

Machine Specifications

Model		MCR-S 25			MCR-S 30		
Item		25 x 40	25 x 50	25 x 65	30 x 40	30 x 50	30 x 65
Travel							
X-axis (table front / back)	mm (in.)	4,200 (165.35)	5,200 (204.72)	6,700 (263.78)	4,200 (165.35)	5,200 (204.72)	6,700 (263.78)
Y-axis (spindlehead horizontal)	mm (in.)	3,200 (125.98)			3,700 (145.67)		
Z-axis (ram vertical)	mm (in.)	800 [1,000] (31.50 [39.37])					
W-axis (crossrail vertical)	mm (in.)	1,000 (39.37)			1,200 (47.24)		
Effective width between columns	mm (in.)	2,650 (104.33)			3,150 (124.02)		
Table to spindle nose	mm (in.)	0 to 1,550 (0 to 61.02)			0 to 1,750 (0 to 68.90)		
Table							
Working surface	mm (in.)	2,000 x 4,000 (78.74 x 157.48)	2,000 x 5,000 (78.74 x 196.85)	2,000 x 6,500 (78.74 x 255.91)	2,500 x 4,000 (98.43 x 157.48)	2,500 x 5,000 (98.43 x 196.85)	2,500 x 6,500 (98.43 x 255.91)
Maximum load	kg (lb)	22,000 (48,400)	27,000 (59,400)	34,000 (74,800)	25,000 (55,000)	33,000 (72,600)	43,000 (94,600)
T-slots Width x No. <center pitch>	mm	24H7 x 11 (center 200, both ends 130)			24H7 x 13 (center 200, both ends 180)		
Height from machine bottom	mm (in.)	850 (33.46)			900 (35.43)		
Spindle							
Speed range	min ⁻¹	30 to 10,000					
Taper bore		7/24 taper No. 50					
Bearing diameter	mm (in.)	ø85 (3.35)					
Feedrates							
Rapid traverse	m/min (fpm)	X: 30, Y: 32 ¹ , Z: 15 (X: 98.43, Y: 104.99 ¹ , Z: 49.22)					
Feedrate	m/min (fpm)	X: 20, Y: 20, Z: 15 (X: 65.62, Y: 65.62, Z: 49.22)					
Average continuous feedrate	m/min (fpm)	X: 20, Y: 20, Z: 10 (X: 65.62, Y: 65.62, Z: 32.81)					
W axis traverse (crossrail)	m/min (fpm)	4.8 (15.75)					
Automatic Tool Changer							
Tool shank		MAS BT50					
Pull stud		MAS P50T-2					
Tool magazine capacity	tools	50 [80, 100, 120, 180]					
Max tool diameter	mm (in.)	w/ adjacent tools: ø135 (5.31), w/o adjacent tools: ø230 (9.06)					
Max tool length	mm (in.)	400 (15.75)					
Max tool weight	kg (lb)	25 (55)					
Tool selection		Fixed address					
Motors							
Spindle drive	kW (hp)	26/22 (35/30) (30 min/cont)					
Axis feed drives	kW (hp)	X: 14.0, Y: 6.4, Z: 5.2 x 2 (X: 18.6, Y: 8.5, Z: 6.9 x 2)					
Crossrail traverse drive	kW (hp)	W: 5.6 x 2 (7.5 x 2)					
Power Sources							
Electrical power supply	kVA	60 ²					
Compressed air supply	L/min (ANR)	1,040 (0.5 MPa or more) ²					
Machine Size							
Height	mm (in.)	6,420 [6,620] (252.76 [260.63])			6,700 [6,900] (263.78 [271.65])		
Floor space (machine only)	mm (in.)	7,370 x 10,730 (290.16 x 422.44)	7,370 x 12,830 (290.16 x 505.12)	7,370 x 16,430 (290.16 x 646.85)	7,870 x 10,730 (309.84 x 422.44)	7,870 x 12,830 (309.84 x 505.12)	7,870 x 16,430 (309.84 x 646.85)
Weight (machine only) ^{*3}	kg (lb)	46,000 (101,200)	52,000 (114,400)	60,000 (132,000)	53,000 (116,600)	58,000 (127,600)	67,000 (147,400)
CNC		OSP-P300MA					

[]: Optional

*1. Deceleration near both ends of Y-axis travel

*2. Standard specs

*3. With 50-tool magazine, 2-station AAC

Standard Accessories

Main motor and standard electricals		Spindle air curtain	
Spindle cooler, ram slideway, feed axis coolers	Oil controller	Magazine tool loader	
AbsoScale detection (X, Y, Z axis)		ATC magazine safety fence	
Thermo-Friendly Premium Note: Refer to the table below.	Includes TAS-S	Column slideway covers	
Synchronized NC W-axis		Crossrail clamp system	
Hydraulic unit		Seesaw pendant operation panel	Elevation: 600 mm
Automatic Tool Changer	No. of tools: 50	Work lamp	LED
Z axis double ball screw		Status indicator	3-color LED
Full length gutter	Both machine sides	Door interlock	
ATC air blower (blast)		Tool kit	
		Tapered bore cleaning bar	
		Tool box	

		Thermo-Friendly Premium	
Spindle thermal deformation control technology	Thermo Active Stabilizer—Spindle (TAS-S)	Thermal deformation from spindle rotation controlled with high accuracy.	
	Environmental thermal deformation control technology	Thermo Active Stabilizer—Construction for large machines (TAS-C²)	TAS-C ² : Thermo Active Stabilizer - Table Thermo Active Stabilizer - Construction In addition to TAS-T (highly accurate displacement control of table thermal growth), even with ambient temperature changes, providing optimal machine control to maintain required machining accuracies during ambient temperature changes.

Kit Specifications

Machine kit specs	Kit	S	A	P	AP
Attachment head ATC		●	●	●	●
Attachment head auto attaching/indexing unit (AAC)			●		●
Attachment head manual tool changing		●	●	●	●
Attachment head coolant lines		●	●	●	●
Auto pallet changer (APC) preparations				●	●
X-axis 2.0-m travel extension (side shuttle APC)				●	●

Optional Specifications

Automatic pallet changer	2-pallet side shuttle (2.0 m extension in X-axis travel)	Attachment head accelerator preps	
Optional Z-axis travel	1,000 mm	Angle head preps	
Coolant system		Auto attachment changer (AAC)	2 stations to 7 stations
Coolant tank	500 L, 1000 L	Attachment head	Please consult
Coolant heater/cooler		Dust-proofing	
Oil skimmer		NC rotary tables	NC rotary table, inclined rotary table
Filtration system		Mist collector	
Semi-dry machining		Dust collector	
Thru-spindle coolant *	High/low pressure switch (2 MPa, 7 MPa)	Full-enclosure shielding	Column front/back covers, w/o ceiling With ceiling (auto open/close)
Centralized coolant application		Auto tool length compensation & breakage detection	Touch sensor system, Laser sensor system
Coolant pump	0.75 kW, 1.1 kW	Auto gauging & auto zero offset	Touch probe
Oil mist coolant	Eyeball nozzle		
Oil-hole coolant system	High/low pressure switch (2 MPa), Simple system	In-machine conveyors	Full length, lift-up type Half length, lift-up type Full length gutter + gutter chip flusher
Chip air blower (blast)		Chip flushers	Crossrail shower (L/R column front), front/back gutters with telescopic covers, work wash gun
ATC tool magazine capacity	80, 100, 120, 180 tools	Collection conveyors	Hinged, hinge + scraper (w/ drum filter) Hinged + magnetic separator
ATC tools	Tool weight (35 kg x 100 mm)	Chip buckets	L type, H type
Tool shank profile	CAT 50, DIN 50	Pendant arms	Parallel linked, manual, electric, floor mounted, front/back travel types
Pull stud shape	MAS 1, special CAT	Foundation methods	Chemical anchors, no foundation bolts (foundation pad only)
Table T-slot width	20H7, 22H7, 28H7	Machine foundation pit work	50 to 1,400 mm, Please consult
Table cross slot width	Please consult for width depth, pitch	Optional control cabinet positions	
Optional table width	+300 mm		
High column specs	200 mm, 400 mm (please inquire for higher specs)		
Optional W axis travel	Standard travel can accommodate up to +200 mm, +400 mm		
Fire regulations compliance			
Automatic extinguisher			
Ram oil pan slush collector			
Door interlock	Type II for double-column machining center (memorandum required)		

*. Okuma pull stud required for thru-spindle coolant.