



AA65-Series Vertical Machining Center Specifications



Machine Features Overview

FANUC OiMF PLUS CNC Machine Control

High Power 6,000 RPM Gear Driven Spindle – Big Plus CAT50 Spindle Taper

(30) Thirty Pocket Standard Automatic Tool Changer. (40) Tools Optional Upgrade Available

Precision Hand Scraped Machine Metal to Metal Contact Points for Vibration Dampening and Extended Machine Life

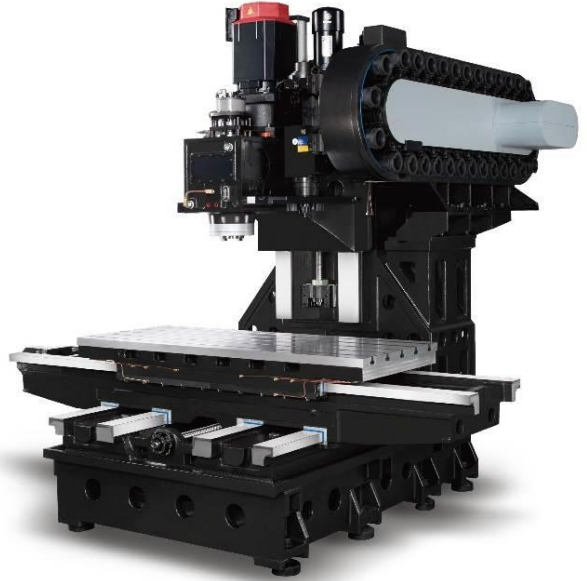
Built in WELE iSmartTune Controller Package with Tool Life Monitoring and ATC Recovery Suite

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 Lift Up Type Conveyor as Standard Feature. Includes Coolant Wash Down

1000 PSI Coolant Through Spindle Preparation



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



FANUC

Standard FANUC OiMF PLUS Features

- Fine Surface Technology – Set Optimal Parameters for Roughing, Semi-Finishing, and Finishing
- AI Contour Control II, Smooth Tolerance Control, and Control Nano Interpolation
- Built in Reporting that that Monitors Productivity and Tool Life
- Fast Cycle Time Technology Set of Servo Functions to Reduce Cycle Time. Acc/Dec Based on Load Inertia, Reduction in Processing Time
- FANUC Picture Allows Generation of Custom Control Objects – WELE iSmartTune
- Smart Servo Control Real Time Optimization Suite
- 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

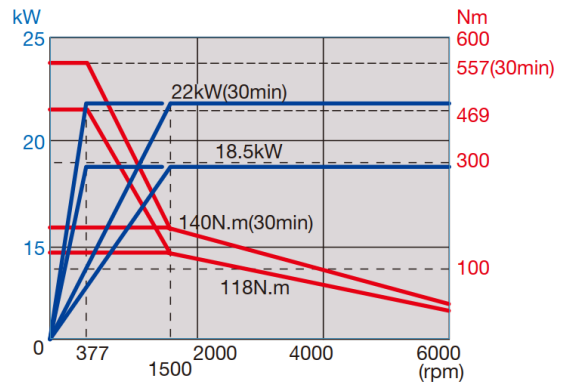
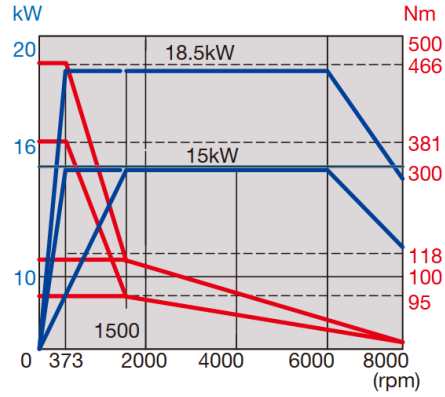


Machine Specifications

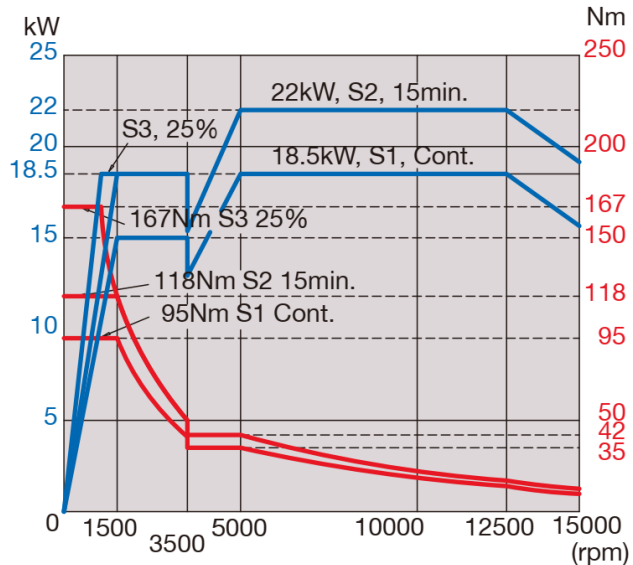
X Axis Travel - AA1165	1,100 mm (43.3")
X Axis Travel - AA1365	1,300 mm (51.2")
X Axis Travel - AA1565	1,500 mm (59.1")
Y Axis Travel	650 mm (25.6")
Z Axis Travel	600 mm (23.6")
Distance from Spindle Nose to Table Top	125 - 725 mm (4.9" – 28.5")
Spindle Taper	CAT50 (Big Plus)
Spindle Speed	6,000RPM
Spindle Type	Gear Drive
Rapid Feedrate (X & Y Axes)	30 m/min (1,181 ipm)
Rapid Feedrate (Z Axis)	24 m/min (945 ipm)
Chain Type ATC	30 Pockets (40 Opt.)
Maximum Tool Diameter with Tool in Adjacent Pocket	127 mm (5.0")
Maximum Tool Diameter with Adjacent Pocket Empty	229 mm (9.0")
Maximum Tool Length from Gage Line	300 mm (11.8")
Maximum Tool Weight	15 kg (33 lb)
Tool Taper	CAT50 Big Plus
Pull Stud	ANSI CAT50
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	Box Guideway
Coolant Tank Capacity (Including CTS Tank)	147.2 gal
Flood Coolant (Gallons per Minute)	20 gal



Standard 6,000 RPM Gear Driven Spindle

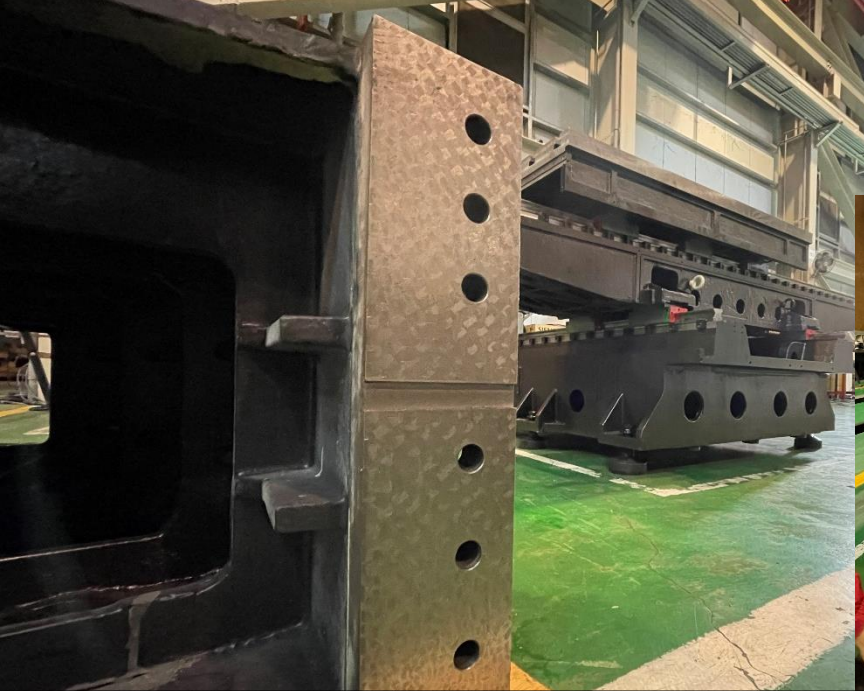
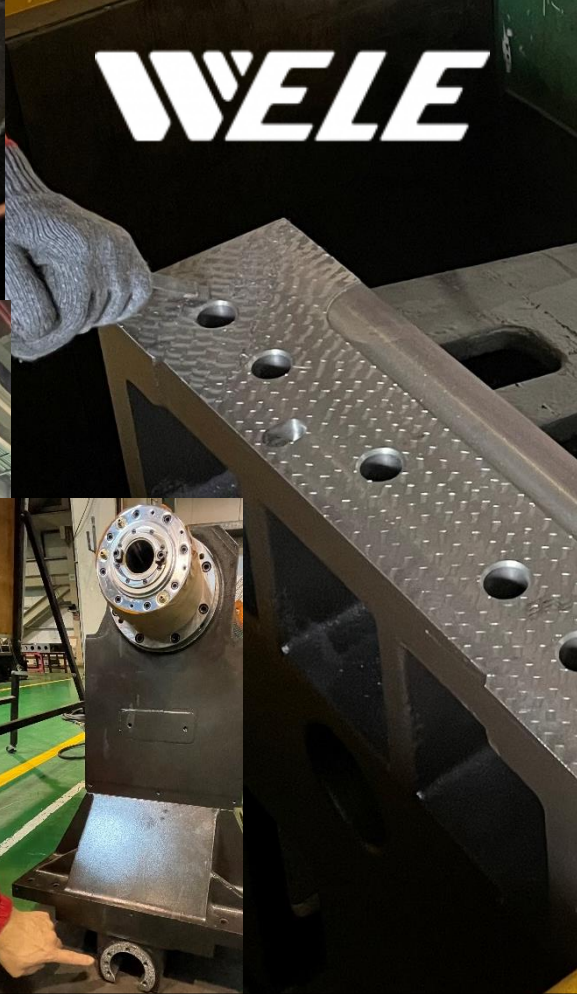


Optional 15,000RPM Integral Motor Spindle





WELE



WELE Precision Hand Scraping – All Metal Contact Surfaces

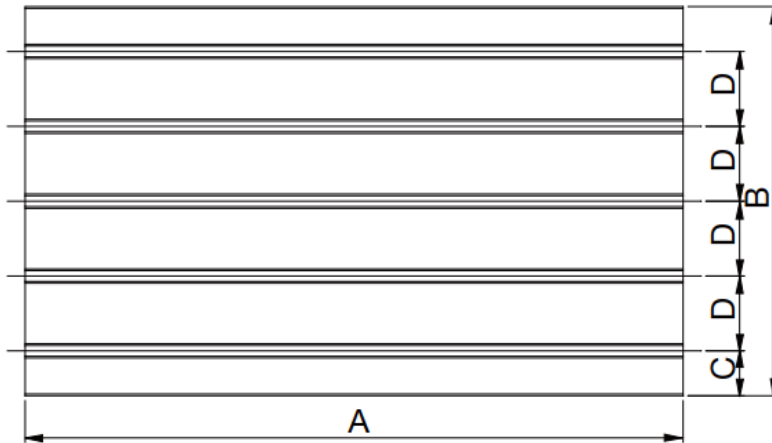


Fanuc Control Package Detail

FANUC

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

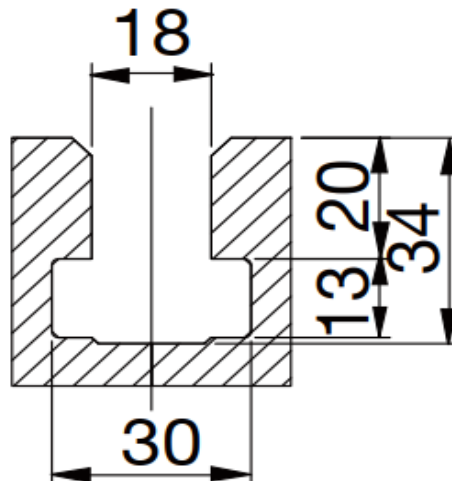
Table Dimensions



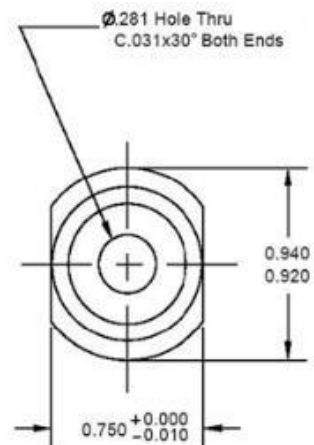
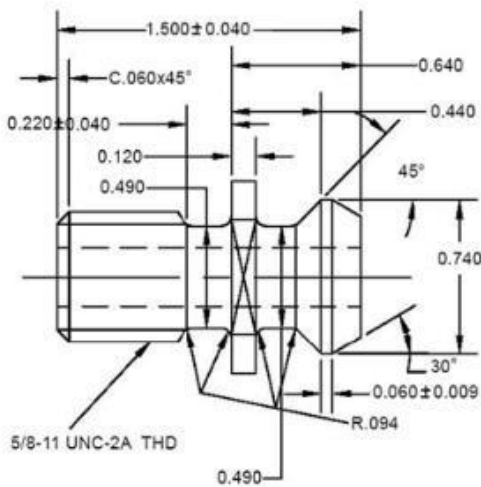
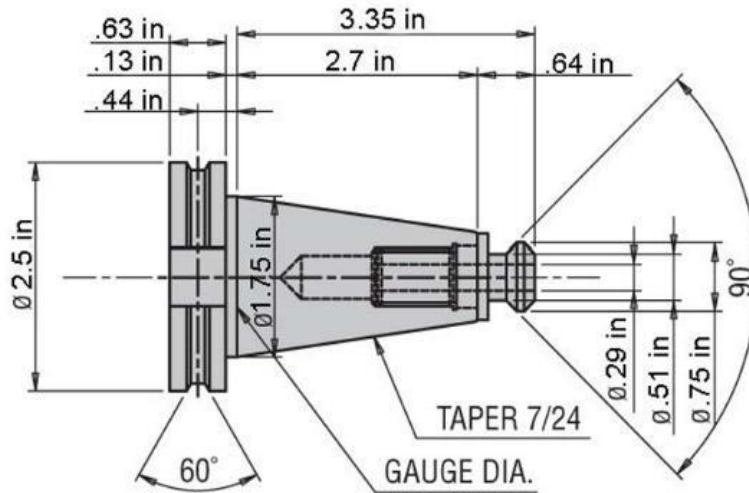
	A	B	C	D
AA1165	1300(51.2)	650(25.6)	75(3)	125(4.9)
AA1365	1450(57.1)	650(25.6)	75(3)	125(4.9)
AA1565	1650(65)	650(25.6)	75(3)	125(4.9)

Unit : mm(inch)

T-Slot Specification



Retention Knob & Tool Assembly CAT40



Productivity Enhancements

