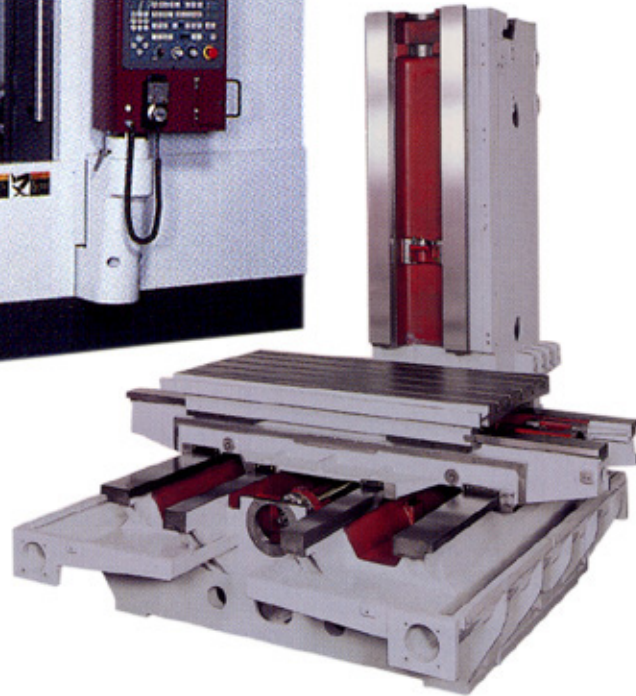


VM 7III



Option : Tool guard, Top cover and Signal light



■ X-/Y-/Z-axis travel

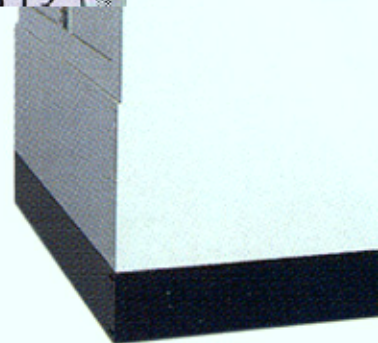
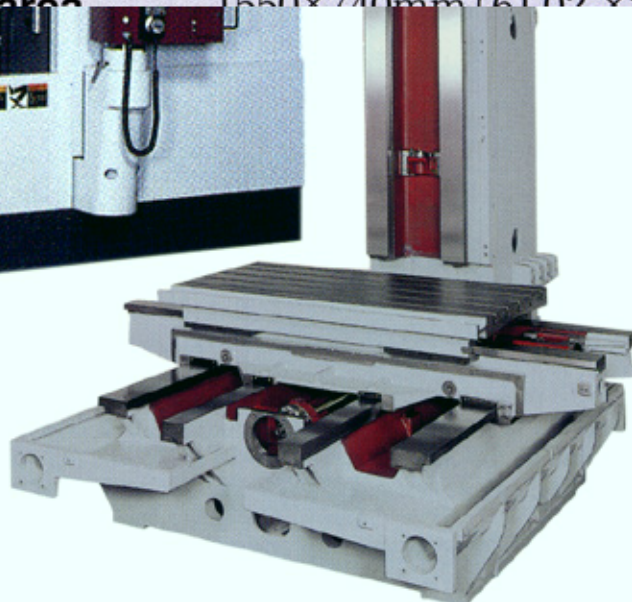
1530×740×660mm (60.24"×29.13"×25.98")

■ Table work surface area

1550×740mm (61.02"×29.13")



Option : Tool guard, Top cover and Signal light



Option : Tool guard, Top cover and Signal light

Standard Specifications

	Item	VM7 III
●Travel	Travel on X axis (Table: right/left)	mm 1530(60.24")
	Travel on Y axis (Saddle: back/forth)	mm 740(29.13")
	Travel on Z axis (Spindle head: up/down)	mm 660(25.98")
●Distance	Distance from table top surface to spindle nose	mm 150(5.91")~810(31.89")
	Distance from column front to spindle center	mm 780(30.71")
●Table	Table work surface area (X-axis directionXY-axis direction)	mm 1550(61.02")X740(29.13")
	Max. workpiece weight loadable on table	kg 1500(3300 lbs)
	Table surface configuration (Nominal dimension of T-slotXspacingXnumber of T-slot)	mm 22X140X5 slots (0.87"X5.51"X5 slots)
●Spindle	Height from floor level to table work surface	mm 1000(39.37")
	Spindle speed	min ⁻¹ 25~6000
	Number of spindle speed change steps	2 steps
	Spindle nose (nominal number)	7/24 taper No.50 ※1
●Feed Rate	Spindle bearing bore diameter	mm φ85(dia 3.35")
	Rapid traverse rate	m/min XY:24(945ipm) Z:20(787ipm)
	Cutting feed rate	mm/min 1(0.04ipm)~2000(787ipm)※2
●Nominal No.	Jog feed rate	mm/min 2000(78.74ipm)
	Automatic tool changer	
	Type of tool shank (nominal number)	JIS B 6339 BT50
●Tool	Type of pull stud (nominal number)	OKK only 90°
	Tool magazine capacity	20(OP 30/40)
	Maximum tool diameter (with adjacent tools)	mm φ110(dia 4.33")
	Maximum tool diameter (without adjacent tools)	mm φ200(dia 7.87")
	Maximum tool length (from the gauge line)	mm 350(13.78")
	Maximum tool weight	kg 20(44 lbs)
	Tool selection method	Random memory
	Tool changing time (tool-to-tool)	s 2.0 (variable for heavy tool)
	Tool changing time (cut-to-cut)	s 7.0
	●Spindle	Motor
Spindle motor (30 min. rating/continuous rating)		kW AC11/7.5 [OP 15/11] AC15/10HP [OP 20/15HP]
Feed motor (M)Mitsubishi (F)FANUC		kW (M) XY3.5(4.7HP) Z4.5(6.0HP) (F) XY4.0(5.4HP) Z7.0(9.4HP)
●Pump	Coolant pump motor	kW 0.4(0.5HP)
	Slideway lubrication pump motor	kW 0.017(0.023HP)
	Spindle head lubrication pump (oil cooler) motor	kW 0.75(1.0HP)
	Motor for tool magazine	kW 0.4(0.5HP)
	Motor for unclamping spindle tool and ATC	kW 0.75(1.0HP)
●Power Supply	Required power source	
	Power supply	kVA Mitsubishi 36 FANUC 29
	Supply voltage	V AC200/220±10%
●Air Supply	Supply frequency	Hz 50/60±1
	Compressed air supply pressure	MPa 0.4(57.1psi)~0.6(85.7psi)
	Air supply flow rate (atmospheric pressure)	L/min 160(42.3GPM)
●Tank	Coolant tank capacity	L 360(95.1gal)
	Spindle head lubrication oil tank capacity	L 30(7.9gal)
	Slideway lubrication oil tank capacity	L 6(1.6gal)
●Machine Size	Machine height (from floor level)	mm MITSUBISHI 3150.FANUC3230 MITSUBISHI 124.02".FANUC127.17"
	Required floor space under operation (left to rightXdepth)	mm 3980(156.69")X3860(151.97")
	Required floor space including maintenance are (left to rightXdepth)	mm 4980(196.06")X4630(182.28")
	Machine weight	kg 10500(23100lbs)

※1 No. 40 is optionally available.

※2 FANUC : Available with HQ, Hyper HQ A or B (HQ is standard).

Mitsubishi : Available with HQ, Hyper HQ I or II (HQ and HQ mode I are standard).

Standard Accessories

Item	Q'ty
Lighting system	1 set
Coolant unit (Separate type coolant tank)	1 set
Splash guard	1 set
X/Y axes steel slideway cover	1 set
Spindle head cooling oil temperature controller (Oil cooler)	1 set
Rear-discharging coil type chip conveyor (one each for right and left sides)	2 sets
Automatic power off (at M02/M30)	1 set
Leveling block	1 set
Parts for Machine transfer	1 set
Electrical spare parts (fuses)	1 set
Instruction manual	1 copy
Electrical instruction manual (Operation, maintenance, parts list, hardware drawings)	1 copy

Special Accessories (Option)

Item	Description		
Spindle speed min ⁻¹	VM4 III	No.40	8000, 10000 (Gear) / 14000, 20000(MS)
		No.50	8000, 10000 (Gear)
	VM5 III	No.40	10000(Gear), 14000, 20000 (MS)
	VM7 III	No.50	8000(Gear) 13000 (MS)
	VM5 III VM7 III	No.50	High-torque (15/11 kW) 6000,8000,10000 (Gear)
Core chilled double anchor ball screw	VM5 III, VM7 III		
Rapid traverse rate	VM5 III X,Y:36m/min(1417ipm), Z:30m/min(1181ipm)		
High-rigidity specification	X-axis: 6-sided contact, Y-axis: 7-sided contact, Z-axis: SKC3		
Signal lamp	2-lamp type: Yellow lamp ON at M02/30, Red lamp ON at an alarm		
Pallet changer	Shuttle type APC※ (Note) Column UP for Machine with APC: 200 mm for VM4 II, 250 mm for VM5 II and VM7		
Magazine	30-tool magazine (drum type), 40-tool magazine (chain type only for VM7)		
X-axis stroke extension	200 mm(7.87") only for VM5 III		
Column UP	VM4 III 200mm(7.87"), VM5 III/VM7 III 250mm(9.84")		
Chip flow coolant system	one each for right and left sides		
Lift-up type chip conveyor (rear discharging)	Scraper type with floor magnet/chip separation function		
Oil hole	BIG, NIKKEN		
Coolant-through-spindle	2MPa(280psi), 7MPa(1000psi)		
Remote control nozzle			
Oil mist/Air blower			
Work flushing gun			
Automatic operation of splash guard	Front door		
Splash guard / top cover			
Sub table	T-slot / Hole / Specified by customer		
Tool presetter			
NC rotary table	Rotary table type [Inform us of the desired manufacturer or model.]		
Mist collector	AKAMATSU ELECTRIC MFG. : HVS-220/SUNWORKER: MISTPURE U40		
Coolant cooler	DAIKIN: AKJ206		
Oil skimmer	Belt type		
Soft AC	For monitoring spindle motor load and controlling feed speed		
Soft CCM	For monitoring spindle motor load and detection of tool failure		
Tool life management system	Tool life management: option		
Automatic restart at tool damage	Interruption type macro is required.		
Touch sensor system T0	Workpiece measurement, tool length and diameter measurement		
Touch sensor system T1	Workpiece measurement, tool length and diameter measurement, tool break detection		
Tool break detection with limit switches			

※ Pallet size
VM4 III: 630(24.80")×400(15.75")mm VM5 III: 1000(39.37")×500(19.69")mm VM7 III: 1500(59.06")×700(27.56")mm

Special Accessories

Touch Sensor System T1

Incorporating internal-contact-type touch sensors, the Touch Sensor System T1 can provide the following measurements automatically (program instructions).

- Measurements of inner/outer shape, inner width and outer width; center measurement; and coordinates setting
- Reference surface and workpiece corner measurements; and coordinates setting
- Measurement of workpiece tilting angle; and coordinates rotation (option)
- Pass/fail judgment of measurement results
- Tool length measurement and compensation amount setting
- Tool break detection



Soft AC



- Monitors tool load.
- Controls feed speed according to tool load condition.
- Detects air cutting (no-load) operation and reduces processing time.

Lift-up Type Chip Conveyor



DIMENSION

NEW CONCEPT
VERTICAL MACHINING CENTER
VM7 III

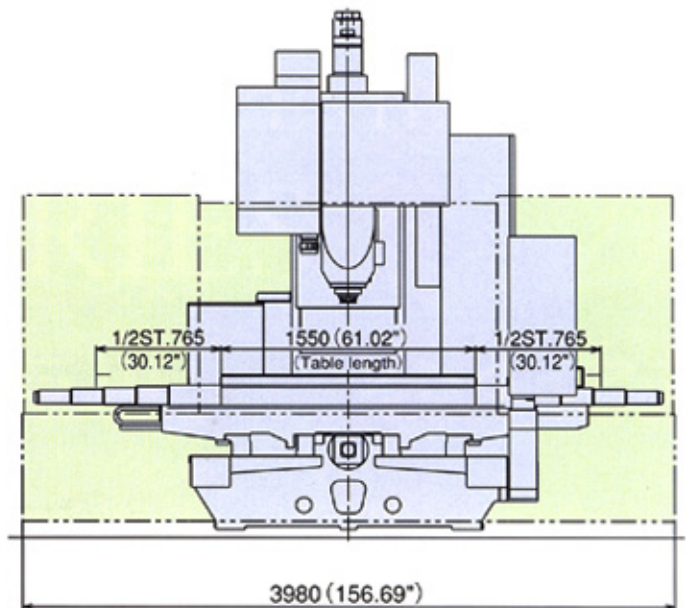
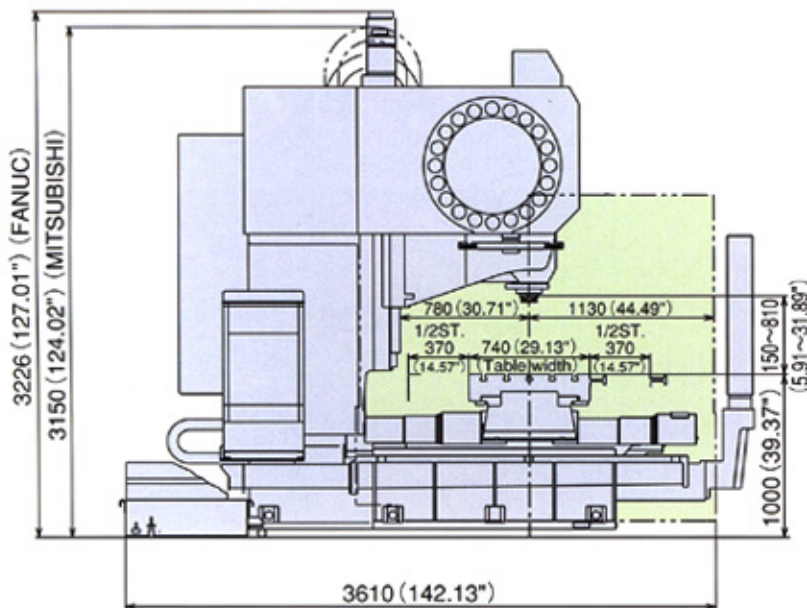
Transportation height (after disassembly) 2970 (2913) mm, 116.93"(114.69")

Transportation width (after disassembly) 2600 (2600) mm, 102.36"(102.36")

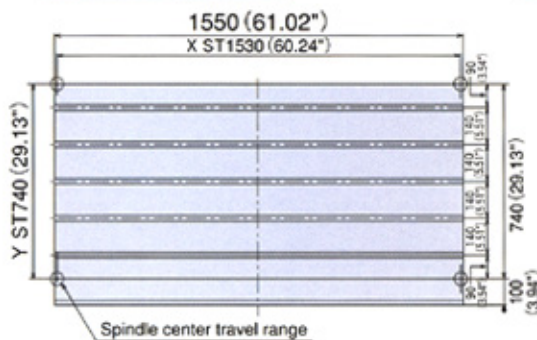
Secure the maintenance area (not specified below) for installation of the machine.

- The above dimensions are for No. 50 gear-spindle specification. Contact us for machines of other specifications.
- A maintenance area must be provided at the installation site.

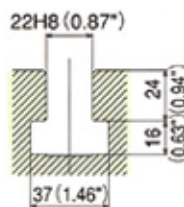
Main Dimensions



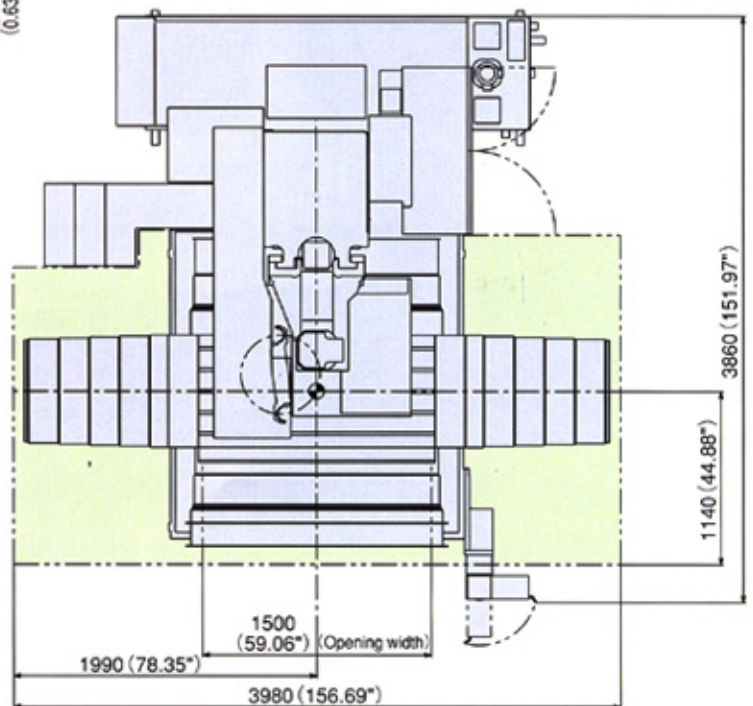
Table



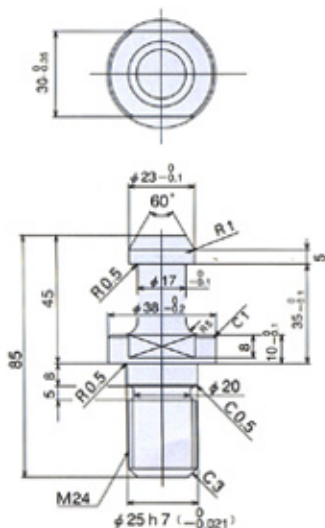
T slot



Floor Space



Pull Stud (BT-50)



Pull Stud (CAT-50)

