

Standard Machine Specifications

		HCN-4000
Stroke	X axis (column right/left)	560 mm (22.05")
	Y axis (spindle up/down)	640 mm (25.20")
	Z axis (table back/forth)	640 mm (25.20")
	Distance between table top to spindle nose	70 mm ~ 710 mm (2.76" ~ 27.95")
	Distance between pallet to spindle center	80 mm ~ 720 mm (3.15" ~ 28.35")
Table	Table size	400 mm × 400 mm (15.75" × 15.75")
	Max. workpiece dimensions	ø630 mm × 900 mm (ø24.80" × 35.43")
	Pallet load capacity (evenly distributed)	400 kg (881 lbs)
	Pallet top surface	5/8-11 UNC tapped holes 25 places 80 mm (3.15") pitch
	Minimum indexing angle increment	1°
	Indexing time	1.3 sec/90°
Spindle	Max. spindle speed	12000 rpm
	Spindle speed range	2-step (electric)
	Spindle taper	No.40
	Spindle bearing ID	ø70 mm (ø2.76")
	Spindle acceleration	1.48 sec (0 → 12000 rpm)
Feedrate	Rapid traverse rate (X, Y, Z axis)**	60000 mm/min (2362 ipm)
	Cutting feedrate (X, Y, Z axis)**	1 mm ~ 60000 mm/min (0.04 ~ 2362 ipm)
	Axis acceleration/deceleration	1.0 G
Automatic tool changer	Tool shank	No. 40
	Tool storage capacity	40
	Max. tool diameter/length (from gauge line)/weight (max. moment: 5.9 N·m (4.35 ft-lbs))	ø95 mm/420 mm/12 kg (ø3.74"/16.54"/26 lbs)
	Max. tool diameter with adjacent pockets empty	ø170 mm (ø6.69")
	Tool selection method	Random selection/shortest path
	Tool change time (chip-to-chip)	2.4 sec
Automatic pallet changer	Number of pallets	2
	Changing system	Rotary type
	Pallet change time	7.0 sec
Motors	Spindle motor (40% ED (30-min. rating)/cont. rating)	18.5 kW/15 kW (25 hp/20 hp)
	Flood coolant pump motor	730 W/1210 W (50 Hz /60 Hz)
Power requirement	Electrical power supply (40% ED (30-min. rating)/cont. rating)	47.4 kVA/42.4 kVA (50 Hz), 49.2 kVA/44.2 kVA (60 Hz)
	Air supply (pressure/flow rate)	0.5 MPa ~ 0.9 MPa (70 ~ 130 psi) / 210 L/min (7.42 ft ³ /min)*2
Machine size	Machine height	2713 mm (106.81")
	Width × length*2	2400 mm × 5454 mm (94.49" × 214.7")
	Machine weight	10720 kg (23633 lbs)

*1 Limited feedrate with continuous axis movement
*2 Including rear coolant tank and chip conveyor (ConSep2000)

		HCN-5000	HCN-5000S
Stroke	X axis (column right/left)	730 mm (28.74")	
	Y axis (spindle up/down)	730 mm (28.74")	
	Z axis (table back/forth)	800 mm (31.50")	
	Distance between table top to spindle nose	70 mm ~ 870 mm (2.76" ~ 34.25")	
	Distance between pallet to spindle center	100 mm ~ 830 mm (3.94" ~ 32.68")	
Table	Table size	500 mm × 500 mm (19.69" × 19.69")	
	Max. workpiece dimensions	ø800 mm × 1000 mm (ø31.5" × 39.37")	
	Pallet load capacity (evenly distributed)	500 kg (1102 lbs)	
	Pallet top surface	5/8-11 UNC tapped holes 25 places 100 mm (3.94") pitch	5/8-11 UNC tapped holes 8 places 200 mm (7.87") pitch
	Minimum indexing angle increment	1°	
	Indexing time	1.4 sec/90°	
Spindle	Max. spindle speed	12000 rpm	
	Spindle speed range	2-step (electric)	
	Spindle taper	No. 40	
	Spindle bearing ID	ø70 mm (ø2.76")	
	Spindle acceleration	1.48 sec. (0 → 12000 rpm)	
Feedrate	Rapid traverse rate (X, Y, Z axis)**	60000 mm/min (2362 ipm)	
	Cutting feedrate (X, Y, Z axis)**	1 mm ~ 60000 mm/min (0.04 ~ 2362 ipm)	
	Axis acceleration/deceleration	1.0 G	
Automatic tool changer	Tool shank	No. 40	
	Tool storage capacity	40	
	Max. tool diameter/length (from gauge line)/weight (max. moment: 5.9 N·m (4.35 ft-lbs))	ø95 mm/510 mm/12 kg (ø3.74"/20.08"/26 lbs)	
	Max. tool diameter with adjacent pockets empty	ø170 mm (ø6.69")	
	Tool selection method	Random selection/shortest path	
	Tool change time (chip-to-chip)	2.6 sec	
Automatic pallet changer	Number of pallets	2	1
	Changing system	Rotary type	—
	Pallet change time	8.0 sec	—
Motors	Spindle motor (40% ED (30-min. rating)/cont. rating)	18.5 kW/15 kW (25 hp/20 hp)	
	Flood coolant pump motor	730 W / 1210 W (50 Hz/60 Hz)	
Power requirement	Electrical power supply (40% ED (30-min. rating)/cont. rating)	48.4 kVA/43.4 kVA (50 Hz), 50.2 kVA/45.2 kVA (60 Hz)	
	Air supply (pressure/flow rate)	0.5 MPa ~ 0.9 MPa (70 ~ 130 psi) /85 L/min (3 ft ³ /min) *2	
Machine size	Machine height	2813 mm (110.75")	
	Width × length*2	2623 mm × 5769 mm (103.28" × 227.13")	2702 mm × 4706 mm (106.38" × 185.28")
	Machine weight	11430 kg (25198 lbs)	10750kg (23699 lbs)

*1 Limited feedrate with continuous axis movement
*2 210 L/min (7.42 ft³/min) for optional 14000, 18000 and 30000 rpm spindle
*3 Including rear coolant tank and chip conveyor (ConSep2000)

Standard Machine Specifications

		HCN-5000/50	HCN-5000/50S
Stroke	X axis (column right/left)	730 mm (28.74")	
	Y axis (spindle up/down)	730 mm (28.74")	
	Z axis (table back/forth)	800 mm (31.5")	
	Distance between table top to spindle nose	70 mm ~ 870 mm (2.76" ~ 34.25")	
	Distance between pallet to spindle center	100 mm ~ 830 mm (3.94" ~ 32.68")	
Table	Table size	500 mm × 500 mm (19.69" × 19.69")	
	Max. workpiece dimensions	ø800 mm × 1000 mm (ø31.5" × 39.37")	
	Pallet load capacity (evenly distributed)	500 kg (1102 lbs)	
	Pallet top surface	5/8-11 UNC tapped holes 25 places 100 mm (3.94") pitch	5/8-11 UNC tapped holes 8 places 200 mm (7.87") pitch
	Minimum indexing angle increment	1°	
	Indexing time	1.4 sec/90°	
Spindle	Max. spindle speed	10000 rpm	
	Spindle speed range	2-step (electric)	
	Spindle taper	No.50	
	Spindle bearing ID	ø90 mm (3.54")	
	Spindle acceleration	1.2 sec (0 → 10000 rpm)	
Feedrate	Rapid traverse rate (X, Y, Z axis)**	60000 mm/min (2362 ipm)	
	Cutting feedrate (X, Y, Z axis)**	1 mm ~ 60000 mm/min (0.04 ~ 2362 ipm)	
	Axis acceleration/deceleration	0.9 G/1.0 G	
Automatic tool changer	Tool shank	No. 50	
	Tool storage capacity	43	
	Max. tool diameter/length (from gauge line)/weight	ø125 mm/510 mm/30 kg (ø4.92"/20.08"/66.14 lbs) (max. moment: 29.4 N·m) (22 ft·lbs)	
	Max. tool diameter with adjacent pockets empty	ø250 mm (ø9.84")	
	Tool selection method	Random selection/shortest path	
	Tool change time (chip-to-chip)	3.5 sec	
Automatic pallet changer	Number of pallets	2	1
	Changing system	Rotary type	—
	Pallet change time	8.0 sec	—
Motors	Spindle motor (40% ED (30-min. rating)/cont. rating)	30 kW/22 kW (40 hp/30 hp)	
	Flood coolant pump motor	730 W/1210 W (50 Hz/60 Hz)	
Power requirement	Electrical power supply (40% ED (30-min. rating)/cont. rating)	65.7 kVA/54.2 kVA (50 Hz), 67.6 kVA/56.0 kVA (60 Hz)	
	Air supply (pressure/flow rate)	0.5 MPa ~ 0.9 MPa (70 ~ 130 psi)/210 L/min (7.42 ft³/min)	
Machine size	Machine height	2813 mm (110.75")	
	Width × length*2	2685 mm × 5804 mm (105.72" × 228.49")	2802 mm × 4910 mm (110.32" × 193.31")
	Machine weight	12830 kg (28285 lbs)	12150 kg (26786 lbs)

*1 Limited feedrate with continuous axis movement
 *2 Including rear coolant tank and chip conveyor (ConSep2000)

		HCN-6000
Stroke	X axis (column right/left)	800 mm (31.50")
	Y axis (spindle up/down)	800 mm (31.50")
	Z axis (table back/forth)	800 mm (31.50")
	Distance between table top to spindle nose	150 mm ~ 950 mm (5.91" ~ 37.4")
	Distance between pallet to spindle center	100 mm ~ 900 mm (3.94" ~ 35.43")
Table	Table size	500 mm × 500 mm (19.69" × 19.69")
	Max. workpiece dimensions	ø900 mm × 1000 mm (ø35.43" × 39.37")
	Pallet load capacity (evenly distributed)	1000 kg (2205 lbs)
	Pallet top surface	5/8-11 UNC tapped holes 25 places at 100 mm (3.94") pitch
	Minimum indexing angle increment	1°
	Indexing time	1.9 sec/90°
Spindle	Max. spindle speed	10000 rpm
	Spindle speed range	2-step (electric)
	Spindle taper	No. 50
	Spindle bearing ID	ø100 mm (ø3.94")
	Spindle acceleration	3.0 sec (0 → 10000 rpm)
Feedrate	Rapid traverse rate (X, Y, Z axis)**	60000 mm/min (2362 ipm)
	Cutting feedrate (X, Y, Z axis)**	1 mm × 60000 mm/min (0.04 ~ 2362 ipm)
	Axis acceleration/deceleration	0.7 G
Automatic tool changer	Tool shank	No. 50
	Tool storage capacity	43
	Max. tool diameter/length (from gauge line)/weight	ø125 mm/500 mm/30 kg (ø4.92"/19.69"/66 lbs) (max. moment: 29.4 N·m) (22 ft·lbs)
	Max. tool diameter with adjacent pockets empty	ø250 mm*2(ø9.84")
	Tool selection method	Random selection, shortest path
	Tool change time (chip-to-chip)	3.5 sec
Automatic pallet changer	Number of pallets	2
	Changing system	Rotary type
	Pallet change time	9.0 sec
Motors	Spindle motor (40% ED (30-min. rating)/cont. rating)	37 kW/30 kW (50 hp/40 hp)
	Flood coolant pump motor	720 W/1180 W (50 Hz/60 Hz)
Power requirement	Electrical power supply (40% ED (30-min. rating)/cont. rating)	87.90 kVA/77.97 kVA (50 Hz), 89.30 kVA/79.38 kVA (60 Hz)
	Air supply (pressure/flow rate)	0.5 MPa ~ 0.9 MPa (70 ~ 130 psi)/350 L /min (12.36 ft³/min)
Machine size	Machine height	3380 mm (133.07")
	Width × length*3	3091 mm × 6813 mm (121.70" × 268.24")
	Machine weight	15800 kg (34833 lbs)

*1 Limited feedrate with continuous axis movement
 *2 When adjacent pockets are empty and pockets next to them have tools less than ø240 mm (ø9.45"), maximum tool diameter is ø260 mm (ø10.24")
 *3 Including rear coolant tank and chip conveyor (ConSep2000 II)