

Machine Specifications

	Item	Unit	MB-4000H	MB-8000H	MB-10000H	
Travels	X axis (Left/right column/ MB-10000H uses left/right carrier)	mm (in)	560 (22.05)	1,300 (51.18)	1,400 (55.12)	
	Y axis (spindle up/down)	mm (in)	560 (22.05)	1,100 (43.31)	1,250 (49.21)	
	Z axis (table front/back)	mm (in)	625 (24.61)	1,250 (49.21)		
	Spindle center to pallet top	mm (in)	50 to 610 (1.97 to 24.02)	50 to 1,150 (1.97 to 45.28)	-20 to 1,230 (-0.79 to 48.43)	
	Spindle nose to pallet center	mm (in)	85 to 710 (3.35 to 27.95)	100 to 1,350 (3.94 to 53.15)		
Pallet	Pallet size	mm (in)	400 × 400 (15.75 × 15.75)	800 × 800 (31.50 × 31.50)	1,000 × 1,000 (39.37 × 39.37)	
	Max load	kg (lb)	400 (880)	2,000 (4,400) [2,500 (5,500)]*1	2,000 (4,400)	
	Indexing angle	deg	0.001	1 [0.001]		
	Max workpiece dimensions	mm (in)	ø600 × 900 (ø23.62 × 35.43)	ø1,450 × 1,450 (ø57.09 × 57.09)	ø1,400 × 1,450 (ø55.12 × 57.09)	
Spindle	Spindle speed	min ⁻¹ (rpm)	50 to 15,000 [50 to 20,000]	50 to 6,000 [12,000, 6,000 high power]	50 to 6,000 [50 to 12,000]	
	Tapered bore		7/24 taper No. 40 [HSK-A63]	7/24 taper No. 50 [HSK-A100]		
	Bearing dia	mm (in)	ø70 (ø2.76)	ø100 (ø3.94)		
Feed rate	Rapid traverse	m/min (ipm)	X-Y-Z: 60 (2,362)	X-Y-Z: 50 (1,969)		
	Cutting feed rate	mm/min (ipm)	1 to 60,000 (0.04 to 2,362)	1 to 50,000 (0.04 to 1,969)		
Motors	Spindle (10 min/cont)	kW (hp)	26/18.5 (35/25) [30/22 (47/33)]	30/22 (40/30) [37/26 (50/35), 45/37 (60/50) (20 min/cont)]	30/22 (40/30) [37/26 (50/35)]	
	Feed axes	kW (hp)	X: 4.6 (6.13), Y-Z: 3.5 (4.67)	X: 5.1 (6.8), Y: 3.5 (4.7) × 2, Z: 5.1 (6.8)	X-Y-Z: 4.6 (6.1) × 2	
	Table indexing	kW (hp)	3.0 (4.0)	4.6 (6.1)		
	ATC	Tool shank		MAS403 BT40 [HSK-A63]	MAS403 BT50 [HSK-A100]	
ATC	Pull stud		MAS 2 [-]			
	Magazine capacity	tools	48 [64, 110 to 326]	40 [60, 81 to 285, 320, 400]	40 [60, 100 to 400]	
	Max tool dia (w/ adjacent)	mm (in)	ø70 (ø2.76)	ø140 (ø5.51)		
	Max tool dia (w/o adjacent)	mm (in)	ø150*2 (ø5.91)	ø240 (ø9.45) [ø315 (ø12.40)]*3	ø240 (ø9.45)	
	Max tool length	mm (in)	300 (11.81) [400 (15.75)]*3	600 (23.62) [800 (31.50)]*3*5	600 (23.62)	
	Max tool weight	kg (lb)	10 (22)	25 (55) [30 (66)]*3	25 (55)	
	Tool selection		Memory random*4	Memory random*6	Memory random*7	
	Machine Size	Height	mm (in)	2,647 (104.21)	3,449 (135.79)	3,410 (134.25)
		Floor space; width × depth	mm (in)	2,420 × 4,700 (95.28 × 185.04)	3,960 × 7,505 (155.91 × 295.47)	4,545 × 6,465 (178.94 × 254.53)
		Weight	kg (lb)	9,500 (20,900)	27,000 (59,400)	33,600 (73,920)
Controller			OSP-P300MA			

- *1. Machine component movements become slower with this optional specification. *2. Max tool size 2 pots away can not exceed ø110 mm (ø4.33 in)
 *3. Shutter open/close times become longer with the optional specification. *4. Fixed address for 110 or more tools
 *5. Max workpiece diameters may be limited by required tool lengths. *6. Fixed address for 81 or more tools *7. Fixed address for 100 or more tools [] : Optional

Standard Specifications

Spindlehead cooling system	Oil controller	Work lamp	LED, 1 location*3
Hydraulic unit		Status indicator	3-lamp signal tower
Centralized lubrication automatic oil supplier	MB-4000H	Tank 6 L	Foundation blocks
	MB-8000H	Tank 20 L	Side-slip prevention tool
	MB-10000H	Oil level alarm and pressure alarm equipped	Chemical anchors included
Coolant supply system	MB-4000H	Tank 750 L (510 L*), Pump motor 1,500 W (double use for nozzle and in-machine)	Automatic tool changer
	MB-8000H	Tank 1,100 L (690 L*), Pump motor 390 W*2 (for nozzle), 550 W (for in-machine wash)	MB-4000H
	MB-10000H	Tank 840 L (530 L*), Pump motor 390 W*2 (for nozzle), 1,500 W (for in-machine wash)	MB-8000H
			MB-10000H
		1-degree indexing table	MB-4000H indexing: 0.001 degree (MB-4000H only)
		APC	2-pallet rotary-shuttle*4
		In-machine chip discharge*5	Hinge type chip conveyor
		Chip pan for above	MB-10000H uses a lift-up conveyor; chip pan not required.
Coolant nozzle	Eyeball nozzle type	In-machine chip discharge (below APC)	Coil type chip conveyor
Table area wash	In-machine and under-pallet wash		N/A for MB-10000H which discharges to front
ATC air blower (blast)		Ball screw cooling	Optional on MB-4000H
Chip air blower (blast)	Nozzle type	TAS-S	Optional on MB-8000H, MB-10000H
Full enclosure shielding		TAS-C	Optional on MB-8000H, MB-10000H
Operating tools, tool box		Door interlock	
Tool release leve		B-axis rotation interlock	Optional on MB-4000H, MB-8000H
Tapered bore cleaning bar			

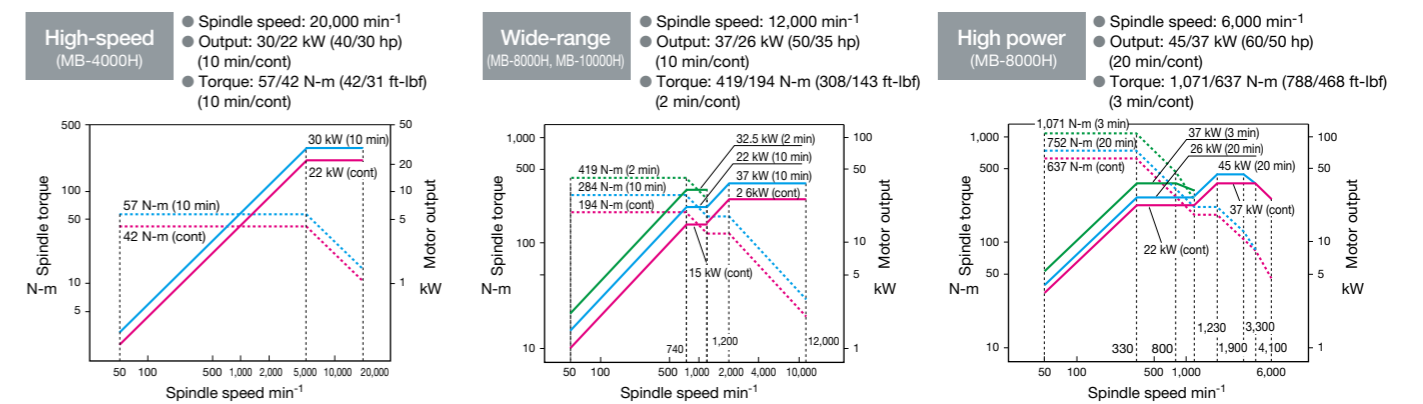
- *1. Effective *2. At 50 Hz *3. 2 locations on MB-8000H and MB-10000H
 *4. Pallets with MAS tapped holes *5. Directly below the spindle

Optional Specifications

Spindle speeds	MB-4000H	50 to 20,000 min ⁻¹ , HSK-A63, 30/22 kW	Mist collector	
	MB-8000H MB-10000H	50 to 12,000 min ⁻¹ , No.50, 37/26 kW	Chip air blower	Adapter
Main motor	MB-8000H	50 to 6,000min ⁻¹ , No.50, 45/37 kW, 1,071 N-m	In-machine discharge	Scraper type chip conveyor
Dual contact spindle	MB-4000H	HSK-A63, BIG-PLUS®	Off-machine chip discharge (lift-up chip conveyor)	Please see the recommended chip conveyors below
	MB-8000H MB-10000H	HSK-A100, BIG-PLUS®	Chip buckets (heights)	L type: 700 mm, H type: 1,000 mm
ATC magazine capacity (tools)	MB-4000H	64 (chain)	Hydraulic oil cooler	
		110, 146, 182, 218, 326 (matrix)	Coolant heater/cooler	
	MB-8000H	60 (chain)	Auto tool length compensation	Touch sensor (w/tool breakage detection)
		81, 111, 141, 171, 195, 225, 255, 285 (matrix)	Auto gauging (w/zero offset)	Touch probe
MB-10000H	320, 400 (multiple magazine)	Pull stud shape	MAS-1, JIS, CAT, DIN	
	60 (chain)	Standard T-column fixture		
AbsoScale detection	X-Y-Z axis	100, 150, 200, 240, 320, 400 (multiple magazine)	Standard square-column fixture	
		Built-in NC table (standard specification on MB-4000H)	Angle plate	
Auto 0.001 indexing table			Ball-screw cooler	Std: MB-8000/10000H [Opt: -4000H]
APC pallets			Additional work lamp	
Pallet surfaces	T-slot		Machining Navi	M-i, M-gII+
Spare pallets			Turning cut	
Edge locator			Hydraulic fixture systems	Linked, pallet-thru types
Coolant pump			TAS-S	Std: MB-4000H [Opt: -8000/10000H]
Thru-tool coolant	1.5 MPa		TAS-C	Optional for all 3 models
Thru-spindle coolant*2	MPa: 1.5, 7.0, large flow 1.5, large flow 7.0		Recommended for die machining	AbsoScale detection (X-Y-Z axes)
Semi-dry machining	Thru-spindle, thru nozzle, thru/nozzle switch		Work wash gun	Hyper-Surface
Shower coolant	10 nozzles, 550-W pump		Oil mist lubricator	DNC-DT, 0.1 µm control
Table area wash discharge				
Work wash gun	250 W pump			

- *1. 12 pallets for MB-4000H only. *2. Okuma pull studs required.

Optional Spindles (Optional)



Recommended chip conveyors (Please contact an Okuma sales representative for MB-10000H recommendations.)

Workpiece material	Steel	FC	Aluminum / Non-ferrous metal	Mixed (general use)
Chip shape				
In-machine	Hinge type (Standard) *			
Off-machine chip discharge (Optional)	Hinge type			
	Scraper type			
	Scraper type (with drum filter)			
	Hinge + scraper (with drum filter)			

○ : Recommended
 △ : Conditionally recommended

* Scraper type (optional) can be selected.
 *1. When there are many fine chips
 *2. When chips are longer than 100 mm
 *3. When chips are shorter than 100 mm
 *4. When there are few fine chips
 Note: When chips are dry, clean out chips that have accumulated under the pallet or elsewhere in the machine as needed.

Off-machine lift-up chip conveyors

Name	Hinge	Scraper	Scraper (with drum filter)	Hinge + scraper (with drum filter)
Shape				