

		MCR-C	MCR-B III ^{*9}	MCR-A5CII
Travel				
X-axis travel (table front/back)	mm	4,200 to 12,200	3,000 to 12,000	3,200 to 12,200
Y-axis travel (spindle horizontal)	mm	3,200 to 4,200	2,700 to 4,200	2,600 to 4,100
Z-axis travel (ram vertical)	mm	1,050 [1,250]	800 [1,000]	800
W-axis travel (crossrail vertical)	mm	1,000, 1,200	700 to 1,300	800 to 1,200
Effective width between columns	mm	2,650 to 3,650	2,050 to 3,550	2,150 to 3,650
Table to spindle nose (max)	mm	1,650 to 1,850 [1,550 to 1,750] ^{*1}	1,350 to 1,850 [1,250 to 1,750] ^{*1}	1,450 to 1,850 [1,350 to 1,750] ^{*1}
Table				
Working surface	mm	2,000 × 4,000 to 3,000 × 12,000	1,500 × 2,800 to 3,000 × 11,800	1,500 × 3,000 to 3,000 × 12,000
Maximum load	kg	22,000 to 66,000	12,000 to 72,600	12,000 to 66,000
T-slots [Width x No. (spacing)]	mm	24H7 × 11, 13, 15 (Center 200)	24H7 × 9 to 15 (Center 200)	24H7 × 11, 13, 15 (Center 140, 200)
Height from the floor	mm	850 to 950	800 to 950	850 to 950
Feedrates				
Rapid traverse	m/min	X-Y: 24, Z: 15 (X-Y: 24 ^{*2} , Z: 15) ^{*3} (X: 20, Y: 24 ^{*2} , Z: 15) ^{*4}	X: 15, Y: 20 ^{*10} , Z: 15	X: 30, Y: 32, Z: 20 (X: 30, Y: 32 ^{*2} , Z: 20) ^{*20} (X: 20, Y: 32 ^{*2} , Z: 20) ^{*21} (X: 30, Y: 30 ^{*2} , Z: 20) ^{*22} (X: 20, Y: 30 ^{*2} , Z: 20) ^{*23}
Cutting feedrate	mm/min	1 to 10,000	1 to 10,000	1 to 10,000
W-axis (crossrail vertical)	mm/min	3,000	3,000	3,000
ATC				
Tool shank		MAS BT50	MAS BT50	MAS BT50
Pull stud		MAS 2	MAS 2	MAS 2
Tool magazine capacity	tools	50 [80, 100, 120, 180]	32 ^{*11} [50, 72, 100, 120, 180]	50 [80, 100, 120, 180]
Max tool diameter	mm	W/ adjacent tools: ø135 W/o adjacent tools: ø264	W/ adjacent tools: ø135 W/o adjacent tools: ø230	W/ adjacent tools: ø135 W/o adjacent tools: ø230
Max tool length	mm	600	400	400
Max tool weight	kg	25	25	25
Tool selection		Fixed address	Fixed address	Fixed address
Spindle				
Spindle speed	min ⁻¹	4,000 [6,000]	4,000 [3,600, 6,000, 8,000, 10,000]	4,000 [6,000, 10,000]
Taper bore		7/24 Taper No. 50	7/24 Taper No. 50	7/24 Taper No. 50
Bearing diameter	mm	ø100 [ø85 ^{*5} , ø130 ^{*6} , ø100 ^{*7}]	ø100 [ø85 ^{*12}]	ø100[ø85 ^{*24}]
Motors				
Spindle drive	kW	45/37 (30 min/cont) [37 (cont)] ^{*5}	30/22 (30 min/cont) ^{*8} [45/37 (30 min/cont) ^{*13} , 22 (cont) ^{*5} 26/22 (30 min/cont) ^{*14}]	26/22 (30 min/cont) ^{*8} [26/22 (30 min/cont) ^{*24} , 30/22 (30 min/cont) ^{*25}]
Feed drives	kW	X: 14.0, Y: 9.4, Z: 5.2 × 2	X: 9.4 (14 ^{*15}), Y: 7.3, Z: 4.6 × 2 (X: 9.4 (14 ^{*16}), Y: 9.4, Z: 4.6×2) ^{*17}	X: 9.4 (14 ^{*26}), Y: 7.3, Z: 5.2 × 2
Crossrail traverse	kW	W: 4.6 (5.2 ^{*18}) × 2	W: 4.6 (5.2 ^{*18}) × 2	W: 4.6 × 2
Power Requirements				
Electrical power supply	kVA	60 ^{*8}	60 ^{*8}	60 ^{*8}
Compressed air flow rate	L/min (ANR)	650 (over 0.5 MPa) ^{*8}	650 (over 0.5 MPa) ^{*8}	650 (over 0.5 MPa) ^{*8}
Machine Size				
Height	mm	6,730, 6,980	6,250 to 6,850	5,820 to 6,300
Floor space (machine only)	mm	7,810 × 10,730 to 8,835 × 27,930	6,950 × 8,200 to 8,700 × 27,400	6,180 × 8,430 to 7,780 × 27,930
Weight (machine only)	kg	48,000 to 116,000	36,000 to 120,900	32,000 to 101,000
CNC		OSP-P300MA	OSP-P300MA	OSP-P300MA

		MCR-H	MCR-AF	MCV-AII
Travel				
X-axis travel (table front/back)	mm	4,200, 5,200	2,600	2,000 to 5,200
Y-axis travel (spindle horizontal)	mm	3,200, 3,700	1,500, 2,000	1,600, 2,000
Z-axis travel (ram vertical)	mm	800 [1,000]	800	450 (Quill vertical)
W-axis travel (crossrail vertical)	mm	1,000	–	1,000, 1,150
Effective width between columns	mm	2,550, 3,050	2,600	1,650, 2,050
Table to spindle nose (max)	mm	1,550	1,100 [1,000 ^{*29}]	1,360 to 1,510 [1,380 to 1,530] ^{*36}
Table				
Working surface	mm	2,000 × 4,000, 2,500 × 5,000	2,000 × 1,500, 2,000 × 2,000	1,200 × 1,800 to 1,500 × 5,000
Maximum load	kg	22,000, 33,000	10,000	6,000 to 16,000
T-slots [Width x No. (spacing)]	mm	24H7 × 11, 13 (Center 200)	20H7 × 9, 11 (Center 200)	20H7 × 9, 11 (Center 140)
Height from the floor	mm	920	850	700 to 750
Feedrates				
Rapid traverse	m/min	X-Y: 30, Z: 15	X-Y: 20, Z: 10	X-Y: 20, Z: 10
Cutting feedrate	mm/min	X-Y: 1 to 30,000, Z: 1 to 15,000	1 to 10,000	1 to 10,000
W-axis (crossrail vertical)	mm/min	5,000	–	420/500 (50/60Hz) ^{*37}
ATC				
Tool shank		MAS BT50	MAS BT50 [MAS BT50 ^{*29} , MAS BT40 ^{*30} , HSK-A63 ^{*31*32}]	MAS BT50
Pull stud		MAS 2	MAS 2 ^{*33}	MAS 2
Tool magazine capacity	tools	50 [80, 100, 120, 180]	24 [32 ^{*30*31*32} , 48 ^{*30*31*32} , 50 ^{*34} , 72 ^{*34} , 100 ^{*34}]	24 [50, 72, 100]
Max tool diameter	mm	W/ adjacent tools: ø135 W/o adjacent tools: ø230	W/ adjacent tools: ø125 ^{*34} [ø135 ^{*35} , ø90 ^{*30*31*32}] W/o adjacent tools: ø230 ^{*34} [ø125 ^{*30*31*32}]	W/ adjacent tools: ø128 W/o adjacent tools: ø230
Max tool length	mm	400	400	400
Max tool weight	kg	25	25 ^{*34} [8 ^{*30*31*32}]	20
Tool selection		Fixed address	Fixed address ^{*34} [random memory ^{*30*31*32}]	Fixed address
Spindle				
Spindle speed	min ⁻¹	8,000	8,000 [12,000, 15,000, 20,000, 25,000]	4,000 [6,000, 10,000]
Taper bore		7/24 Taper No. 50	7/24 Taper No. 50 [7/24 Taper No.50 ^{*29} , 7/24 Taper No.40 ^{*30} , HSK-A63 ^{*31*32}]	7/24 Taper No. 50
Bearing diameter	mm	ø85	ø85 [ø100 ^{*29} , ø70 ^{*30*31} , ø60 ^{*32}]	ø100 [ø85 ^{*24}]
Motors				
Spindle drive	kW	26/22 (30 min/cont)	26/22 (30 min/cont) ^{*8} [37/26 (10 min/cont) ^{*29} , 26/18.5 (10 min/cont) ^{*30} , 30/22 (10 min/cont) ^{*31} , 15/11 (30 min/cont) ^{*32}]	22/18.5 (30 min/cont) [22/15 (30 min/cont) ^{*5} , 22 (cont) ^{*42}]
Feed drives	kW	X: 12 ^{*27*28} (18 ^{*27*43}) Y: 6 ^{*27} , Z: 4.6 × 2	X-Y: 5.2, Z: 3.6 × 2	X: 3.5 (4.2 ^{*38} , 4.6 ^{*39}) Y: 4.2, Z: 4.2
Crossrail traverse	kW	W: 5.2 × 2	–	3.7 (AC) [3.6 ^{*40}]
Power Requirements				
Electrical power supply	kVA	80 ^{*8}	55 ^{*8}	40 ^{*8} 45 ^{*8}
Compressed air flow rate	L/min (ANR)	950 (over 0.5 MPa) ^{*8}	700 (over 0.5 MPa) ^{*8}	500 (over 0.5 MPa) ^{*8}
Machine Size				
Height	mm	6,450	4,670 [4,450 ^{*29}]	4,375 to 4,585 ^{*41}
Floor space (machine only)	mm	7,825 × 10,730, 8,425 × 12,830	5,560 × 4,200, 5,560 × 5,230	4,935 × 6,000 to 5,335 × 12,920
Weight (machine only)	kg	64,000, 75,000	24,500, 26,000	19,500 to 30,500
CNC		OSP-P300MA	OSP-P300MA	OSP-P300MA

[]: Optional *1. Asterisk *1 marked square brackets indicate with 250-mm extension head. *2. Deceleration near both ends of Y-axis travel
*3. (): 30 × 50, 30 × 65, 35 × 50, 35 × 65 machine nominal sizes *4. (): 30 × 80, 30 × 100, 35 × 80, 35 × 100, 35 × 120 machine nominal sizes *5. 6,000 min⁻¹ specs
*6. 4,000 min⁻¹, high output specs *7. 6,000 min⁻¹, high output specs *8. Standard specs *9. Elevating crossrail *10. Deceleration near both ends of Y-axis travel with 30 and 35 size machines *11. With 32-tool ATC there are limitations to ATC range with 25 and larger size machines *12. 6,000, 8,000, 10,000 min⁻¹ specs
*13. 3,600 min⁻¹ specs *14. 8,000, 10,000 min⁻¹ specs *15. 30 × 120 size machine *16. 35 × 120 size machine *17. (): 35 size machine *18. 35 size machine
*20. (): 30 × 50, 30 × 65 size machines *21. (): 30 × 80, 30 × 100 size machines *22. (): 35 × 50, 35 × 65 size machines
*23. (): 35 × 80, 35 × 100, 35 × 120 size machines *24. 6,000, 10,000 min⁻¹ specs *25. 10,000 min⁻¹ aluminum machining specs
*26. 25 × 50, 25 × 65, 30, 35 size machines *27. Linear motor *28. 25 × 40 size machine *29. 12,000 min⁻¹ specs *30. 15,000 min⁻¹ specs *31. 20,000 min⁻¹ specs
*32. 25,000 min⁻¹ specs *33. No pull stud with HSK specs *34. 8,000, 12,000 min⁻¹ specs *35. 8,000 or 12,000 min⁻¹ specs and 50-tool magazine capacity
*36. []: 10,000 min⁻¹ specs *37. Auto-positioning crossrail; 400 mm/min for 16, 340 mm/min for 20 size machines *38. 20 × 40 size machine *39. 20 × 50 size machine
*40. Auto-positioning crossrail *41. Standard pendant (fixed) and no thru-spindle *42. 10,000 min⁻¹ specs *43. 30 × 50 size machine