All axes	Sub program call	10 folds nested
Macro executor/C language executor		Thread cutting	G33 (macro control is required)
Manual absolute on and off		Tool function	T8 digit
Manual guide Oi		Tool length measurement	
Manual handle feed	1 unit	Tool length offset	
Manual handle feed rate	X1, X10, X100	Tool life management	
Manual reference position return		Tool offset increase or decrease	G45~G59
Max. programmable dimension	+/- 9 digits	Tool offset memory C	
MDI Operation		Tool offset pairs	400 pairs
		Tool radius offset	
		USB interface	Only data input and output (not DNC)
		Workpiece coordinate system	G54~G59
		Workpiece coordinate system preset	
		Z lock	

**Table Dimensions**



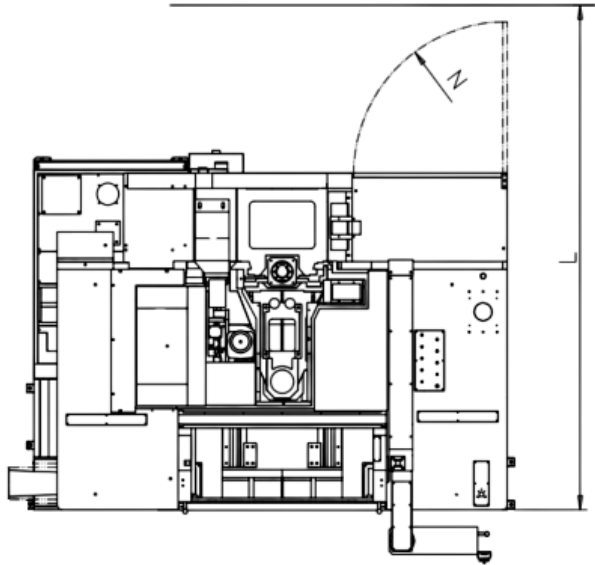
Stealth	A	B	C	D
1060	1150	600	50	125

**Work Envelope**

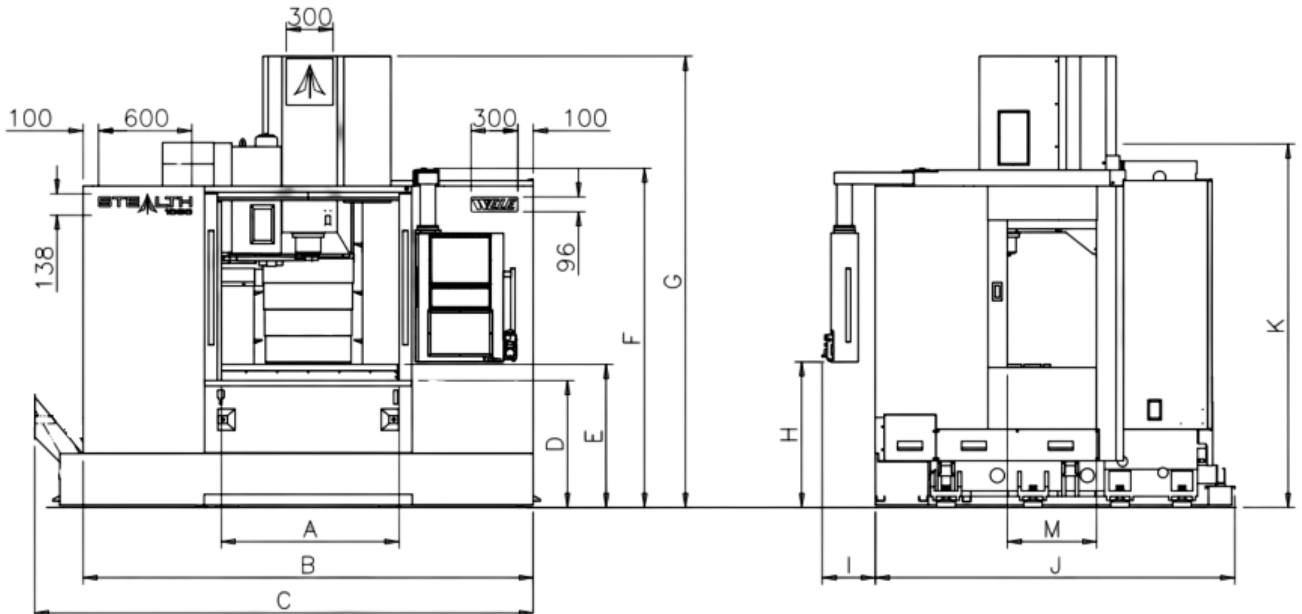


MODEL	TRAVEL: X-Y-Z	A	B	C	D	E	F	G	H	J
Stealth 1060	1020x600x600	1150	510	285	600	300	135	595	110	105~705

**Machine Layout**

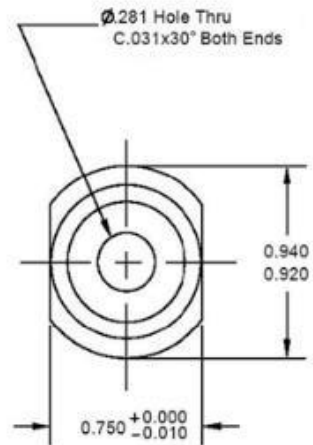
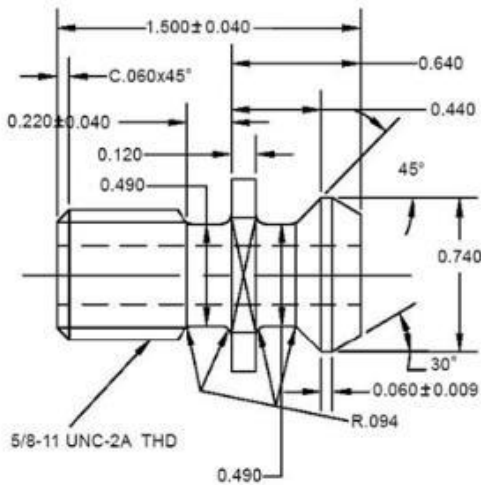
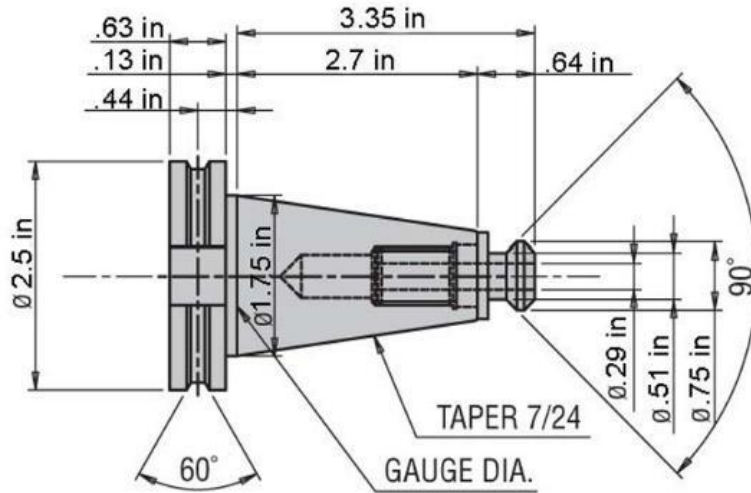


A	1150
B	2900
C	3250
D	820
E	920
F	2200
G	2930
H	930
I	340
J	2320
K	2350
L	3250
M	575
N	980



**STEALTH**  
1060

**Retention Knob & Tool Assembly CAT40**



Shipping Dimensions – Stealth 1060 Reference

Crate #1: 3350mm x 2220mm x 2550mm @ 6,900KGS

Machine Weight

Stealth 1060 Weight: 5,500KG



## The Requirement of Power Sources

### Power and grounding

- a. AC line Voltage: 3 phases AC 220V +/- 10% (AC 380V, 400V etc. must through transformer)
- b. Frequency: 50 or 60 Hz +/- 1%
- c. Power capacity: 35KVA for 1060
- d. Main circuit breaker:

Model	Voltage	Current capacity	Main breaker
Stealth 1060	220V(for USA/Asia/Japan)	100A	150A
	400V (for Europe)		

- e. The cross-section area of Power line cable: 35mm<sup>2</sup>
- f. The colors of power line cables should be assigned by CE regulations.
- g. The outside terminal of power line cables should be protected by fuse or breaker.
- h. The power line cables should NOT be connected with other machines, but be connected independently.
- i. The cross-section area of grounding wire: 22mm<sup>2</sup>; the grounding resistor should be less than 50 Ω. The color of grounding wire must be yellow-green.
- j. The grounding method of multiple machines is shown as Figure 3-1.

### 3.2.2 Compressed air

- a. Compressed air must be filtered to keep it clean and dry (dew point, below 7kgf/cm<sup>2</sup>; 10°C).
- b. The required pressure of compressed air is 4~7 kgf/cm<sup>2</sup>. Make sure the supply of compressed air satisfy the capacity requirement. (One-hp air compressor could provide 90 L/min air flow rate, and it is approximately enough.) Furthermore, air compressor should not branch the use ends excessively, or the instantaneous pressure varieties will cause the insufficient machine pressure alarm.
- c. The size of quick couplings at the air inlet is 3/8".

High speed and general machining purpose. Stealth machine is suitable for aluminum and steel parts machining.

