

## NEW SERIES



### N7

New BOX in BOX® machine  
for High Productivity



### HN63E-5X

Trunnion type 5-axis  
machine with High Rigidity  
and Accuracy



### HN800-V

New style boxway,  
V-slide, machine for High  
Productivity and Accuracy

# MACHINE TOOLS



Best solution for Accuracy, Rigidity and Productivity



A World Leader of Horizontal Machining Centers



<http://www.n-mtec.com>

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Established  
**1895**

**精**  
HIGH ACCURACY

**剛**  
HIGH RIGIDITY

**速**  
HIGH SPEED

Niigata Machine Techno Co., Ltd. offers an International Top Level Line-Up, from Heavy Cutting to High Accuracy Processing.

### Best solution for all of "MONOZUKURI", manufacturing

The brand name NIIGATA on a machine tool has stood for Quality, Reliability, and Innovation for more than 100 years. Niigata Machine Techno Co., Ltd. continues the tradition as A World Leader in Horizontal Machining Centers. Eliminate risks and increase your profits! Choose machines from the accurate heavy duty boxway "HN" series & "PN" series, or "SPN" series & "N7", that is the high-speed, rigid, stationary-column, linear-roller guide featured. Choose NIIGATA with confidence.



# OLDEST & NEWEST

ONE OF THE OLDEST COMPANY IS GENERATING THE NEWEST TECHNOLOGIES !



#### Summary of Niigata Machine Techno Co., Ltd.

1895 June	Niigata Engineering Co., Ltd. was established.	1988 October	100,000rpm spindle Model UHS10 developed. (First 100,000rpm spindle in the world)
1917 November	The production of Universal head milling machine started.	1994 July	High Speed, Box in Box® construction, Horizontal Machining Center Model: SPN50 developed.
1929 November	Machine Tool production was moved to Niigata city.	1999 October	High Speed, high output, Horizontal production center Model: SPN50-HO developed.
1954 July	Technical Partnership with Sundstrand (USA).	2002 September	5th generation, Heavy Duty Boxway style Horizontal Machining center Model: HN80D developed.
1961 September	NC milling machine Model: 22MVN developed.	2005 September	New world class productivity, High production center Model: SPN01 series developed.
1968 September	Machining center Model: 50 DIU (5 axis) developed.	2014 November	Horizontal Machining Center with V-slide Model: HN800-V developed.
1969 June	New Machine Tool Plant completed in Niigata-city (current location).	2014 November	Simultaneous 5-axis Machining Center Model: HN50E-5X developed.
1972 October	Niigata Horizontal Machining Center Model: HN-series developed. (First column traverse style machining center in Japan.)	2015 October	Horizontal Machining Center for #40 spindle: PN series developed.
1976 August	Machining center unmanned operational system developed. (A world leader in FMS technology.)	2016 January	Simultaneous 5-axis Machining Center Model: HN63E-5X developed.
1977 September	Sales in Europe started (first presence in Europe).	2017 June	New BOX in BOX® machine, N7 developed.
1980 April	Sales in USA started (first presence at Chicago show).		
1987 April	Total of 10,000units of Universal milling machine (UM series) shipped.		

# SUPERIOR HORIZONTAL MACHINING CENTER LINE UP FOR HEAVY DUTY & HIGH ACCURACY MACHINING

<p><b>HIGH ACCURACY, PRODUCTIVITY</b></p> <p><b>Roller Guide Machine</b></p> <ul style="list-style-type: none"> <li>High Accuracy</li> <li>High Productivity</li> </ul> <p><b>BOX in BOX®</b></p> <p><b>SPN SERIES N7</b></p> <p>Top class Horizontal Machining Center SPN series equipped with double Box Structure aims to achieve better longer volumetric accuracy &amp; to maintain stable accuracy, even after over 3 years operation. Main Rigid frame structure achieves Heavy duty &amp; High Accuracy Machining by supporting Heavy mass Rapid move.</p>	<p>Pallet size... □ 500</p> <p><b>SPN503</b></p> 	<p>Pallet size... □ 630</p> <p><b>N7</b></p> 	<p>Pallet size... □ 800</p> <p><b>SPN901</b></p> 	<p>Pallet size... □ 1000/ □ 1250</p>	<p>Pallet size... □ 1320/ □ 1600</p>
	<p><b>Hybrid Guide System Machine</b></p> <ul style="list-style-type: none"> <li>High Rigidity</li> <li>High Productivity</li> </ul> <p><b>HN-S SERIES</b></p> <p>Large/Giant component envelope is achieved by longer axes travel. Niigata Hybrid Guide System, Column traverse structure enables unrevealed Heavy duty machining capability.</p>	<p><b>HN50E</b></p> 	<p><b>HN63E</b></p> 	<p><b>HN800-V</b></p> 	<p><b>HN1000-S/ HN1250-S</b></p> 
<p><b>BOXWAY, HIGH RIGIDITY</b></p> <p><b>Boxway Machine</b></p> <ul style="list-style-type: none"> <li>Biggest workpiece size in machining area</li> <li>Heavy Duty Cutting</li> <li>High Rigidity</li> </ul> <p><b>HN SERIES</b></p> <p>Large/Giant component envelope is achieved by longer axes travel. Niigata proved boxway, Column traverse structure enables unrevealed Heavy duty machining capability.</p> <p>● V slideway Machine</p> <p><b>HN800-V</b></p>	<p><b>PN400 (Pallet size... □ 400)</b></p> 	<p><b>PN500 (Pallet size... □ 500)</b></p> 			
<p><b>BOXWAY, HIGH PRODUCTIVITY</b></p> <p><b>Boxway Machine</b></p> <ul style="list-style-type: none"> <li>BT40 Taper Spindle</li> <li>Heavy Duty Machining</li> <li>High Productivity</li> </ul> <p><b>PN SERIES</b></p> <p>#40 Taper Spindle Machine with its heavy duty machining capable equivalent to #50 Model's. High productivity achieved by 61 m/min rapid speed with boxway structure.</p>					

## SPN SERIES

ITEM	SPN503	N7	SPN901	
TRAVEL	X axis travel (saddle side to side)	800mm (31.5")	1000mm (39.4")	1500mm (59.1")
	Y axis travel (spindle head up and down)	750mm (29.5")	950mm (37.4")	1300mm (51.2")
	Z axis travel (table front and rear)	750mm (29.5")	1050mm (41.3")	1150mm (45.3")
TABLE	Pallet size	500 x 500mm (19.7 x 19.7")	630 x 630mm (24.8 x 24.8")	800 x 800mm (31.5 x 31.5")
	Table increments	1" [0.001"]	1" [0.001"]	1" [0.001"]
	Maximum mass on pallet (uniform load)	600kg (1320 lbs)	1200kg (2640 lbs)	2500kg (5500 lbs)
SPINDLE	Spindle speeds	10000 min <sup>-1</sup> (rpm) [15000 / 12000 / 8000 min <sup>-1</sup> (rpm)]	12000 min <sup>-1</sup> (rpm)	8000 min <sup>-1</sup> (rpm) [15000 min <sup>-1</sup> (rpm)]
	Spindle drive motor	AC30/25kW (AC40/34HP)	AC30/25kW (AC40/34HP)	AC30/22kW (AC40/29.5HP)
	Spindle max. torque	420N-m (310 ft.lbs)	420N-m (310 ft.lbs)	600N-m (443 ft.lbs) [1009N-m (744ft.lbs)]
	Spindle taper	No.50	No.50	No.50
RAPID TRAVERSE	X, Y, Z axis	50m/min (1968 ipm) [61m/min (2400 ipm)]	60m/min (2362 ipm)	50m/min (1968 ipm)
ATC	Tool magazine capacity	62 [88/128]	60 [64/88/126]	60 [Matrix 126/178/230]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ800 x 1000mm (φ31.5 x 39.3")	φ1100 x 1200mm (φ43.3 x 47.2")	φ1750 x 1400mm (φ68.9 x 55.1")

[ ] Optional specifications \*NC table only

## HN-S SERIES

ITEM	HN1000-S	HN1250-S	HN1600-S	
TRAVEL	X axis travel (longitudinal table)	2030mm (79.9")	2200mm (86.61")	3050mm (120.1")
	Y axis travel (spindle head up and down)	1650mm (64.9") [1800mm (70.87")]	1800mm (70.87") [1650mm (64.9")]	2200mm (86.61")
	Z axis travel (table front and rear)	1200mm (47.24")	1200mm (47.24")	1420mm (55.9")
TABLE	Pallet size	1000 x 1000mm (39.4 x 39.4")	1250 x 1000mm (49.2 x 39.4")	1600 x 1320mm (62.99 x 51.97")
	Table increments	1" [0.001"]	1" [0.001"]	0.001"
	Maximum mass on pallet (uniform load)	3500kg (7700 lbs) [5000kg (11000 lbs)*]	3500kg (7700 lbs) [5000kg (11000 lbs)*]	8000kg (17600 lbs) [10000kg (22000 lbs)*]
SPINDLE	Spindle speeds	6000 min <sup>-1</sup> (rpm) [15000 min <sup>-1</sup> (rpm)]	6000 min <sup>-1</sup> (rpm) [15000 min <sup>-1</sup> (rpm)]	6000 min <sup>-1</sup> (rpm) [15000 min <sup>-1</sup> (rpm)]
	Spindle drive motor	AC37/30kW (AC50/40HP)	AC37/30kW (AC50/40HP)	AC37/30kW (AC50/40HP)
	Spindle max. torque	1200N-m (886 ft.lbs)	1200N-m (886 ft.lbs)	1200N-m (886 ft.lbs)
	Spindle taper	No.50	No.50	No.50
RAPID TRAVERSE	X, Y, Z axis	40m/min (1575 ipm)	40m/min (1575 ipm)	30m/min (1181 ipm)
ATC	Tool magazine capacity	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ2300 x 1850mm (φ90.6 x 72.8")	φ2500 x 2000mm (φ98.4 x 78.7")	φ3200 x 3000mm (φ126 x 118.1")

[ ] Optional specifications \*NC table only

## HN SERIES

ITEM	HN50E	HN63E	HN800-V	HN1000-II
TRAVEL	X axis travel (longitudinal table)	800mm (31.5")	1080mm (42.5")	1530mm (60.2")
	Y axis travel (spindle head up and down)	700mm (27.5")	930mm (36.6")	1230mm (48.4")
	Z axis travel (column in & out)	580mm (22.8")	830mm (32.7")	1020mm (40.2")
TABLE	Pallet size	500 x 500mm (19.7 x 19.7")	630 x 630mm (24.8 x 24.8")	800 x 800mm (31.5 x 31.5")
	Table increments	1" [0.001"]	1" [0.001"]	1" [0.001"]
	Maximum mass on pallet (uniform load)	800kg (1760 lbs)	1200kg (2640 lbs)	2500kg (5500 lbs)
SPINDLE	Spindle speeds	6000 min <sup>-1</sup> (rpm)	6000 min <sup>-1</sup> (rpm)	6000 min <sup>-1</sup> (rpm) [15000 min <sup>-1</sup> (rpm)]
	Spindle drive motor	AC26/22kW (AC35/30HP)	AC26/22kW (AC35/30HP)	AC37/30kW (AC50/40HP)
	Spindle max. torque	901N-m (665 ft.lbs)	901N-m (665 ft.lbs)	1200N-m (886 ft.lbs)
	Spindle taper	No.50	No.50	No.50
RAPID TRAVERSE	X, Y, Z axis	30m/min (1180 ipm)	30m/min (1180 ipm)	50m/min (1968 ipm)
ATC	Tool magazine capacity	60 [119/179, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ800 x 800mm (φ31.5 x 31.5")	φ1080 x 1000mm (φ42.5 x 39.4")	φ1750 x 1400mm (φ68.9 x 55.1")

[ ] Optional specifications \*NC table only

## HN SERIES

ITEM	HN130D	PN SERIES	PN400	PN500
TRAVEL	X axis travel (longitudinal table)	3050mm (120.1")	X axis travel (column side to side)	630mm (24.8")
	Y axis travel (spindle head up and down)	2200mm (86.61")	Y axis travel (spindle head up and down)	600mm (23.6")
	Z axis travel (column in & out)	1420mm (55.9")	Z axis travel (table front and rear)	660mm (26.0")
TABLE	Pallet size	1320 x 1320mm (51.97 x 51.97")	Pallet size	400 x 400mm (15.7 x 15.7")
	Table increments	0.001"	Table increments	0.001"
	Maximum mass on pallet (uniform load)	8000kg (17600 lbs) [10000kg (22000 lbs)*]	Maximum mass on pallet (uniform load)	400kg (880 lbs)
SPINDLE	Spindle speeds	6000 min <sup>-1</sup> (rpm) [15000 min <sup>-1</sup> (rpm)]	Spindle speeds	10000 min <sup>-1</sup> (rpm) [15000 min <sup>-1</sup> (rpm)]
	Spindle drive motor	AC37/30kW (AC50/40HP)	Spindle drive motor	AC37/22kW (AC50/30HP)
	Spindle max. torque	1200N-m (886 ft.lbs)	Spindle max. torque	303N-m (224 ft.lbs)
	Spindle taper	No.50	Spindle taper	No.40
RAPID TRAVERSE	X, Y, Z axis	18/12/12m/min (709/472/472 ipm)	X, Y, Z axis	61m/min (2400 ipm)
ATC	Tool magazine capacity	62 [88/128, Matrix 126/178/230]	Tool magazine capacity	40 [60/88/126]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ3200 x 3000mm (φ126 x 118.1")	Swing diameter x height	φ630 x 700mm (φ24.8 x 27.55")

[ ] Optional specifications \*NC table only

[ ] Optional specifications

# SUPERIOR HORIZONTAL MACHINING CENTER LINE UP FOR VERSATILE MACHINING

	Pallet size... 500	Pallet size... 630	Pallet size... 800	Pallet size... 1000/1250	Pallet size... 1320/1600
<p><b>MACHINING CENTER WITH VERSATILE FUNCTION</b></p> <ul style="list-style-type: none"> <li>Versatile Machining</li> <li>High Rigidity</li> <li>Heavy Duty Machining</li> </ul> <p><b>Facing Center</b> <b>HN-FC SERIES</b> Machine with versatile spindle, U axis and W axis function</p>					
<ul style="list-style-type: none"> <li>Versatile Machining</li> <li>High Rigidity</li> <li>Heavy Duty Machining</li> </ul> <p><b>Bar Machine</b> <b>HN-BAR SERIES</b> Boxway STYLE machine with boring spindle</p> <p><b>HN-S-BAR SERIES</b> Hybrid guide system machine with boring spindle</p>					
<p><b>TRUNION TYPE 5-AXIS HORIZONTAL MACHINING CENTER</b></p> <ul style="list-style-type: none"> <li>Heavy Duty Machining Type 5-Axis Machine</li> </ul> <p><b>Boxway Style</b> <b>HN-5X SERIES</b> 5-axis machine that accumulates the results of difficult-to-cut material processing and efficiently processes</p>					

## HN-FC SERIES

ITEM		HN80D-II FC	HN100D-II FC	HN130D-FC
TRAVEL	X axis travel (longitudinal table)	1530mm (60.2")	2030mm (79.9")	3050mm (120.1")
	Y axis travel (spindle head up and down)	900mm (35.4")	1300mm (51.1")	1850mm (76.8")
	Z axis travel (column in & out)	1020mm (40.2")	1420mm (55.9")	1420mm (55.9")
	U axis travel (facing slide)	130mm (5.1")	130mm (5.1") [230mm (9.0")]	130mm (5.1") [230mm (9.0")]
	W axis travel (bar spindle in & out)	300mm (11.8")	300mm (11.8")	300mm (11.8")
TABLE	Pallet size	800 x 800mm (31.5 x 31.5")	1000 x 1000mm (39.4 x 39.4")	1320 x 1320mm (51.97 x 51.97")
	Table increments	1° [0.001"]	1° [0.001"]	0.001°
	Maximum mass on pallet (uniform load)	2500kg (5500 lbs)	3500kg (7700 lbs) [5000kg (11000 lbs)*]	8000kg (17600 lbs)* [10000kg (22000 lbs)*]
SPINDLE	Spindle speeds (W axis)	2500 min <sup>-1</sup> (rpm)	2500 min <sup>-1</sup> (rpm)	2500 min <sup>-1</sup> (rpm)
	Spindle drive motor	AC26/22kW (AC35/30HP)	AC26/22kW (AC35/30HP)	AC26/22kW (AC35/30HP)
	W axis diameter	φ130mm (5.1")	φ130mm (5.1")	φ130mm (5.1")
	Spindle max. torque (W axis)	659.5N·m (487 ft.lbs)	659.5N·m (487 ft.lbs)	659.5N·m (487 ft.lbs)
	Spindle taper (W axis)	No.50	No.50	No.50
	Facing head speed (U axis)	600 min <sup>-1</sup> (rpm)	600 min <sup>-1</sup> (rpm)	600 min <sup>-1</sup> (rpm)
	Spindle max. torque (U axis)	1486N·m (1097 ft.lbs)	1486N·m (1097 ft.lbs)	1486N·m (1097 ft.lbs)
	Spindle taper (U axis)	No.50 short taper	No.50 short taper	No.50 short taper
RAPID TRAVERSE	X axis	32m/min (1260 ipm)	20m/min (787 ipm)	18m/min (709 ipm)
	Y axis	15m/min (591 ipm)	12m/min (472 ipm)	12m/min (472 ipm)
	Z axis	20m/min (787 ipm)	15m/min (591 ipm)	12m/min (472 ipm)
	U axis	5m/min (197 ipm)	5m/min (197 ipm)	5m/min (197 ipm)
	W axis	5m/min (197 ipm)	5m/min (197 ipm)	5m/min (197 ipm)
ATC	Tool magazine capacity	62 [88/128/175/255]	62 [88/128/175/255]	62 [88/128/175/255]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ1750 x 1400mm (φ68.9 x 55.1")	φ2300 x 1850mm (φ90.6 x 72.8")	φ3200 x 3000mm (φ126 x 118.1")

[ ] Optional specifications \*NC table only

## HN-5X SERIES

ITEM		HN50E-5X	HN63E-5X
TRAVEL	X axis travel (longitudinal table)	800mm (31.5")	900mm (35.4")
	Y axis travel (spindle head up and down)	930mm (36.6")	930mm (36.6")
	Z axis travel (column in and out)	830mm (32.7")	830mm (32.7")
TABLE	A axis	+10° ~ -100°	+10° ~ -100°
	B axis	360°	360°
	Pallet size	500 x 500mm (19.7 x 19.7")	630 x 630mm (24.8 x 24.8")
SPINDLE	Table increments	0.001°	0.001°
	Maximum mass on pallet (uniform load)	600kg (1320 lbs)	1000kg (2200 lbs)
	Spindle speeds	6000 min <sup>-1</sup> (rpm) [12000 min <sup>-1</sup> (rpm)]	6000 min <sup>-1</sup> (rpm) [12000 min <sup>-1</sup> (rpm)]
	Spindle drive motor	AC26/22kW (AC35/30HP)	AC26/22kW (AC35/30HP)
	Spindle max. torque	901N·m (665 ft.lbs)	901N·m (665 ft.lbs)
RAPID TRAVERSE	Spindle taper	No.50	No.50
	X, Y, Z axis	30m/min (1180 ipm)	30m/min (1180 ipm)
	A, B axis	A: 8 min <sup>-1</sup> (rpm) B: 20 min <sup>-1</sup> (rpm)	A: 6 min <sup>-1</sup> (rpm) B: 15 min <sup>-1</sup> (rpm)
ATC	Tool magazine capacity	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ750 x 700mm (φ29.5 x 27.55")	φ950 x 800mm (φ37.4 x 31.5")

[ ] Optional specifications \*NC table only

## HN-BAR SERIES

ITEM		HN800-V BAR	HN100D-II BAR	HN130D-BAR
TRAVEL	X axis travel (longitudinal table)	1530mm (60.2")	2030mm (79.9")	3050mm (120.1")
	Y axis travel (spindle head up and down)	1100mm (43.3")	1500mm (59.06")	2050mm (80.7")
	Z axis travel (column in & out)	1020mm (40.2")	1200mm (47.24")	1420mm (55.9")
	W axis travel (BAR spindle in & out)	535mm (21.1")	535mm (21.1")	535mm (21.1")
TABLE	Pallet size	800 x 800mm (31.5 x 31.5")	1000 x 1000mm (39.4 x 39.4")	1320 x 1320mm (51.97 x 51.97")
	Table increments	1° [0.001"]	1° [0.001"]	0.001°
	Maximum mass on pallet (uniform load)	2500kg (5500 lbs)	3500kg (7700 lbs) [5000kg (11000 lbs)*]	8000kg (17600 lbs)* [10000kg (22000 lbs)*]
SPINDLE	Spindle speeds	3500 min <sup>-1</sup> (rpm)	3500 min <sup>-1</sup> (rpm)	3500 min <sup>-1</sup> (rpm)
	Spindle drive motor	AC30/22kW (AC40/30HP)[AC45/37kW(AC60/50kW)]	AC30/22kW (AC40/30HP)[AC45/37kW(AC60/50kW)]	AC30/22kW (AC40/30HP)[AC45/37kW(AC60/50kW)]
	Spindle max. torque	1836N·m (1354 ft.lbs) [1318N·m (972 ft.lbs)]	1836N·m (1354 ft.lbs) [1318N·m (972 ft.lbs)]	1836N·m (1354 ft.lbs) [1318N·m (972 ft.lbs)]
	Spindle taper	No.50	No.50	No.50
RAPID TRAVERSE	X, Y, Z, W axis	50/40/50/5 m/min (1968/1575/1968/197 ipm)	20/20/20/5 m/min (787/787/787/197 ipm)	18/12/12/5 m/min (709/472/472/197 ipm)
ATC	Tool magazine capacity	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ1750 x 1400mm (φ68.9 x 55.1")	φ2300 x 1850mm (φ90.6 x 72.8")	φ3200 x 3000mm (φ126 x 118.1")

[ ] is 1250-S [ ] Optional specifications \*NC table only

## HN-S BAR SERIES

ITEM		HN1000-S BAR	HN1250-S BAR	HN1600-S BAR
TRAVEL	X axis travel (longitudinal table)	2030mm (79.9")	2200mm (86.61")	3050mm (120.1")
	Y axis travel (spindle head up and down)	1500mm (59.06")	1650mm (64.9")	2050mm (80.7")
	Z axis travel (table front and rear)	1200mm (47.24")	1200mm (47.24")	1420mm (55.9")
	W axis travel (BAR spindle in & out)	535mm (21.1")	535mm (21.1")	535mm (21.1")
TABLE	Pallet size	1000 x 1000mm (39.4 x 39.4")	1250 x 1000mm (49.2 x 39.4")	1600 x 1320mm (62.99 x 51.97")
	Table increments	1° [0.001"]	1° [0.001"]	0.001°
	Maximum mass on pallet (uniform load)	3500kg (7700 lbs) [5000kg (11000 lbs)*]	3500kg (7700 lbs) [5000kg (11000 lbs)*]	8000kg (17600 lbs)* [10000kg (22000 lbs)*]
SPINDLE	Spindle speeds	3500 min <sup>-1</sup> (rpm)	3500 min <sup>-1</sup> (rpm)	3500 min <sup>-1</sup> (rpm)
	Spindle drive motor	AC30/22kW (AC40/30HP) [AC45/37kW(AC60/50kW)]	AC30/22kW (AC40/30HP) [AC45/37kW(AC60/50kW)]	AC30/22kW (AC40/30HP) [AC45/37kW(AC60/50kW)]
	Spindle max. torque	1836N·m (1354 ft.lbs) [1318N·m (972 ft.lbs)]	1836N·m (1354 ft.lbs) [1318N·m (972 ft.lbs)]	1836N·m (1354 ft.lbs) [1318N·m (972 ft.lbs)]
	Spindle taper	No.50	No.50	No.50
RAPID TRAVERSE	X, Y, Z, W axis	40/5 m/min (1575/197 ipm)	40/5 m/min (1575/197 ipm)	30/5 m/min (1181/197 ipm)
ATC	Tool magazine capacity	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]	62 [88/128, Matrix 126/178/230]
MAXIMUM WORK ENVELOPE	Swing diameter x height	φ2300 x 1850mm (φ90.6 x 72.8")	φ2500 x 2000mm (φ98.4 x 78.7")	φ3200 x 3000mm (φ126 x 118.1")

[ ] Optional specifications \*NC table only