

## Machine Specifications

		MCV-AII 16		MCV-AII 20		
Item		16 x 20	16 x 30	20 x 30	20 x 40	20 x 50
<b>Travel</b>						
X-axis (table front / back)	mm (in.)	2,000 (78.74)	3,000 (118.11)	3,000 (118.11)	4,000 (157.48)	5,200 (204.72)
Y-axis (spindlehead horizontal)	mm (in.)	1,600 (62.99)		2,000 (78.74)		
Z-axis (ram vertical)	mm (in.)	450 (17.72)				
W-axis (crossrail vertical)	mm (in.)	1,000 (39.37)		1,150 (45.28)		
Effective width between columns	mm (in.)	1,650 (64.96)		2,050 (80.71)		
Table to spindle nose	mm (in.)	0 to 1,360 [0 to 1,380]*1 (0 to 53.54) [0 to 54.33]		0 to 1,510 [0 to 1,530]*1 (0 to 59.45) [0 to 60.24]		
<b>Table</b>						
Working surface	mm (in.)	1,200 × 1,800 (47.24 × 70.87)	1,200 × 2,800 (47.24 × 110.24)	1,500 × 2,800 (59.06 × 110.24)	1,500 × 3,800 (59.06 × 149.61)	1,500 × 5,000 (59.06 × 196.85)
Maximum load	kg (lb)	6,000 (13,200)	8,000 (17,600)	10,000 (22,000)	12,000 (26,400)	16,000 (35,200)
Table top shape [T-slots width x No. <center pitch>]	mm (in.)	20H7 x 9 (center 140, ends 100)		20H7 x 11 (center 140, ends 100)		
Height from machine bottom	mm (in.)	700 (27.56)		750 (29.53)		
<b>Spindle</b>						
Speed range	min <sup>-1</sup>	4,000 [6,000*3, 10,000*1]				
Taper bore		7/24 taper No. 50				
Bearing diameter	mm (in.)	ø100 (3.94) [ø85 (3.35)*2]				
<b>Feed rates</b>						
Rapid traverse	m/min	X-Y : 20, Z : 10				
Feed rate	mm/min	1 to 10,000				
Crossrail traverse	mm/min	420/500 (50/60Hz)*4				
<b>Automatic Tool Changer</b>						
Tool shank		MAS BT50				
Pull stud		MAS P50T-2				
Tool magazine capacity	tools	24 [50, 72, 100]				
Max tool diameter	mm (in.)	w/ adjacent tools: ø128 (5.04); w/o adjacent tools: ø230 (9.06)				
Max tool length	mm (in.)	400 (15.75)				
Max tool weight	kg (lb)	20 (44)				
Tool selection		Fixed adress				
<b>Motors</b>						
Spindle drive	kW (hp)	22/18.5 (30/25) (30 min/cont) [22/15 (30/20) (30 min/cont)*3, 22 (30) (cont)*1]				
Axis feed drives	kW (hp)	X : 3.5 (4.7), Y-Z : 4.2 (5.6)		X-Y-Z : 4.2 (5.6)	X : 4.6 (6.1), Y-Z : 4.2 (5.6)	
Crossrail traverse drive	kW (hp)	3.7 (4.9) (AC) [3.6 (4.8)*5]				
<b>Power Sources</b>						
Electrical power supply	kVA	40*6			45*6	
Compressed air supply	L/min (ANR)	500 (0.5 MPa or more)*6				
<b>Machine Size</b>						
Height	mm (in.)	4,375 (172.24) [4,535 (178.54)*1]		4,585 (180.51) [4,745 (186.81)*1]		
Floor space (machine only, 24-tool ATC)	mm (in.)	4,935 × 6,000 (194.29 × 236.22)	4,935 × 8,000 (194.29 × 314.96)	5,335 × 8,100 (210.04 × 318.90)	5,335 × 10,100 (210.04 × 397.64)	5,335 × 12,920 (210.04 × 508.66)
Weight (machine only, 24-tool ATC)	kg (lb)	19,500 (42,900)	21,300 (46,860)	25,100 (55,220)	27,600 (60,720)	30,500 (67,100)

[ ] Optional \*1: 10,000 min<sup>-1</sup> specs \*2: 6,000 min<sup>-1</sup> specs, 10,000 min<sup>-1</sup> specs \*3: 6,000 min<sup>-1</sup> specs

\*4: With auto-positioning crossrail specifications: 16 type 400 mm/min, 20 type 340 mm/min \*5: With auto-positioning crossrail specifications

\*6: With standard specifications

## Standard Accessories

Spindle drive, standard electricals	22/18.5 kW (30 min/cont)
Spindlehead cooler	Oil controller
Hydraulic unit	
Automatic tool changer (ATC)	Tool shank BT50 MAS-2 pull stud Tool magazine capacity: 24
ATC air blower (blast)	
Tool kit/tool box	
Work lamp	LED lamp under crossrail
Crossrail positioning	Manual
90° manual angular attachment: Preparations	

## Sales kit

Coolant systems	Eye nozzle
	Tank capacity 200 L (type 16), 400 L (type 20)
	Pump motor 750 W
Chip air blower (blast)	Eyeball (switch w/coolant available)
Crossrail screw cover	
Column slideway covers	
Ladder and top beam fence	
Foundation	Foundation bolt type, chemical anchor type
Status indicator	3-color LED signal tower
Lamp in control box	

## Optional Accessories and Specifications

Spindle speeds	6,000 min <sup>-1</sup> , 10,000 min <sup>-1</sup>
AbsoScale detection	X-Y-Z axes
ATC magazine capacities	50, 72, or 100 tools
Tool shank/pull stud configuration	
Auto-positioning crossrail	W-axis NC (only with 24-tool ATC) 10 positions by M code commands
Auto pallet changer (APC)	2-pallet front loading
NC rotary table	
Oil mist coolant system	
Oil hose coolant system*1	Simple, high/low pressure switch
Thru-spindle coolant*1*2	Medium pressure, high/low pressure switch
Sub table	
Pendant operation panel (elevating)	Vertical travel: 600 mm (23.62 in.)
Manual angular spindlehead	Quill mount type
Manual universal spindlehead	Quill mount type
Chip conveyor	
T-slot width	22H7, 24H7
Additional cross groove (1)	20H7, 22H7, 24H7, depth 12 mm, in center
Automatic tool length compensation/ tool breakage detection	Touch sensor, vertical axis only
Auto work gauging, auto zero offset	
Hand lamp	LED spotlight
High column spec	200 mm, 400 mm
Machine foundation pit work	
Full enclosure shielding	Open ceiling type, with ceiling
Machine color	

\*1: Must select one or the other (oil hose or thru-spindle).

\*2: Okuma pull stud required with thru-spindle coolant.