

Standard Machine Specifications

		HCN-6800		HCN-8800	
		Standard	Hard Metal package	Standard	Hard Metal package
Stroke	X axis (column right/left)	1050 mm (41.34")		1400 mm (55.12")	
	Y axis (spindle up/down)	900 mm (35.43")		1200 mm (47.24")	
	Z axis (table back/forth)	980 mm (38.58")		1325 mm (52.17")	
	Distance between table center to spindle nose	100 mm ~ 1080 mm (3.94" ~ 42.52")		100 mm ~ 1425 mm (3.94" ~ 56.1")	
	Distance between pallet top to spindle center	100 mm ~ 1000 mm (3.94" ~ 39.37")		100 mm ~ 1300 mm (3.94" ~ 51.18")	
	Table	Pallet size	630 mm × 630 mm (24.8" × 24.8")		800 mm × 800 mm (31.5" × 31.5")
Max. workpiece dimensions		ø1050 mm × 1300 mm (ø41.34" × 51.18")		ø1450 mm × 1450 mm (ø57.09" × 57.09")	
Pallet load capacity (evenly distributed)		1500 kg (3307 lbs)		2200 kg (4850 lbs)	
Pallet top surface		M16 × P2 (5/8-11 UNC), tapped 25 places, pitch 125 mm (4.25")		M16 × P2 (5/8-11 UNC), tapped 25 places, pitch 160 mm (6.3")	
Minimum indexing angle increment		1°		1°	
Indexing time		1.9 sec/90°		3.2 sec/90°	
Spindle		Max. spindle speed	10000 rpm	6000 rpm	10000 rpm
	Spindle gear range	2 (electric)	2 (electric)	2 (electric)	2 (electric)
	Spindle taper	7/24 taper No. 50	HSK-A100	7/24 taper No. 50	HSK-A100
	Spindle bearing ID	ø100 mm (ø3.94")	ø120 mm (ø4.72")	ø100 mm (ø3.94")	ø120 mm (ø4.72")
	Spindle acceleration	3.0 sec (0 → 10000 rpm)	3.5 sec (0 → 6000 rpm)	3.0 sec (0 → 10000 rpm)	3.5 sec (0 → 6000 rpm)
	Feedrate	Rapid traverse rate (X, Y, Z axis)*1	60 m/min (2362 ipm)		60 m/min (2362 ipm)
Cutting feedrate (X, Y, Z axis)*1		1 ~ 60000 mm/min (2362 ipm)		1 ~ 60000 mm/min (2362 ipm)	
Axis acceleration/deceleration		0.8 G	0.6 G	0.5 G	
Automatic tool changer	Tool shank	CAT No. 50	HSK-A100	CAT No. 50	HSK-A100
	Tool magazine capacity	43		60	
	Max. tool dia./length (from gauge line)/weight	ø125 mm/630 mm/30 kg (ø4.92"/24.8"/66 lbs)		ø125 mm/630 mm/30 kg (ø4.92"/24.8"/66 lbs)	
	Max. tool diameter (when adjacent pockets empty)	ø250 mm (ø9.84")*2		ø250 mm (ø9.84")*2	
	Tool selection method	Random selection/shortest path		Random selection/shortest path	
	Tool change time (chip-to-chip)	4.2 sec		5.0 sec	
Automatic pallet changer	Number of pallets	2		2	
	Change system	Rotary type		Rotary type	
	Pallet change time	10.0 sec		13.0 sec	
Motors	Spindle motor (30-min. rating/cont. rating)	37 kW/30 kW (50 hp/40 hp)	—	37 kW/30 kW (50 hp/40 hp)	—
	Spindle motor (40% ED/cont. rating)	—	37 kW/30 kW (50 hp/40 hp)	—	37 kW / 30 kW (50 HP/40 HP)
Power requirement	60 Hz Motor (30-min. rating/cont. rating)	92.44 kVA/82.51 kVA	—	98.68 kVA/88.75 kVA	—
	60 Hz Motor (40% ED/cont. rating)	—	105.08 kVA/95.10 kVA	—	107.35 kVA/97.36 kVA
	50 Hz Motor (30-min. rating/cont. rating)	90.55 kVA/80.61 kVA	—	96.79 kVA/86.86 kVA	—
	50 Hz Motor (40% ED/cont. rating)	—	103.19 kVA/93.21 kVA	—	105.46 kVA/95.47 kVA
	Air supply (pressure/volume)	0.5 MPa (73 psi) ~ 0.9 MPa (131 psi)/350 L/min (12.36 ft³/min)		0.5 MPa (73 psi) ~ 0.9 MPa (131 psi)/350 L/min (12.36 ft³/min)	
Machine size	Machine height	3400 mm (133.86")		3726 mm (146.69")	
	Floor space requirement	3635 mm × 6796 mm (143.11" × 267.56")		4208 mm × 8186 mm (165.67" × 322.28")	
	Machine weight	19000 kg (41887 lbs)	21000 kg (46296 lbs)	30000 kg (66138 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")

		HCN-10800		HCN-12800	
		Standard	Hard Metal package	Standard	Hard Metal package
Stroke	X axis (column right/left)	1700 mm (66.93")		2200 mm (86.61")	
	Y axis (spindle up/down)	1400 mm (55.12")		1600 mm (62.99")	
	Z axis (table back/forth)	1525 mm (60.04")		1850 mm (72.83")	
	Distance between table center to spindle nose	150 mm ~ 1675 mm (5.91" ~ 65.94")		250 mm ~ 2100 mm (9.84" ~ 82.68")	
	Distance between pallet top to spindle center	100 mm ~ 1500 mm (3.94" ~ 59.06")		100 mm ~ 1700 mm (3.94" ~ 66.93")	
	Table	Pallet size	1000 mm × 1000 mm (39.37" × 39.37")		1250 mm × 1250 mm (49.21" × 49.21")
Max. workpiece dimensions		ø2050 mm × 1600 mm (ø80.71" × 62.99")		ø2400 mm × 2000 mm (ø94.49" × 78.74")	
Pallet load capacity (evenly distributed)		3000 kg (6614 lbs)		6000 kg (13228 lbs)	
Pallet top surface		M20 (3/4-10 UNC), tapped 81 places, pitch 100 mm (3.94")		M20 (3/4-10 UNC), tapped 81 places, pitch 125 mm (4.92")	
Minimum indexing angle increment		0.0001°		0.0001°	
Indexing time		2.4 sec/90°		3.6 sec/90°	
Spindle		Max. spindle speed	10000 rpm	6000 rpm	10000 rpm
	Spindle gear range	2 (electric)	2 (electric)	2 (electric)	2 (electric)
	Spindle taper	7/24 taper No. 50	HSK-A100	7/24 taper No. 50	HSK-A100
	Spindle bearing size ID	ø100 mm (ø3.94")	ø120 mm (ø4.72")	ø100 mm (ø3.94")	ø120 mm (ø4.72")
	Spindle acceleration	3.0 sec (0 → 10000 rpm)	3.5 sec (0 → 6000 rpm)	3.0 sec (0 → 10000 rpm)	2.3 sec (0 → 6000 rpm)
	Feedrate	Rapid traverse rate (X, Y, Z axis)*1	52 m/min (2047 ipm)		43 m/min (1693 ipm)
Cutting feedrate (X, Y, Z axis)*1		1 ~ 52000 mm/min		1 ~ 43000 mm/min (1693 ipm)	
Axis acceleration/deceleration		0.4 G		X, Y axis: 0.35 G/Z axis: 0.3 G	
Automatic tool changer	Tool shank	CAT No. 50	HSK-A100	CAT No. 50	HSK-A100
	Tool magazine capacity	80		80	
	Max. tool dia./length (from gauge line)/weight	ø135 mm /650 mm/30 kg (ø5.31"/25.59"/66 lbs)		ø135 mm/800 mm/30 kg (ø5.31"/31.5"/66 lbs)	
	Max. tool diameter (when adjacent pockets empty)	ø260 mm (ø10.24")*2		ø260 mm (ø10.24")*2	
	Tool selection method	Random selection/shortest path		Random selection/shortest path	
	Tool change time (chip-to-chip)	5.7 sec		6.8 sec	
Automatic pallet changer	Number of pallets	2		2	
	Change system	Rotary type		Shuttle type	
	Pallet change time	25 sec		48 sec	
Motors	Spindle motor (30-min. rating/cont. rating)	37 kW/30 kW (50 hp/40 hp)	—	37 kW/30 kW (50 hp/40 hp)	—
	Spindle motor (40% ED/cont. rating)	—	37 kW/30 kW (50 hp/40 hp)	—	56 kW/45 kW (75 hp/60 hp)
Power requirement	60 Hz Motor (30-min. rating/cont. rating)	107.84 kVA/97.86 kVA	—	117.68 kVA/107.75 kVA	—
	60 Hz Motor (40% ED/cont. rating)	—	116.04 kVA/106.06 kVA	—	153.69 kVA/135.08 kVA
	50 Hz Motor (30-min. rating/cont. rating)	105.95 kVA/95.97 kVA	—	115.36 kVA/105.43 kVA	—
	50 Hz Motor (40% ED/cont. rating)	—	114.15 kVA/104.17 kVA	—	151.37 kVA/132.76 kVA
	Air supply (pressure/volume)	0.5 MPa (73 psi) ~ 0.9 MPa (131 psi)/600 L/min (21.19 ft³/min)		0.5 MPa (73 psi) ~ 0.9 MPa (131 psi)/700 L/min (24.72 ft³/min)	
Machine size	Machine height	4052 mm (159.53")		4511 mm (177.60")	
	Floor space requirement	6081 mm × 8868 mm (239.41" × 349.13")		7047 mm × 10896 mm (277.44" × 428.98")	
	Machine weight	45000 kg (99206 lbs)		57500 kg (126764 lbs)	

\*1 Limited feedrate with continuous axis movement

\*2 When adjacent pockets are empty and pockets next to them have tools less than ø160 mm (ø6.30"), maximum tool diameter is ø360 mm (ø14.17")