

Machine specifications

Item		SV-400	SV-500 / 40	SV-500 / 50	SV-500B / 40	SV-500B / 50
Travel	X-axis travel (Longitudinal movement of table) mm(in.)	600 (23.6)	800 (31.5)		1,020 (40.2)	
	Y-axis travel (Cross movement of saddle) mm(in.)	430 (16.9)	510 (20.1)			
	Z-axis travel (Vertical movement of spindle head) mm(in.)	460 (18.1)	510 (20.1)			
	Distance from table surface to spindle gage plane mm(in.)	150-610 (5.9-24.0)	150-660 (5.9-26.0)			
Table	Working surface mm(in.)	900×500 (35.4×19.7)	1,100×600 (43.3×23.6)		1,320×600 (52.0×23.6)	
	Table loading capacity kg(lb.)	500 (1,100)	1,000 (2,200)		1,200 (2,640)	
	Table surface configuration (No. of T slots×T slots width×pitch)	5×18 mm×100 mm (5×0.7 in.×3.9 in.)	6×18 mm×100 mm (6×0.7 in.×3.9 in.)			
Spindle	Max.spindle speed*1 min ⁻¹	12,000	10,000 [20,000]	6,000 [10,000]	10,000 [20,000]	6,000 [10,000]
	Number of spindle speed ranges	1				
	Type of spindle taper hole	7/24 Taper, No.40		7/24 Taper, No.50	7/24 Taper, No.40	7/24 Taper, No.50
	Spindle bearing inner diameter mm(in.)	70 (2.7)	85 (3.3)	100 (3.9)	85 (3.3)	100 (3.9)
Feedrate	Rapid traverse rate mm/min (ipm)	32,000 (1,259.8)				
	Feedrate mm/min (ipm)	1-16,000 (0.01-629.9)				
	Jog feedrate mm/min (ipm)	0-1,260 (0-50.0) <15 steps>				
ATC	Type of tool shank	MAS BT-40 [CAT-40]		MAS BT-50 [CAT-50]	MAS BT-40 [CAT-40]	MAS BT-50 [CAT-50]
	Type of retention knob	For MORI SEIKI 90° type [MAS I · II]				
	Tool storage capacity	30 [40]	20 [30/40]	30 [40]	20 [30/40]	30 [40]
	Max.tool diameter <without adjacent tools> mm(in.)	80 (3.1) <125 (4.9)>		120 (4.7) <240 (9.4)>	80 (3.1) <125 (4.9)>	120 (4.7) <240 (9.4)>
	Max.tool length mm(in.)	300 (11.8)		350 (13.8)	300 (11.8)	350 (13.8)
	Max.tool mass kg(lb.)	8 (17.6) [12 (26.4)]		20 (44)	8 (17.6) [12 (26.4)]	20 (44)
	Method of tool selection	Technical memory random method				
	Tool changing time (tool-to-tool)*2 <MAS> sec.	0.9 / 1.4**		2.0 / 3.0**	0.9 / 1.4**	2.0 / 3.0**
	Tool changing time (chip-to-chip)*2 <MAS> sec.	2.8 / 3.3**	3.1 / 3.7**	4.1 / 5.1**	2.8 / 3.3**	4.1 / 5.1**
Motor	Spindle drive motor (30min/cont)*5 kW(HP)	22/18.5(30/24.8)<15min/cont>	22 / 18.5 (30 / 24.8)*5	22 / 18.5 (30 / 24.8)	22 / 18.5 (30/24.8)*5	22 / 18.5 (30/24.8)
	Feed motor <X/Y/Z> kW(HP)	1.1 / 1.4/3.8 (1.9/1.9/5.1)	2.1 / 2.1 / 4.4 (2.8 / 2.8 / 5.9)		3.8 / 3.8 / 4.4 (5.1 / 5.1 / 5.9)	
	Cooling oil pump motor kW(HP)	1.1 (15)				
	Lubricant pump motor kW(HP)	0.017 (0.022) <for spindle> 0.017 (0.022) <for ball guide and ball screw>	0.017 (0.022) <for ball guide and ball screw>			
	Coolant pump motor kW(HP)	1.04** (1.39**)				
	Chip conveyor motor kW(HP)	1.1 (1.5)				
Power source	Electrical power supply kVA	47.4	47.9	46.9	51	50
	Compressed air supply MPa (psi),L/min (gpm)	0.5 (71),200 (52.8)<ANR**>	0.5 (71),300 (79.2)<ANR**>	0.5 (71),350 (92.4)<ANR**>	0.5 (71),300 (79.2)<ANR**>	0.5 (71),350 (92.4)<ANR**>
Tank capacity	Coolant tank capacity L(gal.)	260 (68.6)	280 (73.9)	400 (105.6)	280 (73.9)	400 (105.6)
	Lubricant tank capacity L(gal.)	2 (0.5) <for spindle>	0.6 (0.2) <for spindle>			
		4.2 (1.1) <for ball guide and ball screw>				
Machine size	Machine height mm(in.)	2,703 (106.4)	2,850 (112.2)	3,020 (118.9)	2,850 (112.2)	3,020 (118.9)
	Floor space mm(in.)	2,147×2,480 (84.5×97.6)	2,347×2,580 (92.4×101.6)	2,373×2,670 (93.4×105.1)	2,347×2,580 (92.4×101.6)	2,373×2,670 (93.4×105.1)
	Mass of machine kg(lb.)	5,200 (11,440)	6,600 (14,520)	7,800 (17,160)	6,900 (15,180)	8,100 (17,820)
Accuracy*7	Positioning accuracy mm(in.)	0.005 (0.0002) <Full range>				
	Repeatability mm(in.)	±0.001 (±0.00004)				

[] Option

*1 Depending on restrictions imposed by the workpiece clamping device, jig and tool used, it may not be possible to rotate at the maximum spindle speed.

*2 At 60 Hz.

*3 Measurement has been done with tool 8 kg (17.6 lb.) or heavier

*4 Measurement has been done with tool 10 kg (22 lb.) or heavier

*5 Rated value for 20,000 min⁻¹ are (15 min. / cont.)

*6 ANR refers to a standard atmospheric state; i.e., temperature at 20 °C (68 °F); absolute pressure at 101.3 kPa (760 mmHg); and relative humidity at 65%.

*7 The above precision values were obtained in accordance with JIS B6338, with measurements being taken at a room temperature of 23 °C ± 1 °C (73.4 °F ± 1.8 °F) and with all units of the machine having been run until reaching stability with regard to temperature, lubrication, etc.

* Figures in inches are converted from metric measurements.

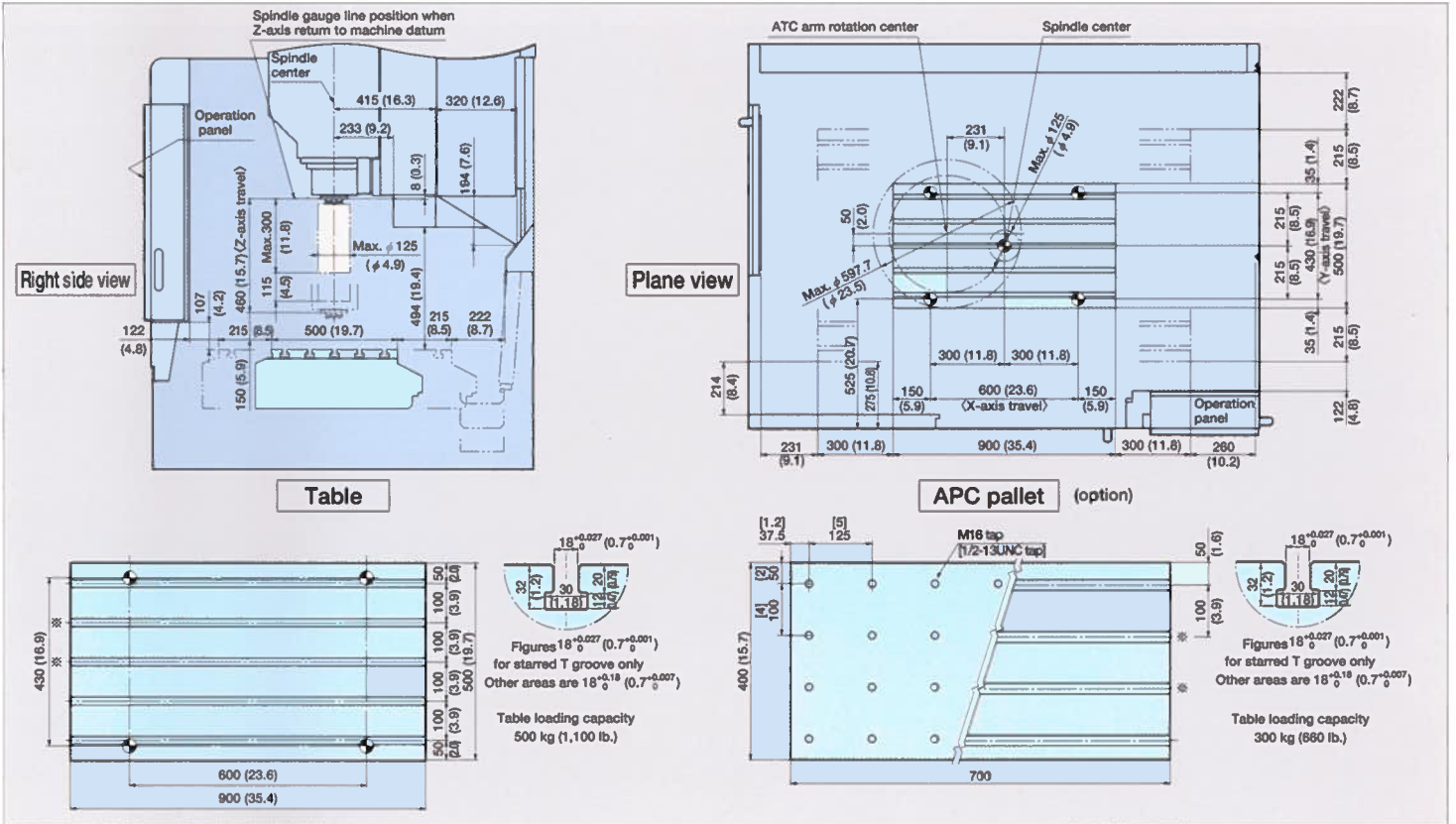
* Design and specifications subject to change without notice.

* Mori Seiki is not responsible for differences between the information in the catalog and the actual machine.

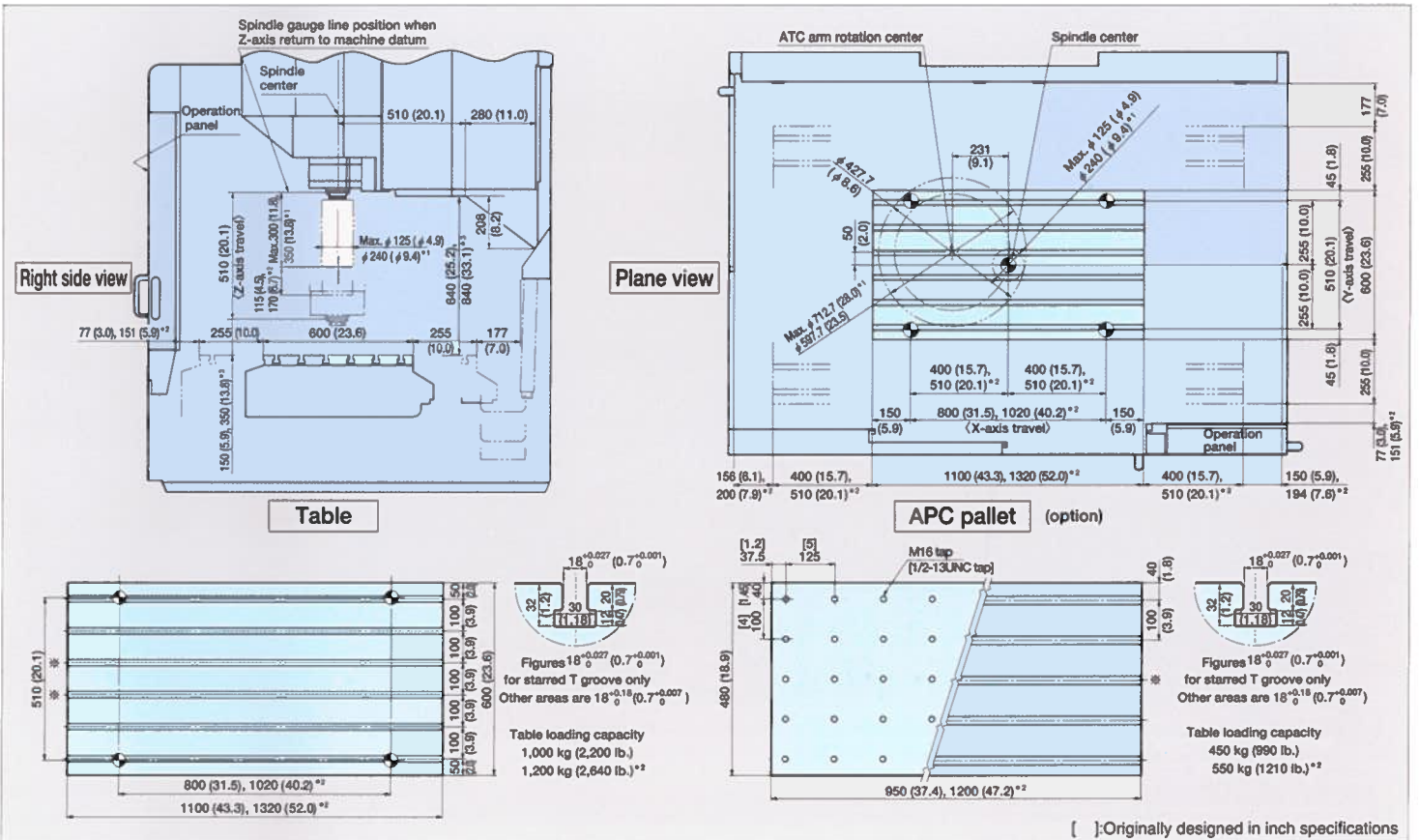
Axis travel diagram, Table dimensions, Tool restrictions

SV-400

mm(in.)



SV-500



[]: Originally designed in inch specifications

- *1 SV-500/50
- *2 SV-500B
- *3 Raised column

● Figures in inches are converted from metric measurements.

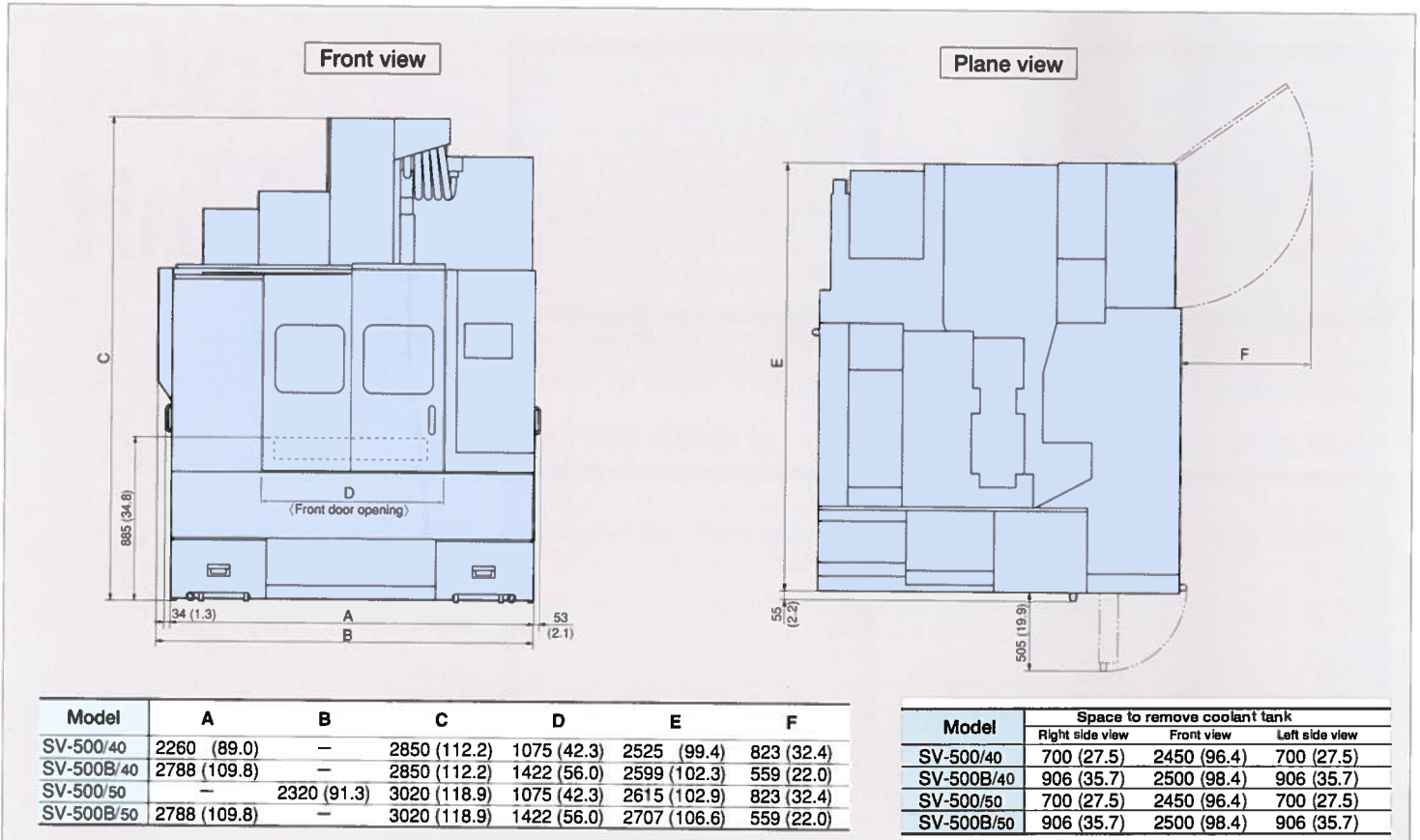
Installation drawing

SV-400

mm(in.)



SV-500



●Figures in inches are converted from metric measurements.
●Check separately for special specifications.