

1-2. Machine Specifications

Item		Unit symbol	MW50
Distance between the spindles		mm	620
Max. swing		mm	234
Chuck size		in	6
		mm	165
Max. processing size	Max. processing diameter	mm	190
	Max. length	mm	200
Stroke	X-axis	mm	+100
	Z-axis	mm	200
Rapid traverse rate	X-axis	m/min	18
	Z-axis	m/min	24
Spindle speed		rpm	6000
Tool size	Square shank	mm	20
	Circle shank	mm	20
Total weight (with loader, tools)		kg	3500
Required floor space (for the main machine alone)	Width	mm	1220
	Depth	mm	1990

* The maximum rotation speed of the tool rest may be decreased depending on the type and the number of tools you use or the tool layout

1-3. Specifications of Loader System

Item		Unit	Machine type	
			MW50 (Swivel spec.) [Standard]	MW50 (parallel spec.)
Stroke	X-axis	mm	Left : 1000 Right : 1000	Left : 1000 Right : 1000
	Y-axis	mm	360	Up : 110 Down : 370
	Z-axis	mm	95	95
	α -axis	°	180	-
Max. speed*	X-axis	m/min	180	180
	Y-axis	m/min	130	130
	Z-axis	m/min	35	35
Rotation time	α -axis	s/180°	(Measurement schedule)	-
Specifications of load/ unload grippers (Air pressure)	Outer diameter	mm	60	60
	Jaw stroke (diameter range)	mm	(Measurement schedule)	(Measurement schedule)
	Gripping force	MPa	0.4	0.4
	Outside grip	N	259	349
	Inside grip	N	276	372
Specifications of turn-around chuck (Air pressure)	Outer diameter	mm	60	60
	Jaw stroke (diameter range)	mm	(Measurement schedule)	(Measurement schedule)
	Gripping force	MPa	0.4	0.4
	Outside grip	N	349	349
	Inside grip	N	372	372
Max. weight of work piece (including weight of jaw)		kg	0.5 (x2)	0.5 (x2)

*Applicable work. The maximum speed may be reduced depending on specifications.

1-4. Standard CNC Specifications

Function		Specifications
Simultaneously controllable axis		2 Pairs (X-axis, Z-axis)
Interpolation		Linear, circular interpolation (1 block in multiple quadrant)
Least input increment	X-axis	0.001 mm
	Z-axis	0.001 mm
Least command increment	X-axis	0.0005 mm
	Z-axis	0.001 mm
Feed rate	Rapid traverse (G00) X-axis	18 m/min.
	Rapid traverse (G00) Z-axis	24 m/min.
	Cutting feed (G01)	mm/rev, mm/min.
	Threading (F)	0.0001–500.0000 mm/rev
Manual continuous feed (JOG)		0 – 1260 mm/min.
Manual handle feed		0.001 mm, 0.01 mm, 0.1 mm
Spindle speed command (S)		S-4 digits direct designation
Surface speed command		Constant surface speed control
Override	Cutting feed	0 – 110%, 10% step
	Rapid traverse	0%, 25%, 50%, 100%
	Spindle speed	50% – 120%, 10% step
Tool function (T)		4 digits
Tool offsets		Left / right 16 pieces
Miscellaneous function (M)		3 digits
Display unit		10.4 inch color LCD display
Tape storage length		Left/right 1M byte, Equivalent to 160 m (total of left and right)
Tape code		EIA/ISO automatic distinction
Tape punch interface		RS232C (option)
Manual data input (MDI)		Manual keyboard input
Manual/automatic zero return		G28
Program method		Incremental / absolute direction
Registered programs		1000 pieces each for right and left
Program number (O)		4 digits
Program stop		M00, M01
Program end		M02, M30

Other standard functions	- Emergency stop - Machine lock - Feed hold - Dry run - Optional block skip - Program number search - Sequence number display (N) - Sequence number search - Decimal points input/Pocket calculator type- decimal points input - Single fix cycle - Dwell (G04) - Arc radius R designation - Exact stop - Diameter/radius designation (X-axis) - Automatic coordinate set - Coordinate set and shift (G50) - Work coordinate shift - Work coordinate shift direct input - Stored stroke limit 1 - Over-travel - Automatic increase/reduce speed - Uniform tangential speed control - Label skip - Control in/out - Spindle serial output - Shape wear correction - Backlash correction - Tool blade radius correction - Various status display - Data protection key - Direct input of tool correctional amount A
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1-5. Specifications of Basic Control and Drive Systems

Item \ Model		MW50G	MW50GT
CNC unit (FANUC)		FS32i-MODEL B series	
Axis motor (FANUC AC servo motor)	X-axis	β S4-b	
	Z-axis	β 8-is-b	
Processing axis SERVO amplifier		SVM2 20/20i	
Spindle motor (FANUC AC Spindle motor)	Standard	Bii 112S-b (7.5kW)	
	High precision option	Bii 100s-b (3.7kW)	
Spindle controller (FANUC)	Standard	SPM-22i-b	
	High precision option	SPM-5.5i-b	
Loader axis motor (FANUC AC servo motor)	X-axis	β 4-is-b	
	Y-axis	β 8-is-b (with brake)	
	Z-axis	β 4-is-b	
Loader axis SERVO amplifier		SVM3 20/20/20 i-b	