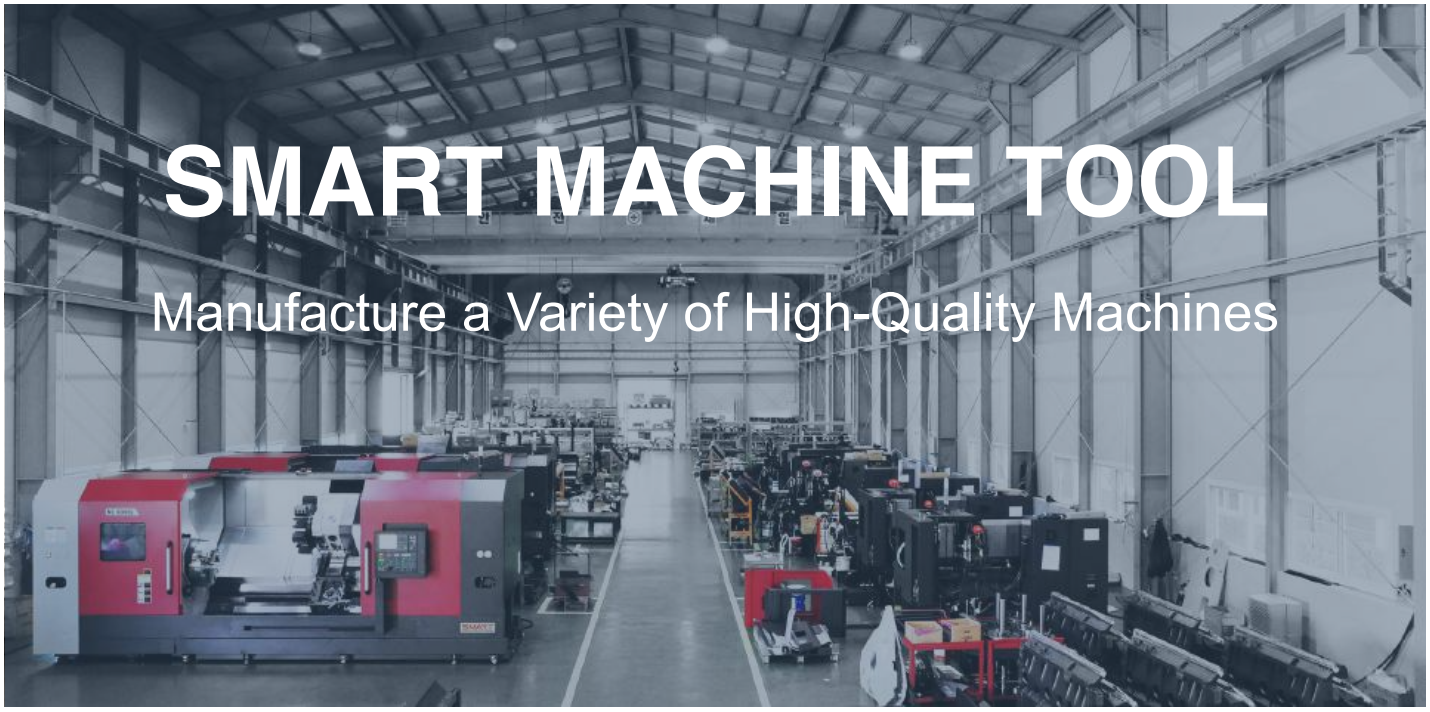
SMART MACHINE TOOL

Machine Tools
LINE-UP



SMART MACHINE TOOL

Manufacture a Variety of High-Quality Machines

Smart Machine Tool produces machine tools based on the team's knowledge of product design, engineering and understanding what the market needs.

Smart Machine Tool Korea

With over 100 years of combined experience in the machine tool industry, Jong B. Won, Jong C. Kim, and Jong W. Shin were the original members of Samsung Machine Tools before starting Smart Machine Tool Korea. They are shareholders of Smart Machine Tool Korea and serve as CEO, the Head of Manufacturing, and the Head of Engineering and Design, respectively. Brian Whang Started at Hyundai in 1993 and has spent the past 20 years in sales and finance at Dynamic International. He is a lawyer and CPA and serves as CFO for Smart Machine Tool Korea. Richard Layo, the owner of Dynamic International, started a Wisconsin based dealership in 1986, and started importing high-end CNC machine tools in 1999 from Japan, Korea, Taiwan and Smart Machine tool Korea and serves as Chairman.

Smart Machine Construction

Headstock

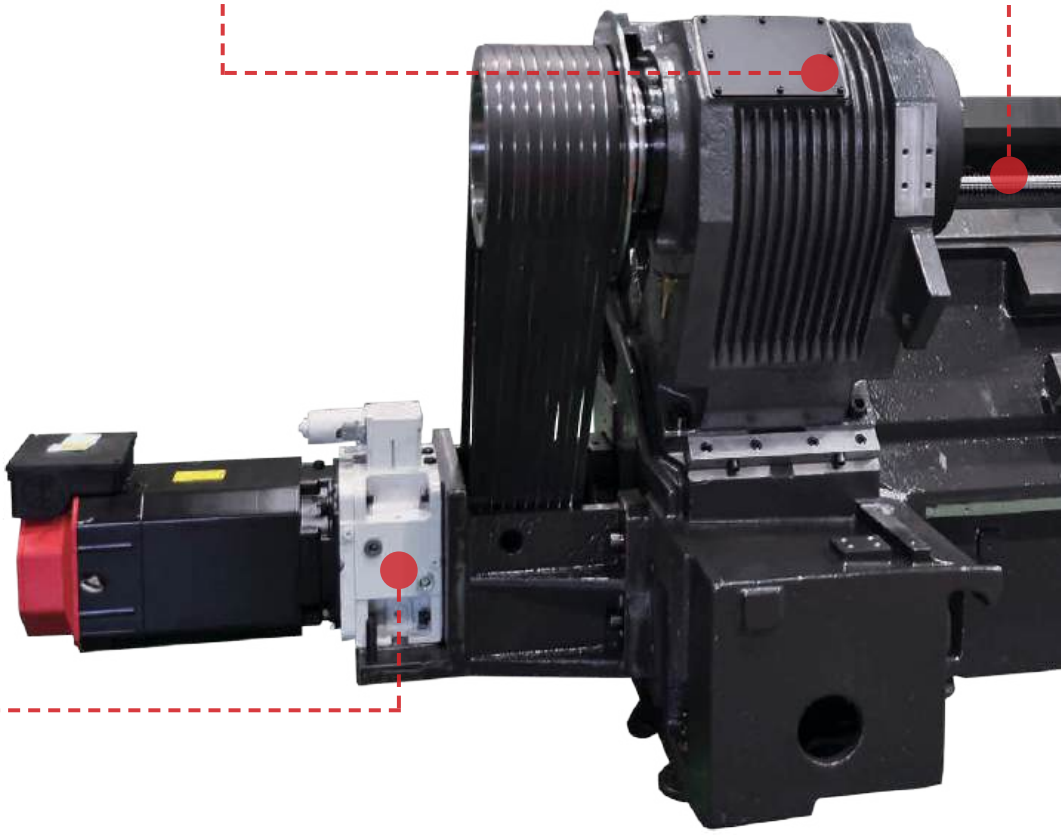
Radiator fan-like pin tube rib design dissipates heat generated by axis movements, maintaining minimum thermal expansion

Pre-Tension and Double Anchored Ballscrews

All axes ballscrews are pre-tensioned, heat treated and fixed by doubled anchors on both ends, providing ultimate rigidity and minimal thermal growth.

Spindle

Double row cylindrical roller bearings and angular thrust bearing, ensure high rigidity for heavy cutting and excellent surface finishes.



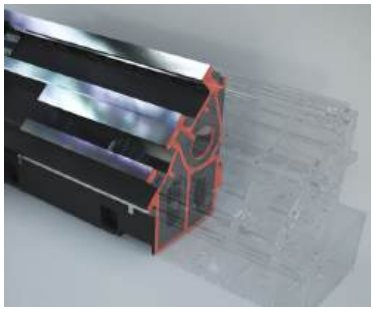
Gearbox

NL 2500, 3000, 4000, 5000, 6000 are equipped with two-speed in-line gearbox provide machining stability and increase torque at low speed.

NL 2500, 3000 gearbox

NL 4000, 5000, 6000 gearbox

Rigid 45 Degree Slant Bed



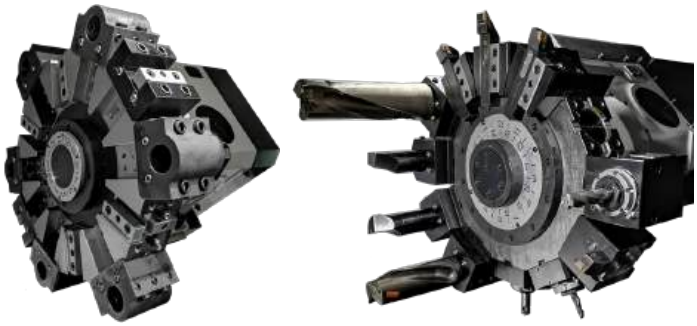
The 45 degree slant torque tube design bed and wide guide slide ways

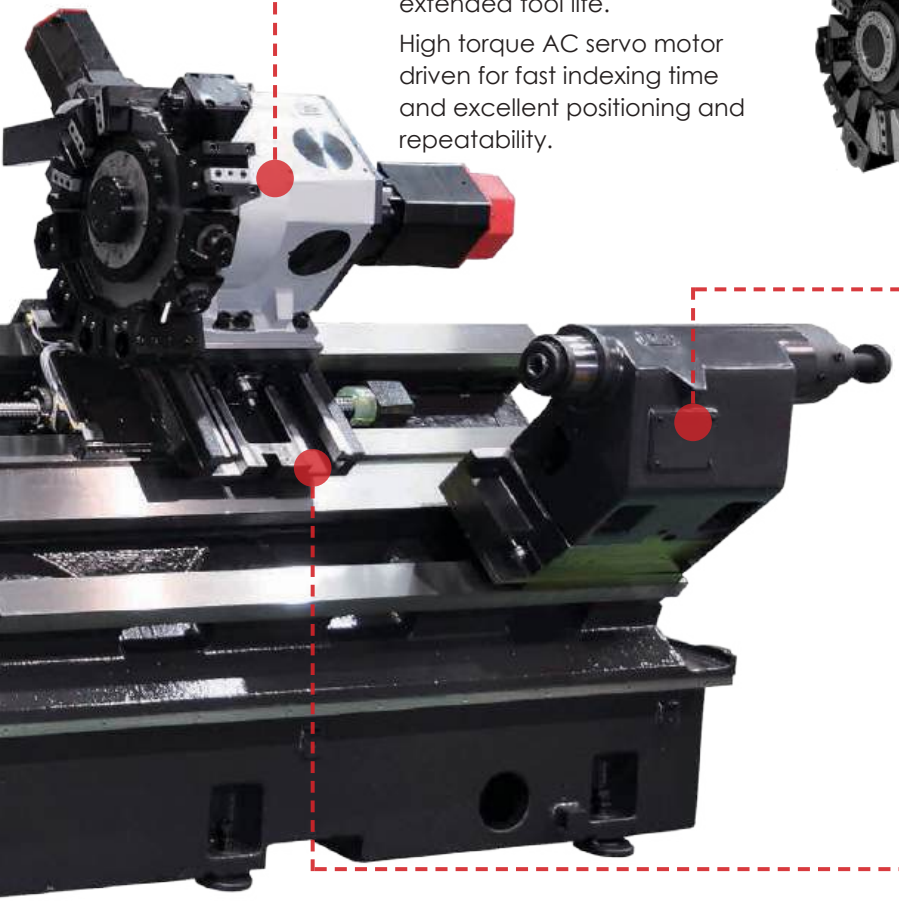
Easy access to the workpiece and superb chip discharge.

12-Station Turret

Large diameter 3-piece Curvic coupling for excellent rigidity and extended tool life.

High torque AC servo motor driven for fast indexing time and excellent positioning and repeatability.





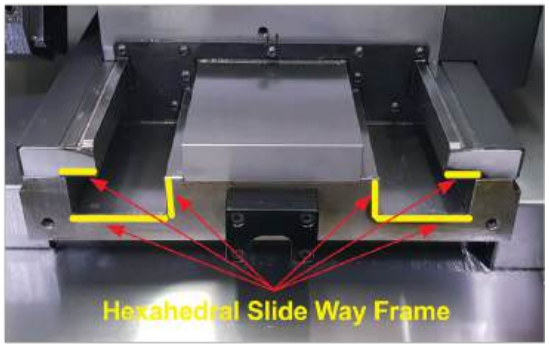
Programmable Tailstock Body & Quill

Wide-spaced guideways and heavy-duty tailstock body design ensure machining rigidity, and built in spindle quill design ensures higher rigidity.

Hexahedral Slide Ways (X-axis)

Wide boxways, machined from one-piece casting, promote heavy-duty machining.

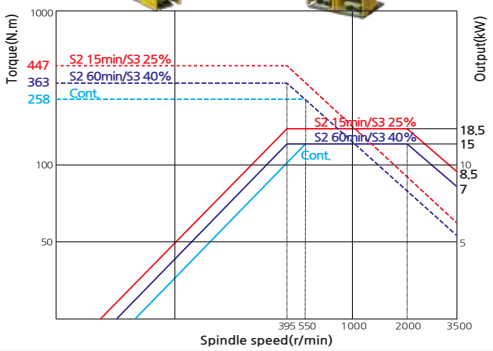
Induction hardened and precision ground ways ensure accurate machining for extended periods of time.



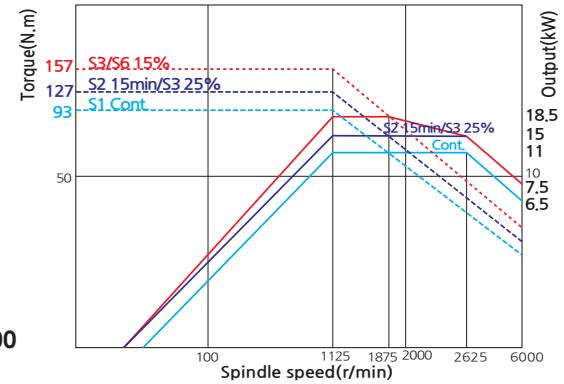
Hand Scraping

Precise hand scraping on all the contact surface to the bed ensures long-lasting machining accuracy and minimal surface wears.

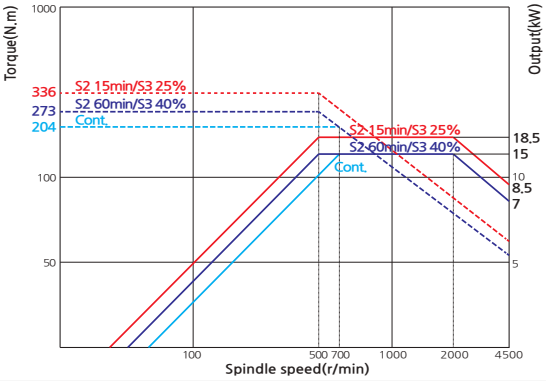
NL 1500 | 2000 6", 8", 10" Chuck / A2-5, A2-6, A2-8 spindle nose



NL 2000B



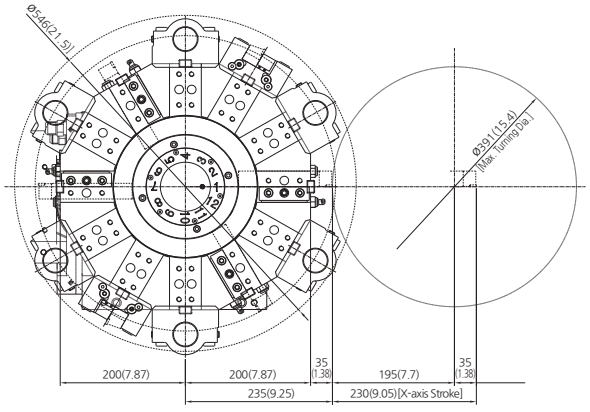
NL 1500



NL 2000

Turret Head Interference

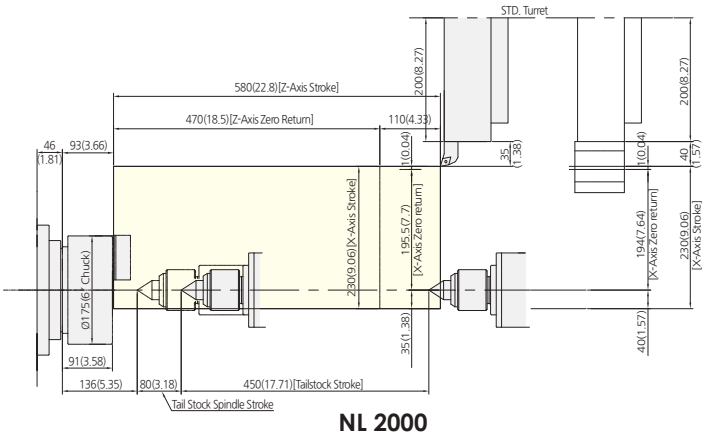
Unit: mm(inch)



NL 2000

Work Range

Unit: mm(inch)

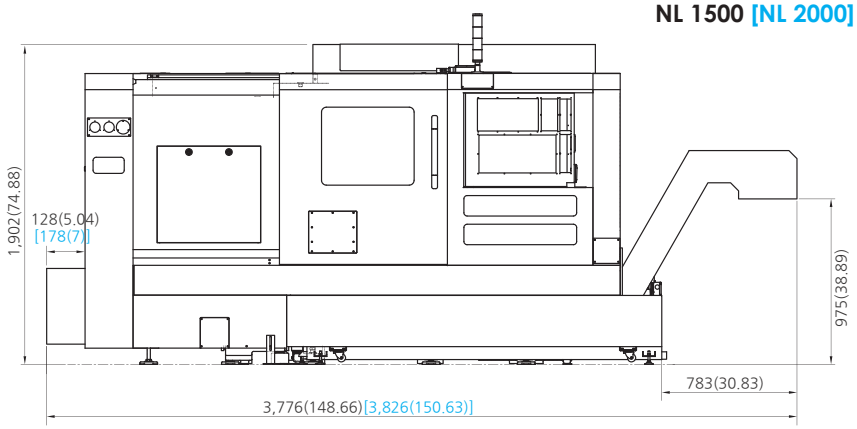


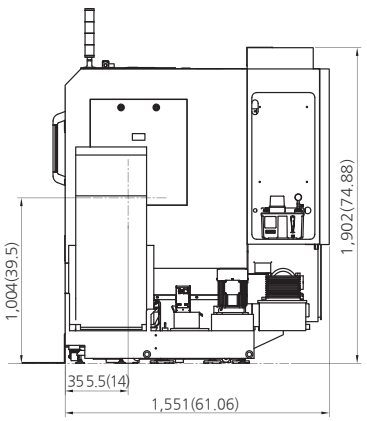
NL 2000

Machine Dimensions

Unit: mm(inch)

NL 1500 [NL 2000]





Machine Specifications

DESCRIPTION			NL 1500	NL 1500M	NL 2000	NL 2000M	NL 2000B	NL 2000BM
CAPACITY	Swing over the bed	mm(inch)	570(22.44)					
	Swing over the cross slide	mm(inch)	370(14.57)					
	Max. machining diameter	mm(inch)	391(15.39)	381(15.0)	391(15.39)	381(15.0)	391(15.39)	381(15.0)
	Max. machining length	mm(inch)	560(22.05)	540(21.26)	560(22.05)	540(21.26)	550(21.65)	540(21.26)
	Chuck size	Inch	6		8		10	
	Bar working dia.	mm(inch)	51(2.01)		65(2.56)		81(3.19)	
SPINDLE	Spindle speed	rpm	6,000		4,500		3,500	
	Spindle motor (Cont./Max.)	kW(Hp)	11/18.5(15/25)		15/18.5(20/25)		15/18.5(20/25)	
	Spindle nose	ASA	A2-5		A2-6		A2-8	
	Spindle torque (Max.)	N.m(ft.lbs)	157(115.8)		336(247.8)		447(329.7)	
	Spindle through hole dia.	mm(inch)	61(2.4)		76(2.99)		91(3.58)	
TRAVEL	Rapid traverse (X/Z)	m/min(ipm)	24/30(945/1,181)					
	X-axis travel	mm(inch)	230(9.06)					
	Z-axis travel		580(22.83)	560(22.05)	580(22.83)	560(22.05)	580(22.83)	560(22.05)
	Feed motor (X/Z)	kW(hp)	1.8/3(2.4/4)	3/3(4/4)	1.8/3(2.4/4)	3/3(4/4)	1.8/3(2.4/4)	3/3(4/4)
TURRET	Number of tool stations	st.	12	12(24)	12	12(24)	12	12(24)
	OD tool size	mm(inch)	□25(1)					
	Max. boring bar size	mm(inch)	Ø40(1.5)				Ø50(2)	Ø40(1.5)
	Indexing time	sec	0.15/Step					
	Milling tool holder type	-	-	BMT55	-	BMT55	-	BMT55
	Max. rotary tool spindle speed	rpm	-	5,000	-	5,000	-	5,000
	Rotary tool motor power	kW(hp)	-	3.7/5.5(5/7.4)	-	3.7/5.5(5/7.4)	-	3.7/5.5(5/7.4)
TAILSTOCK	Tailstock travel	mm(inch)	450(17.72)					
	Quill diameter	mm(inch)	80(3.15)					
	Quill travel	mm(inch)	80(3.15)					
	Taper of tailstock spindle	-	MT#4 Live center					
BED TYPE		-	45° Slant					
ELECTRIC POWER SUPPLY		kVA	31					
REQUIRED FLOOR SPACE		mm(inch)	3,140x1,560(124x62)					
MACHINE WEIGHT		kg(lbs)	3,800(8,378)		3,900(8,598)			
CONTROLLER		-	Fanuc 0*i*-TF					

- Figures in inches are converted from metric measurements.
- Design and specifications are subject to change without notice.

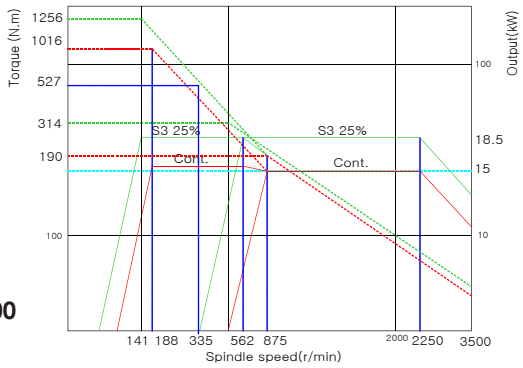
Standard Accessories

- Coolant unit 10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

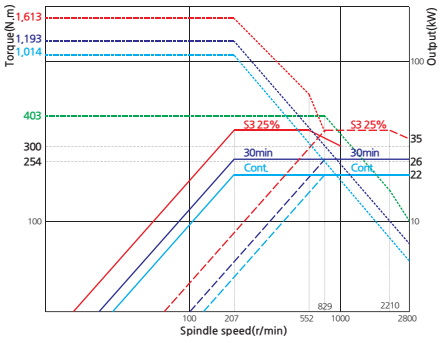
Optional Accessories

- Chip conveyor
- Dual pressure chucking
- Auto door
- Oil skimmer
- Part catcher
- Coolant gun
- Tool presetter

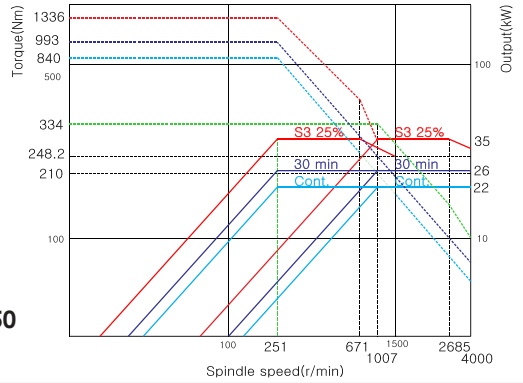
NL 2500 | 3000 10", 12" Chuck / A2-8, A2-11 spindle nose



NL 2500/500



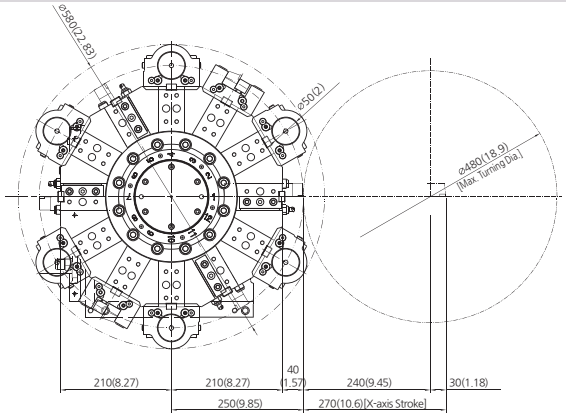
NL 3000



NL 2500/750

Turret Head Interference

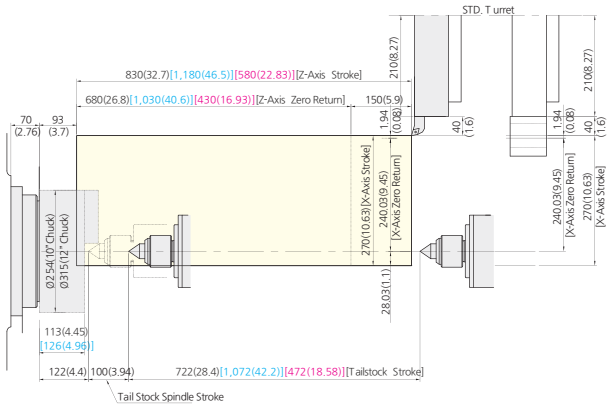
Unit: mm(inch)



NL 2500 | NL 3000

Work Range

Unit: mm(inch)

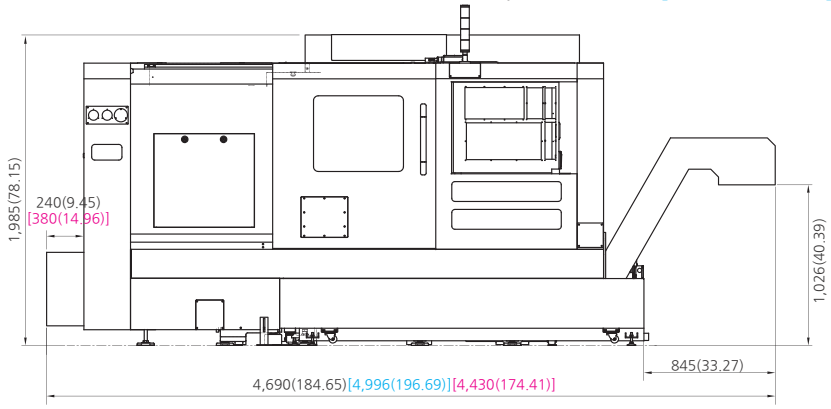


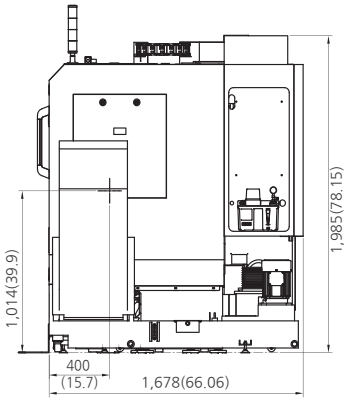
NL 2500/750 | NL3000B/750 [NL 3000B/1100] [NL 2500/500]

Machine Dimensions

Unit: mm(inch)

NL 2500/750 | NL3000B/750 [NL 3000B/1100] [NL 2500/500]





Machine Specifications

DESCRIPTION			NL 2500/750 [NL 2500/500]	NL 2500M/750 [NL 2500M/500]	NL 3000B/750 [NL 3000B/1100]	NL 3000BM/750 [NL 3000BM/1100]
CAPACITY	Swing over the bed	mm(inch)	700(27.56)			
	Swing over the cross slide	mm(inch)	510(20.08)			
	Max. machining diameter	mm(inch)	480(18.9)	450(17.72)	480(18.9)	450(17.72)
	Max. machining length	mm(inch)	750(29.53) [530(20.87)]	700(27.56) [480(18.9)]	750(29.53) [1,100(43.31)]	700(27.56) [1,050(41.34)]
	Chuck size	Inch	10		12	
	Bar working dia.	mm(inch)	81(3.19)		102(4.02)	
SPINDLE	Spindle speed	rpm	4,000 [3,500]		2,800	
	Spindle motor (Cont./Max.)	kW(Hp)	22/35(29.5/47) [15/18.5(20/25)]		22/35(29.5/47)	
	Spindle nose	ASA	A2-8		A2-11	
	Spindle torque (Max.)	N.m(ft.lbs)	1,336(985.4) [1,256(926.4)]		1,613(1,189.7)	
	Spindle through hole dia.	mm(inch)	91(3.58)		115(4.53)	
TRAVEL	Rapid traverse (X/Z)	m/min(ipm)	24/30(945/1,181)			
	X-axis travel	mm(inch)	270(10.63)			
	Z-axis travel	mm(inch)	830(32.68) [580(22.83)]	770(30.31) [520(20.47)]	830(32.68) [1,180(46.46)]	770(30.31) [1,120(44.09)]
	Feed motor (X/Z)	kW(hp)	4/4(5.4/5.4)			
TURRET	Number of tool stations	st.	12	12(24)	12	12(24)
	OD tool size	mm(inch)	□25(1)			
	Max. boring bar size	mm(inch)	Ø50(2)			
	Indexing time	sec	0.2/Step			
	Milling tool holder type	-	-	BMT65	-	BMT65
	Max. rotary tool spindle speed	rpm	-	5,000	-	5,000
	Rotary tool motor power	kW(hp)	-	3.7/5.5/7.5(5/7.4/10)	-	3.7/5.5/7.5(5/7.4/10)
TAILSTOCK	Tailstock travel	mm(inch)	722(28.43) [472(18.58)]		722(28.43) [1,072(42.2)]	
	Quill diameter	mm(inch)	110(4.33)			
	Quill travel	mm(inch)	100(3.94)			
	Taper of tailstock spindle	-	MT#4 (Built-in)			
BED TYPE		-	45° Slant			
ELECTRIC POWER SUPPLY		kVA	40 [35]	40 [35]	40	40
REQUIRED FLOOR SPACE		mm(inch)	3,708x1,727(146x68) [3,208x1,778(126.3x70)]		3,708x1,727(146x68) [4,013x1,727(158x68)]	
MACHINE WEIGHT		kg(lbs)	5,700(12,566) [4,700(10,361)]		5,700(12,566) [6,900(15,211)]	
CONTROLLER		-	Fanuc 0*i*-TF			

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Standard Accessories

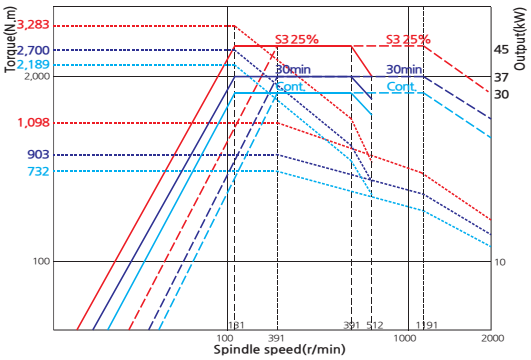
- Coolant unit 10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

Optional Accessories

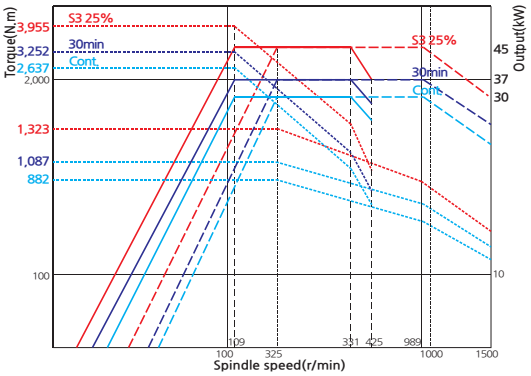
- Chip conveyor
- Dual pressure chucking
- Auto door
- Oil skimmer
- Part catcher [NL2500(M) only]
- Coolant gun
- Tool presetter

NL 4000 | 5000 18", 21" Chuck / A2-11, A2-15 spindle nose

NL 4000

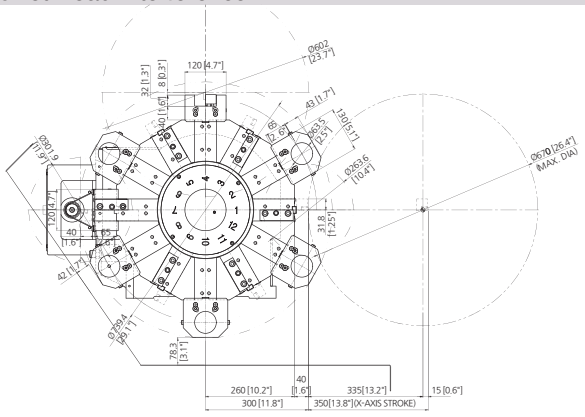


NL 5000



Turret Head Interference

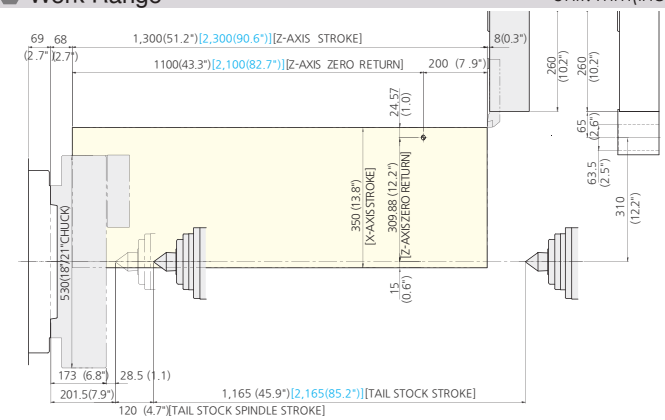
Unit: mm(inch)



NL 5000

Work Range

Unit: mm(inch)

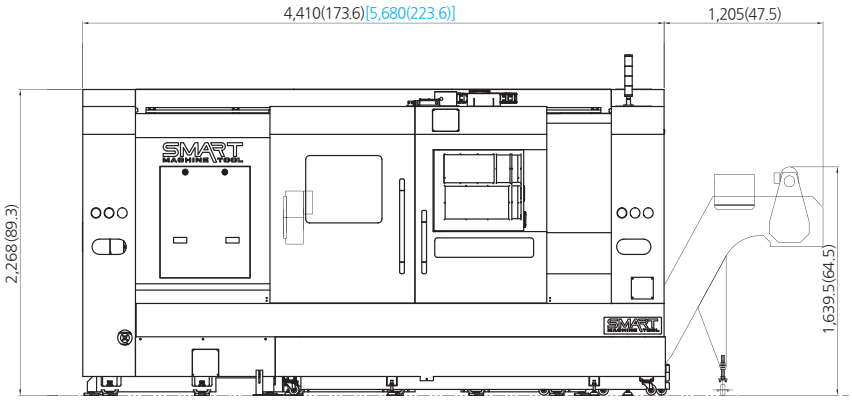


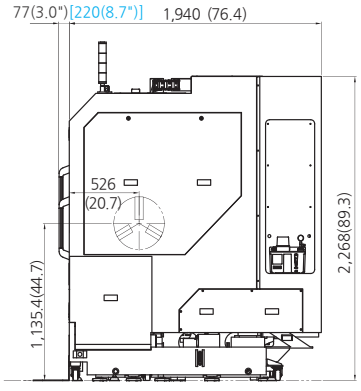
NL 5000/1200 [NL 5000/2200]

Machine Dimensions

Unit: mm(inch)

NL 4000/1200 | NL 5000/1200 [NL 5000/2200]





Machine Specifications

DESCRIPTION			NL 4000/1200	NL 4000M/1200	NL 5000/1200 [NL 5000/2200]	NL 5000M/1200 [NL 5000M/2200]
CAPACITY	Swing over the bed	mm(inch)	790(31.1)		900(35.43)	
	Swing over the cross slide	mm(inch)	610(24.02)		690(27.17)	
	Max. machining diameter	mm(inch)	648(25.51)	638(25.11)	670(26.38)	650(25.59)
	Max. machining length	mm(inch)	1,213(47.76)	1,145(45.08)	1,155(45.47) [2,155(84.84)]	1,119(44.06) [2,119(83.43)]
	Chuck size	Inch	18		21	
	Bar working dia.	mm(inch)	116.5 (4.59)		165.5 (6.52)	
SPINDLE	Spindle speed	rpm	2,000		1,500	
	Spindle motor (Cont./Max.)	kW(Hp)	30/45(40/60)			
	Spindle nose	ASA	A2-11		A2-15	
	Spindle torque (Max.)	N.m(ft.lbs)	3,283(2,421)		3,955(2,917)	
	Spindle through hole dia.	mm(inch)	132(5.2)		181(7.125)	
TRAVEL	Rapid traverse (X/Z)	m/min(ipm)	16/20(630/787)			
	X-axis travel	mm(inch)	340(13.39)		350(13.78)	
	Z-axis travel	mm(inch)	1,300(51.18)		1,300(51.18) [2,300(90.55)]	
	Feed motor (X/Z)	kW(hp)	4/7(5.4/9.4)		7/6(9.4/8)	
TURRET	Number of tool stations	st.	12			
	OD tool size	mm(inch)	□32(1.25)			
	Max. boring bar size	mm(inch)	Ø60(2.5)			
	Indexing time	sec	0.25/step			
	Milling tool holder type	-	-	BMT75	-	BMT75
	Max. rotary tool spindle speed	rpm	-	4,000	-	4,000
	Rotary tool motor power	kW(hp)	-	7.5/11/15 (10/14.8/20.1)	-	7.5/11/15 (10/14.8/20.1)
TAILSTOCK	Tailstock travel	mm(inch)	1,165(45.87)		1,165(45.87) [2,165(85.24)]	
	Quill diameter	mm(inch)	140(5.51)			
	Quill travel	mm(inch)	120(4.72)			
	Taper of tailstock spindle	-	MT#5 (Built-in)			
BED TYPE		-	45° Slant			
ELECTRIC POWER SUPPLY		kVA	55			
REQUIRED FLOOR SPACE		mm(inch)	4,450x2,017(175.2x79.4)		4,450x2,017(175.2x79.4) [5,720x2,205(225.2x86.8)]	
MACHINE WEIGHT		kg(lbs)	10,700(23,589)	1,0800(23,810)	10,800(23,810) [13,700(30,203)	10,900(24,030) [13,800(30,424)
CONTROLLER		-	Fanuc 0*i*-TF			

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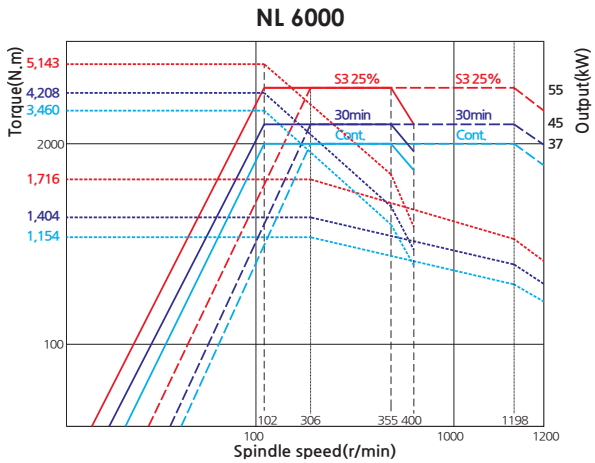
Standard Accessories

- Coolant unit 10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

Optional Accessories

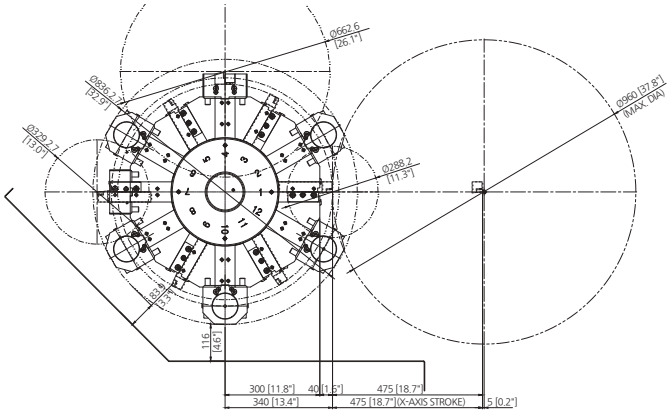
- Chip conveyor
- Dual pressure chucking
- Auto door
- Coolant gun
- Tool presetter
- Oil skimmer
- Steady rest prep

NL 6000 24" Chuck / A1-15, A1-20 spindle nose



Turret Head Interference

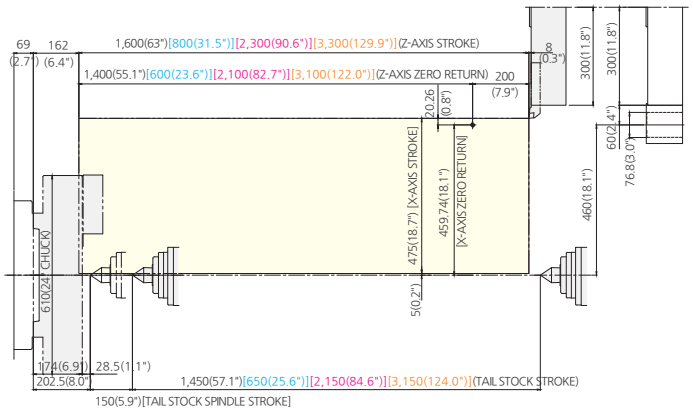
Unit: mm(inch)



NL 6000

Work Range

Unit: mm(inch)

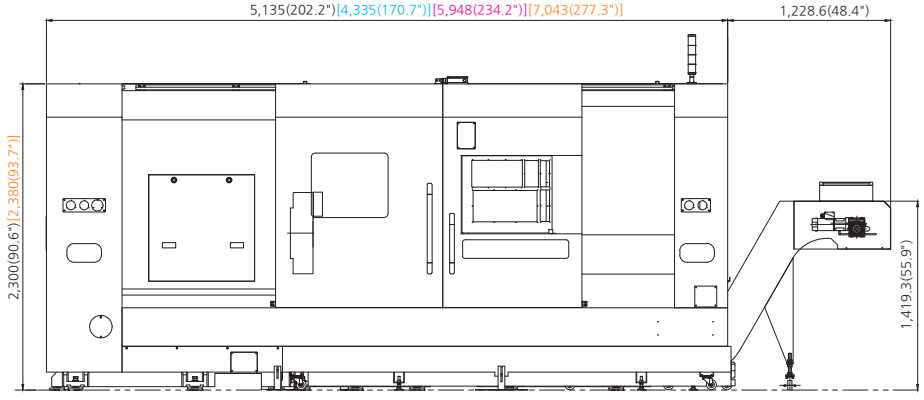


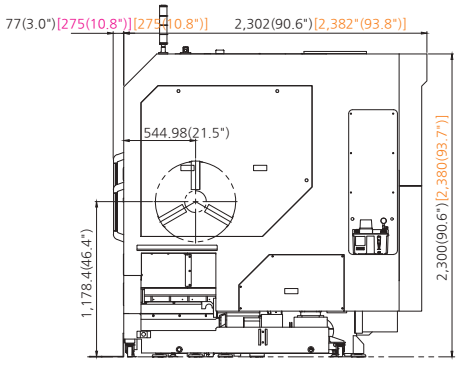
NL 6000 [NL 6000S] [NL 6000L] [NL 6000XL]

Machine Dimensions

Unit: mm(inch)

NL 6000 [NL 6000S] [NL 6000L] [NL 6000XL]





Machine Specifications

DESCRIPTION			NL 6000/750	NL 6000M/750	NL 6000/1500 [NL 6000/1500C]	NL 6000M/1500 [NL 6000CM/1500]
CAPACITY	Swing over the bed	mm(inch)	1,030(40.55)			
	Swing over the cross slide	mm(inch)	850(33.46)			
	Max. machining diameter	mm(inch)	960(37.80)	900(35.43)	960(37.80)	900(35.43)
	Max. machining length	mm(inch)	750(29.53)	700(27.56)	1,550(61.02)	1,500(59.06)
	Chuck size	Inch	24 [User scope]			
	Bar working dia.	mm(inch)	165.5(6.52) [Chuck dependent]			
SPINDLE	Spindle speed	rpm	1,200 [1,000]			
	Spindle motor (Cont./Max.)	kW(Hp)	37/55(50/73)			
	Spindle nose	ASA	A1-15 [A1-20]			
	Spindle torque (Max.)	N.m(ft.lbs)	5,143(3,793.3)			
	Spindle through hole dia.	mm(inch)	181(7.125) [275(10.83)]			
TRAVEL	Rapid traverse (X/Z)	m/min(ipm)	16/20(630/787)			
	Travel (X/Z)	mm(inch)	475/800 (18.7/31.5)		475/1,600(18.7/63)	
	Feed motor (X/Z)	kW(hp)	7/6(9.4/8)			
TURRET	Number of tool stations	st.	12			
	OD tool size	mm(inch)	□32(□1.25)			
	Max. boring bar size	mm(inch)	Ø80(3)			
	Indexing time	sec	0.25/Step	0.35/Step	0.25/Step	0.35/Step
	Milling tool holder type	-	-	BMT85	-	BMT85
	Max. rotary tool spindle speed	rpm	-	3,000	-	3,000
	Rotary tool motor power	kW(hp)	-	7.5/11/15 (10/14.8/20.1)	-	7.5/11/15 (10/14.8/20.1)
TAILSTOCK	Tailstock travel	mm(inch)	[Option]		1,450(57.09)	
	Quill diameter	mm(inch)	[Option]		180(7.09)	
	Quill travel	mm(inch)	[Option]		150(5.91)	
	Taper of tailstock spindle	-	[Option]		MT#6 (Built-in)	
BED TYPE		-	45° Slant			
ELECTRIC POWER SUPPLY		kVA	65			
REQUIRED FLOOR SPACE		mm(inch)	4,390x2,379(172.8x93.7)		5,191x2,379(204.4x93.7)	
MACHINE WEIGHT		kg(lbs)	11,500(25,353)	12,000(26,455)	15,300(33,371)	15,800(34,833)
CONTROLLER		-	Fanuc 0*i*-TF			

- Figures in inches are converted from metric measurements.
- Design and specifications are subject to change without notice.

[ ] : Option

Standard Accessories

- Coolant unit 10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

Optional Accessories

- Chip conveyor
- Dual pressure chucking
- Auto door
- Coolant gun
- Tool presetter
- Oil skimmer
- Steady rest prep

Machine Specifications

DESCRIPTION			NL 6000/2200 [NL 6000C/2200]	NL 6000M/2200 [NL 6000CM/2200]	NL 6000/3200 [NL 6000C/3200]	NL 6000M/3200 [NL 6000CM/3200]
CAPACITY	Swing over the bed	mm(inch)	1,030(40.55)			
	Swing over the cross slide	mm(inch)	850(33.46)			
	Max. machining diameter	mm(inch)	960(37.80)	900(35.43)	960(37.80)	900(35.43)
	Max. machining length	mm(inch)	2,250(88.58)	2,200(86.61)	3,250(127.95)	3,200(125.98)
	Chuck size	Inch	24 [User scope]			
	Bar working dia.	mm(inch)	165.5(6.52) [Chuck dependent]			
SPINDLE	Spindle speed	rpm	1,200 [1,000]			
	Spindle motor (Cont./Max.)	kW(Hp)	37/55(50/73)			
	Spindle nose	ASA	A1-15 [A1-20]			
	Spindle torque (Max.)	N.m(ft.lbs)	5,143(3,793.3)			
	Spindle through hole dia.	mm(inch)	181(7.125) [275(10.83)]			
TRAVEL	Rapid traverse (X/Z)	m/min(ipm)	16/16(630/630)		16/10(630/394)	
	Travel (X/Z)	mm(inch)	475/2,300 (18.7/90.55)		475/3,300(18.7/129.92)	
	Feed motor (X/Z)	kW(hp)	7/6(9.4/8)			
TURRET	Number of tool stations	st.	12			
	OD tool size	mm(inch)	□32(□1.25)			
	Max. boring bar size	mm(inch)	Ø80(3)			
	Indexing time	sec	0.25/Step	0.35/Step	0.25/Step	0.35/Step
	Milling tool holder type	-	-	BMT85	-	BMT85
	Max. rotary tool spindle speed	rpm	-	3,000	-	3,000
	Rotary tool motor power	kW(hp)	-	7.5/11/15 (10/14.8/20.1)	-	7.5/11/15 (10/14.8/20.1)
TAILSTOCK	Tailstock travel	mm(inch)	2,150(86.65)		3,150(124.02)	
	Quill diameter	mm(inch)	180(7.09)			
	Quill travel	mm(inch)	150(5.91)			
	Taper of tailstock spindle	-	MT#6 (Built-in)			
BED TYPE		-	45° Slant			
ELECTRIC POWER SUPPLY		kVA	65			
REQUIRED FLOOR SPACE		mm(inch)	6,004x2,389(236.4x94.1)		7,100x2,469(279.5x97.2)	
MACHINE WEIGHT		kg(lbs)	17,300(38,140)	17,800(39,242)	19,800(43,652)	20,300(44,754)
CONTROLLER		-	Fanuc 0*i*-TF			

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Standard Accessories

- Coolant unit [10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

Optional Accessories

- Chip conveyor
- Dual pressure chucking
- Auto door
- Coolant gun
- Tool presetter
- Oil skimmer
- Steady rest prep

Machine Specifications

DESCRIPTION			NL 8000/2200	NL 8000M/2200	NL 8000/3200	NL 8000M/3200
CAPACITY	Swing over the bed	mm(inch)	1,030(40.55)			
	Swing over the cross slide	mm(inch)	850(33.46)			
	Max. machining diameter	mm(inch)	960(37.80)	900(35.43)	960(37.80)	900(35.43)
	Max. machining length	mm(inch)	2,170(85.43)	2,120(83.46)	3,170(124.8)	3,120(122.83)
	Chuck size	Inch	[User scope]			
	Bar working dia.	mm(inch)	[Chuck dependent]			
SPINDLE	Spindle speed	rpm	500			
	Spindle motor (Cont./Max.)	kW(Hp)	37/55(50/73)			
	Spindle nose	ASA	A1-20			
	Spindle torque (Max.)	N.m(ft.lbs)	8,076(5,956)			
	Spindle through hole dia.	mm(inch)	375(14.76)			
TRAVEL	Rapid traverse (X/Z)	m/min(ipm)	16/16(630/630)		16/10(630/394)	
	Travel (X/Z)	mm(inch)	475/2,300 (18.7/90.55)		475/3,300(18.7/129.92)	
	Feed motor (X/Z)	kW(hp)	6/6(8/8)			
TURRET	Number of tool stations	st.	12			
	OD tool size	mm(inch)	□32(□1.25)			
	Max. boring bar size	mm(inch)	Ø80(3)			
	Indexing time	sec	0.25/Step	0.35/Step	0.25/Step	0.35/Step
	Milling tool holder type	-	-	BMT85	-	BMT85
	Max. rotary tool spindle speed	rpm	-	3,000	-	3,000
	Rotary tool motor power	kW(hp)	-	7.5/11/15 (10/14.8/20.1)	-	7.5/11/15 (10/14.8/20.1)
TAILSTOCK	Tailstock travel	mm(inch)	2,150(86.65)		3,150(124.02)	
	Quill diameter	mm(inch)	180(7.09)			
	Quill travel	mm(inch)	150(5.91)			
	Taper of tailstock spindle	-	MT#6 (Built-in)			
BED TYPE		-	45° Slant			
ELECTRIC POWER SUPPLY		kVA	65			
REQUIRED FLOOR SPACE		mm(inch)	6,200x2,590(244.1x102.0)		7,300x2,670(287.4x105.1)	
MACHINE WEIGHT		kg(lbs)	18,800(41,447)	19,300(42,549)	21,300(46,958)	21,800(48,061)
CONTROLLER		-	Fanuc 0*i*-TF			

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[ ] : Option

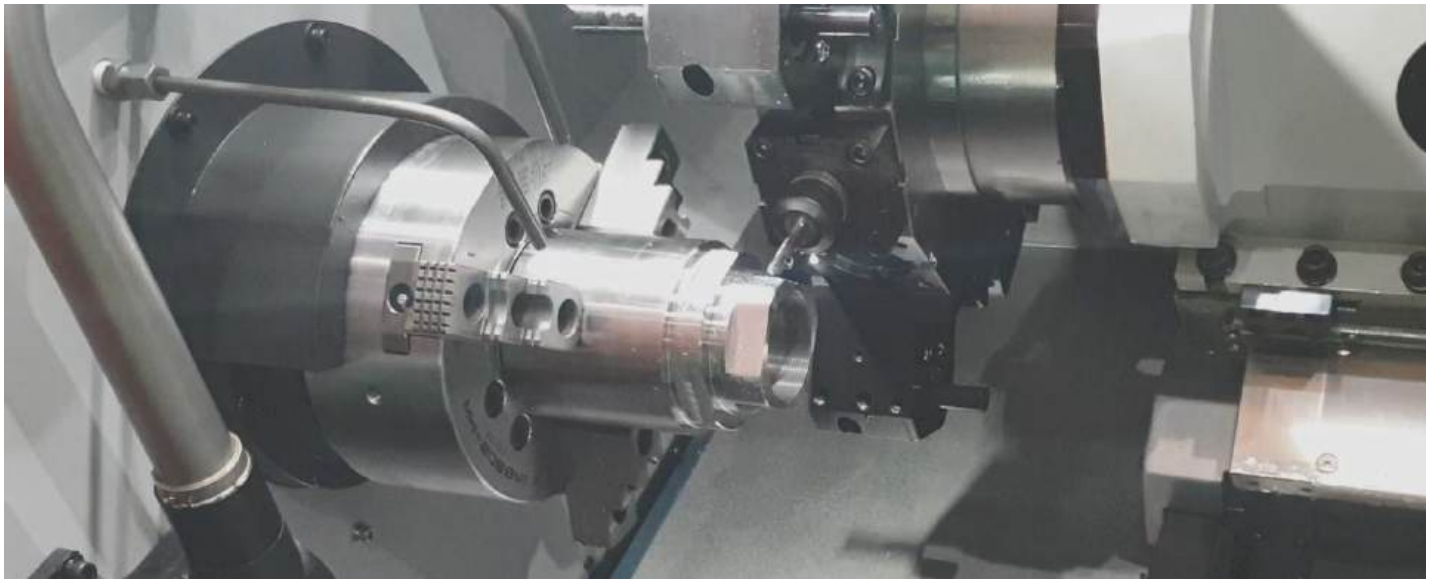
Standard Accessories

- Coolant unit 10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Leveling blocks
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

Optional Accessories

- Chip conveyor
- Dual pressure chucking
- Auto door
- Coolant gun
- Tool presetter
- Oil skimmer
- Steady rest prep

6, 8, 10 Inch Chuck Y-Axis Turning Centers



12-Station (24 Position) BMT Turret

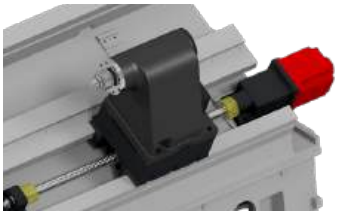
BMT turret is equipped with 2 separated motors for indexing and milling, ensuring high machining performance, reliability and reducing processing time of workpiece.

Sub Spindle (SY Models)

Equipped with built-in motor and oil cooling unit as standard to minimize thermal displacement and ensure maximum machining accuracy even during a long period of machining.

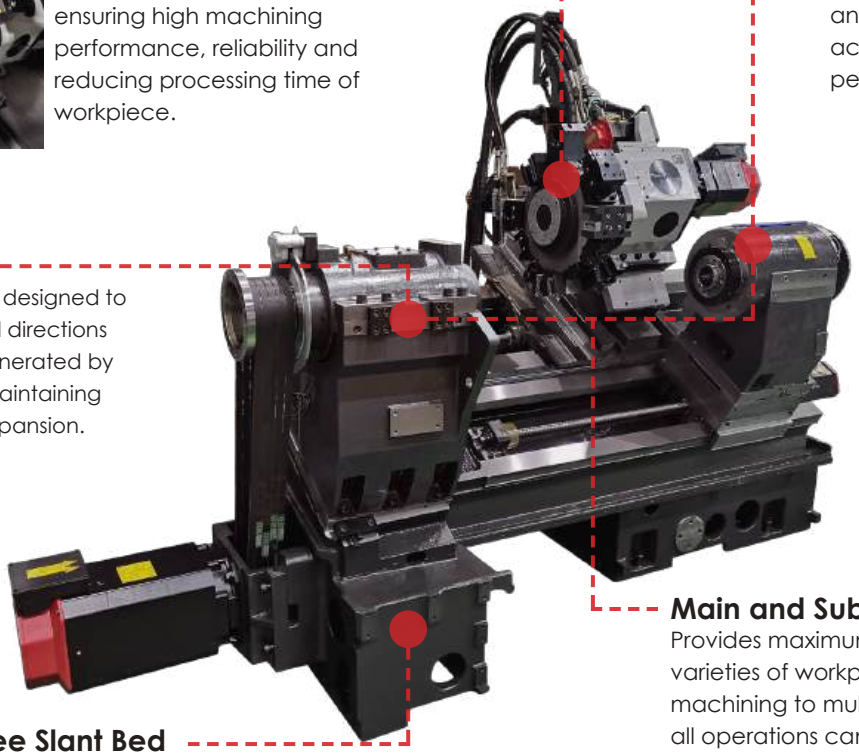
Servo Tailstock (Y Models)

Servo tailstock is available as standard feature for Y models, offers better machining efficiency and reduce set-up time.



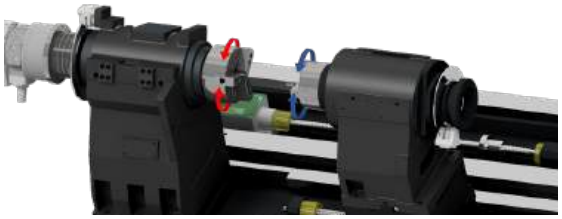
Main Spindle

Spindle cartridge is designed to exposed to air in all directions dissipating heat generated by axis movements, maintaining minimal thermal expansion.



Main and Sub Spindle Synchronization

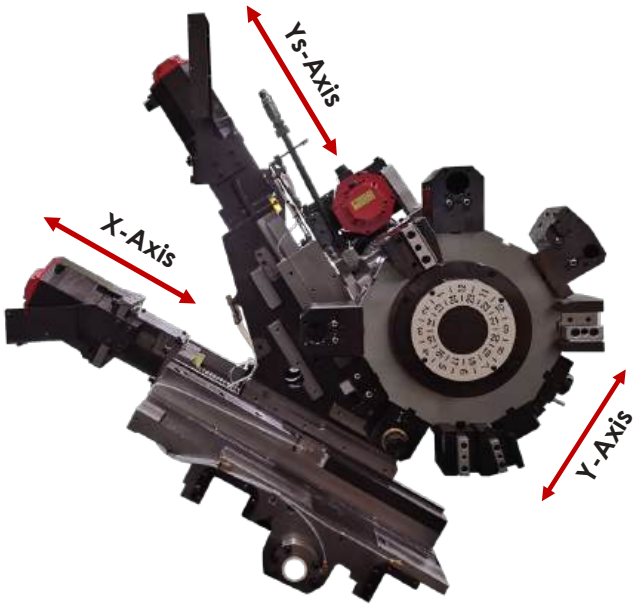
Provides maximum machining flexibility for varieties of workpiece configuration. From simple machining to multi-axis simultaneous machining, all operations can be completed in one set-up.



Rigid 30 Degree Slant Bed

One-piece casting 30 degree slant torque tube design bed which provides maximum vibration dampening and improve machining stability during heavy duty cutting.

Y-Axis Machining Capability



Y-axis allows side milling, off-center drilling and grooving. This result in better machining accuracy and also enable more complex shape machining capability compared to conventional 2 and 3 axis turning center.

The simultaneous operation of the X-axis and the Ys-axis creates the Y-axis movement.

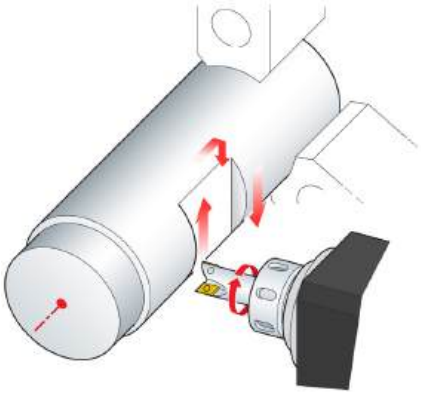
Y-Axis Travel

110 (±55) mm [4.33 (±2.17) inch]

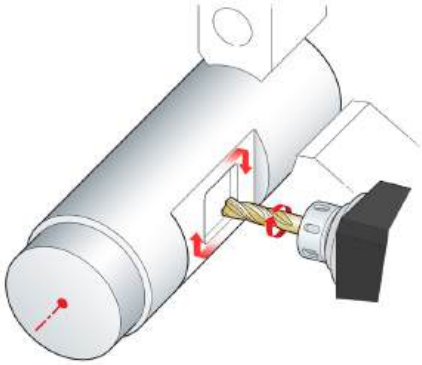
Y-Axis Rapid Traverse

10 m/min [394 ipm]

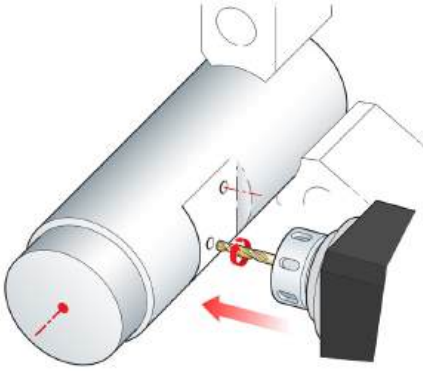
■ Side milling



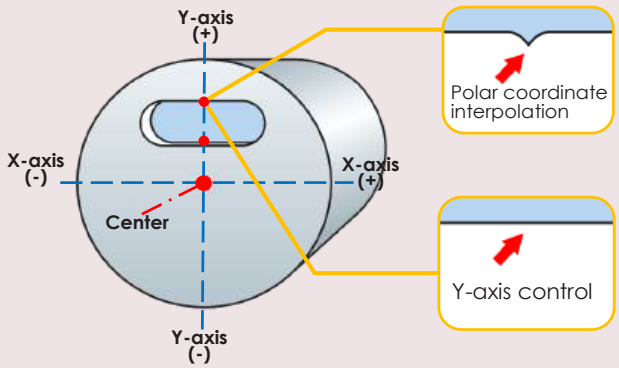
■ Off-center grooving



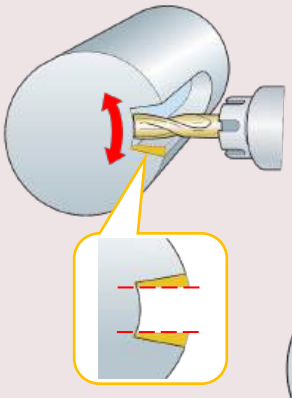
■ Off-center drilling



Y-axis control compared to Polar coordinate interpolation

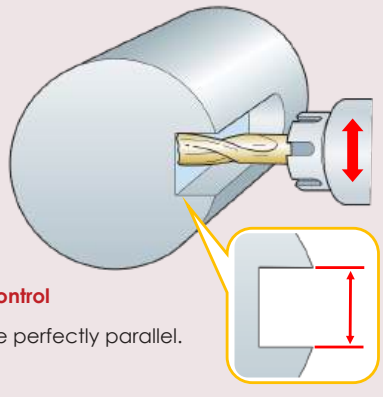


Polar coordinate interpolation control during grooving and contouring, the X-axis reverses at cross point between the center line and the profile to be machined which cause change in cutting condition and affect profile accuracy. Machining with Y-axis control can avoid such issue and also provide better profile accuracy.



Milling without Y-axis control

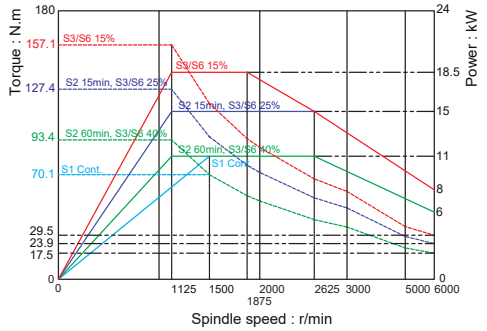
Width of outer and inner grooves are not perfectly parallel.



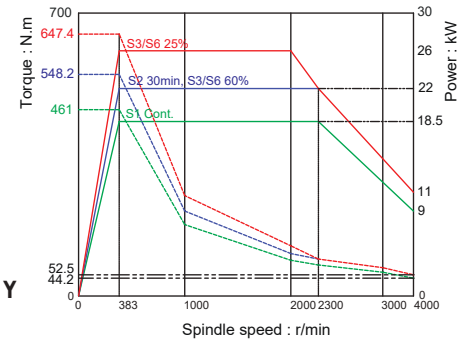
Milling with Y-axis control

Width of grooves are perfectly parallel.

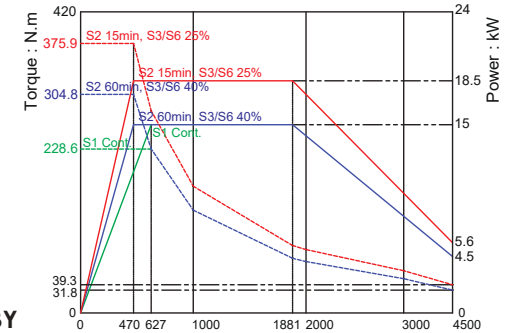
NL 2000SY-Y | NL 2500SY-Y | NL 3000SY-Y 6" - 12" Chuck / A2-5, A2-6, A2-8, A2-11 spindle nose



NL 2000ASY | AY



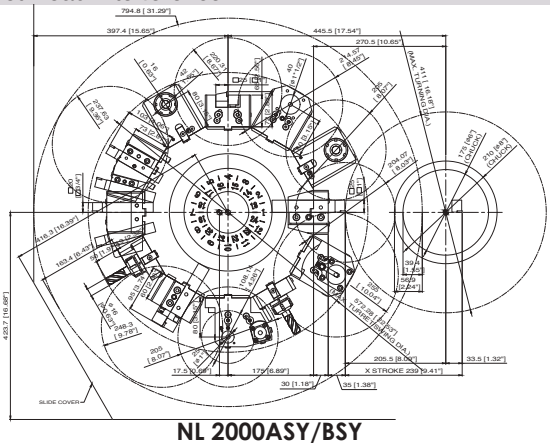
NL 2500SY | Y



NL 2000BSY | BY

Turret Head Interference

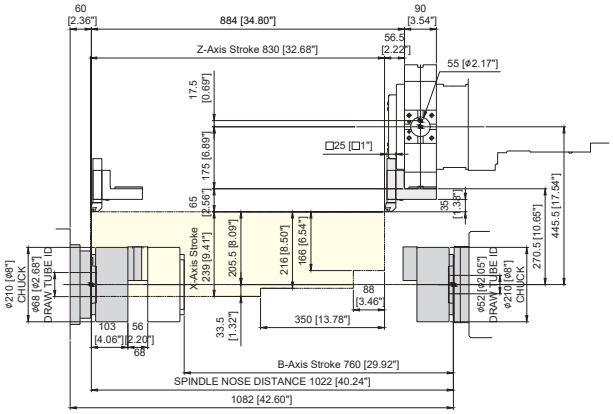
Unit: mm(inch)



NL 2000ASY/BSY

Work Range

Unit: mm(inch)



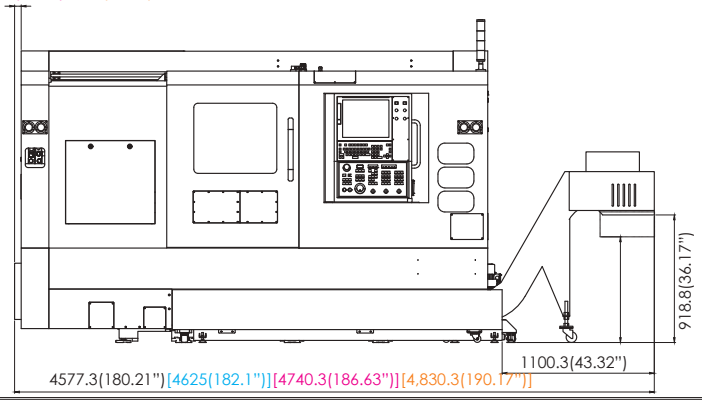
NL 2000BSY

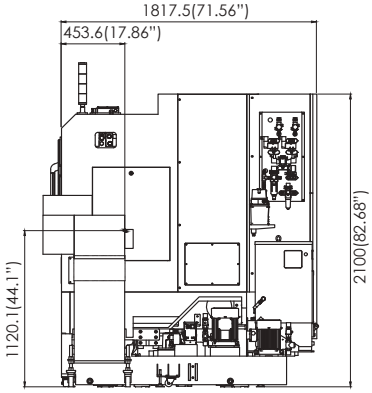
Machine Dimensions

Unit: mm(inch)

NL 2000ASY [NL 2000BSY] [NL 2500SY] [NL 3000SY]

[48(1.89")][163(6.52")][251(9.88")]





Machine Specifications

DESCRIPTION				NL 2000ASY [NL 2000BSY]	NL 2000AY [NL 2000BY]	NL 2500SY [NL 3000SY]	NL 2500Y [NL 3000Y]
CAPACITY	Swing over the bed		mm(inch)	810(31.89)			
	Swing over the cross slide		mm(inch)	720(28.35)			
	Max. machining diameter		mm(inch)	411(16.18)		394(15.51)	
	Max. machining length		mm(inch)	750(29.53) [735(28.94)]	726.5(28.6) [711.5(28.01)]	713(28.07) [700(27.56)]	690(27.17) [730(28.74)]
MAIN SPINDLE	Chuck size		inch	6 [8]		10 [12]	
	Bar working dia.		mm(inch)	51(2) [65(2.56)]		81(3.19) [102(4.02)]	
	Spindle speed		rpm	6,000 [4,500]		4,000 [2,800]	
	Spindle motor (Cont./Max.)		kW(Hp)	11/18.5(15/25) [15/18.5(20/25)]		18.5/26(25/35)	
	Spindle nose		ASA	A2-5 [A2-6]		A2-8 [A2-11]	
	Spindle torque (Max.)		N.m(ft.lbs)	157(115.8) [376(277.3)]		647.4(477.5) [1,124(830)]	
	Spindle through hole dia.		mm(inch)	61(2.4) [76(2.99)]		91(3.58) [115(4.53)]	
SUB SPINDLE	Chuck size		inch	6 [8]	-	8	-
	Bar working dia.		mm(inch)	51(2)	-	51(2)	-
	Spindle speed		rpm	6,000 [5,000]	-	5,000	-
	Spindle motor (Cont./Max.)		kW(Hp)	11/15(15/20)	-	11/15(15/20)	-
	Spindle nose		ASA	A2-5 [A2-6]	-	A2-6	-
	Spindle torque (Max.)		N.m(ft.lbs)	135(99.6)	-	135(99.6)	-
	Spindle through hole dia.		mm(inch)	62(2.44)	-	62(2.44)	-
TRAVEL	Rapid traverse (X/Z/Y/B)		m/min(ipm)	30/30/10/30(1,181/1,181/394/1,181)			
	Travel	X/Z	mm(inch)	239/830(9.41/32.68)	239/830(9.41/32.68)	248.5/830(9.78/32.68)	248.5/830(9.78/32.68)
		Y/B	mm(inch)	110/790(4.33/31.1) [110/760(4.33/29.92)]	110/830(4.33/32.68)	110/760(4.33/29.92)	110/830(4.33/32.68)
	Feed motor (X/Z/Y/B)		kW(hp)	3/3/1.8/3(4/4/2.4/4)			
TURRET	Number of tool stations		st.	12(24)			
	OD tool size		mm(inch)	□25(□1)			
	Max. boring bar size		mm(inch)	Ø40(1.5)		Ø50(2)	
	Indexing time		sec	0.15/Step			
	Milling tool holder type		-	BMT55		BMT65	
	Max. rotary tool spindle speed		rpm	5,000			
	Rotary tool motor power		kW(hp)	3.7/5.5(5/7.4)		3.7/5.5/7.5(5/7.4/10)	
TAILSTOCK	Tailstock travel		mm(inch)	-	830(32.68)	-	830(32.68)
	Taper of tailstock spindle		-	-	MT#5 live center	-	MT#5 live center
BED TYPE			-	30° Slant			
ELECTRIC POWER SUPPLY			kVA	40		45	
REQUIRED FLOOR SPACE			mm(inch)	3,570x1,818(140.55x71.57)		3,790x1,818(149.21x71.57)	
MACHINE WEIGHT			kg(lbs)	5,700(12,566) [5,800(12,787)]	5,600(12,345) [5,700(12,566)]	6,100(13,448) [6,200(13.669)]	6,000(13,228) [6,100(13,448)]
CONTROLLER			-	Fanuc 0*i*-TF			

- Figures in inches are converted from metric measurements.
- Design and specifications are subject to change without notice.

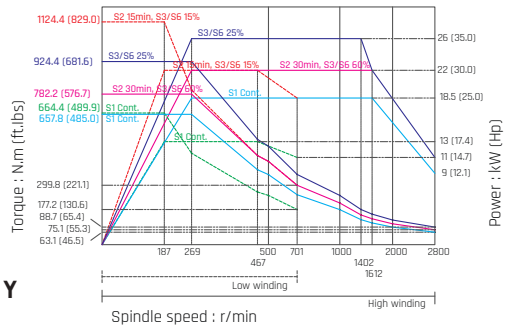
Standard Accessories

- Coolant unit 20bar (290PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock

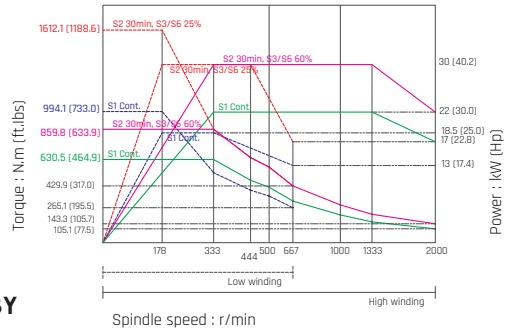
Optional Accessories

- Chip conveyor
- Dual pressure chucking
- Auto door
- Oil skimmer
- Main part catcher
- Sub part catcher with internal part conveyor (Only SY model)
- Work ejector (Only SY model)
- Air blower
- Coolant gun
- Tool presetter

NL 3500SY-Y 12" - 15" Chuck / A2-11 spindle nose



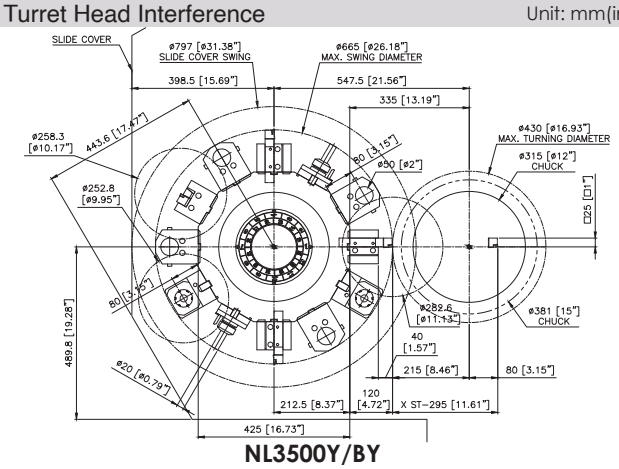
NL3500SY | Y



NL3500BSY | BY

Turret Head Interference

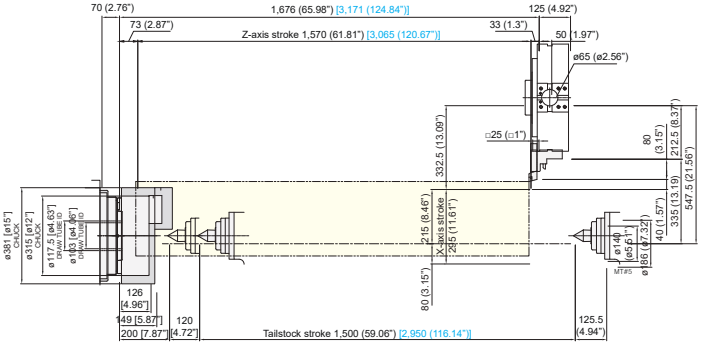
Unit: mm(inch)



NL3500Y/BY

Work Range

Unit: mm(inch)

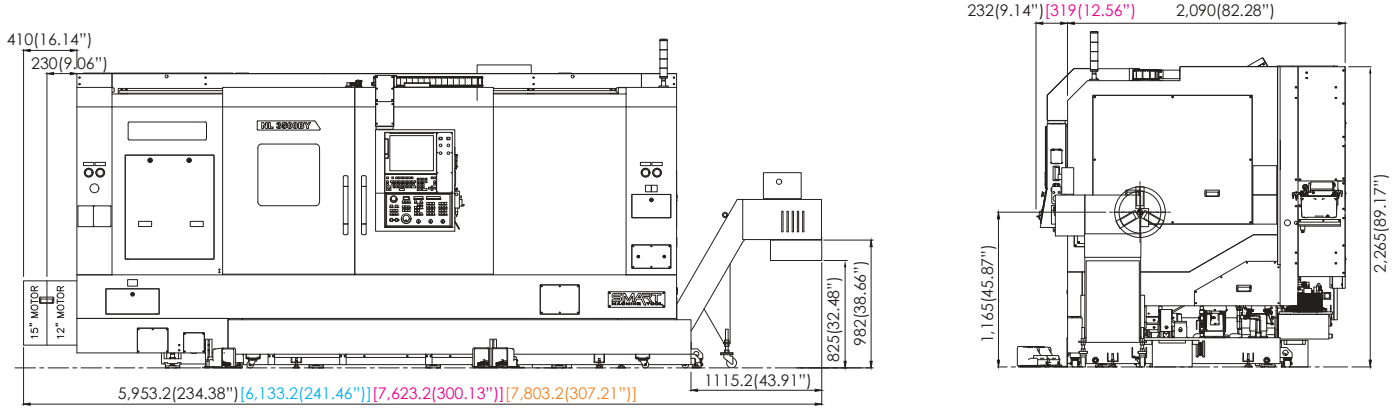


NL3500Y [NL3500XLY]

Machine Dimensions

Unit: mm(inch)

NL 3500Y/SY [NL 3500BY/BSY] [NL 3500XLY] [NL 3500BXLY]



Machine Specifications

DESCRIPTION				NL 3500Y [NL 3500XLY]	NL 3500BY [NL 3500BXLY]	NL 3500SY	NL 3500BSY
CAPACITY	Swing over the bed		mm(inch)	987(38.86)			
	Swing over the cross slide		mm(inch)	852(33.54)			
	Max. machining diameter		mm(inch)	430(16.93)			
	Max. machining length		mm(inch)	1,500(59.06) [3,000(118.11)]	1,470(57.87) [2,970(116.93)]	1,500(59.06)	1,470(57.87)
MAIN SPINDLE	Chuck size		inch	12	15	12	15
	Bar working dia.		mm(inch)	102(4.02)	116.5(4.59)	102(4.02)	116.5(4.59)
	Spindle speed		rpm	2,800	2,000	2,800	2,000
	Spindle motor (Cont./Max.)		kW(Hp)	18.5/26(25/35)	22/30(30/40)	18.5/26(25/35)	22/30(30/40)
	Spindle nose		ASA	A2-11			
	Spindle torque (Max.)		N.m(ft.lbs)	1,124.4(829)	1,612.1(1,188.6)	1,124.4(829)	1,612.1(1,188.6)
	Spindle through hole dia.		mm(inch)	115(4.53)	132(5.2)	115(4.53)	132(5.2)
SUB SPINDLE	Chuck size		inch	-		10	
	Bar working dia.		mm(inch)	-		81(3.19)	
	Spindle speed		rpm	-		4,000	
	Spindle motor (Cont./Max.)		kW(Hp)	-		15/22(20/30)	
	Spindle nose		ASA	-		A2-8	
	Spindle torque (Max.)		N.m(ft.lbs)	-		599.1(441.7)	
	Spindle through hole dia.		mm(inch)	-		91(3.58)	
TRAVEL	Rapid traverse (X/Z/Y/B)		m/min(ipm)	30/30/10(1,181/1,181/394)		30/30/10/30(1,181/1,181/394/1,181)	
	Travel	X/Z	mm(inch)	295/1,570(11.61/61.81) [295/3,065(11.61/120.67)]		295/1,570(11.61/61.81)	
		Y/B	mm(inch)	130/-(5.12/-)		130/1,570(5.12/61.81)	
	Feed motor (X/Z/Y/B)		kW(hp)	4/7/4/-(5.4/9.4/5.4/-)		4/7/4/3(5.4/9.4/5.4/4)	
TURRET	Number of tool stations		st.	12(24)			
	OD tool size		mm(inch)	□25(□1)			
	Max. boring bar size		mm(inch)	Ø50(2)			
	Indexing time		sec	0.25/Step			
	Milling tool holder type		-	BMT65			
	Max. rotary tool spindle speed		rpm	5,000			
	Rotary tool motor power		kW(hp)	7.5/11(10/14.8)			
TAILSTOCK	Tailstock travel		mm(inch)	1,450(57.1) [2,950(116.14)]		-	
	Quill diameter		mm(inch	140(5.51)		-	
	Quill travel		mm(inch	120(4.72)		-	
	Taper of tailstock spindle		-	MT#5 (Built-in)		-	
BED TYPE			-	30° Slant			
ELECTRIC POWER SUPPLY			kVA	45	55	65	65
REQUIRED FLOOR SPACE			mm(inch)	5,000x2,300(196.9x90.6) [6,522x2,300(256.7x90.6)]		5,000x2,300(196.9x90.6)	
MACHINE WEIGHT			kg(lbs)	9,000(19,842) [11,100(24,471)]	9,300(20,503) [11,400(25,133)]	9,400(19,842)	9,700(21,385)
CONTROLLER			-	Fanuc 0*i*-TF			

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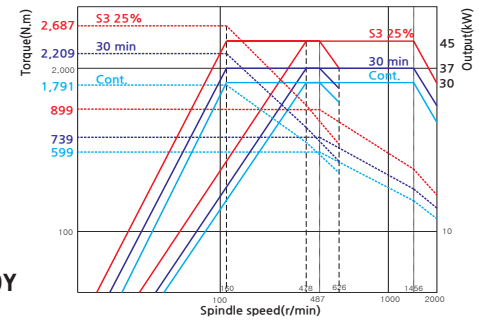
Standard Accessories

- Coolant unit 10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

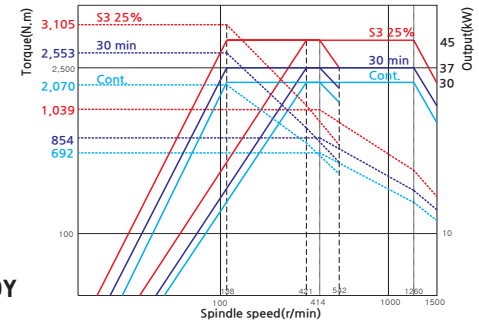
Optional Accessories

- Chip conveyor
- Dual pressure chucking
- Auto door
- Oil skimmer
- Steady rest prep (Only Y model)
- Air blower
- Coolant gun
- Tool presetter

NL 4000Y | 5000Y 18", 21" Chuck / A2-11, A2-15 spindle nose, With Y-Axis



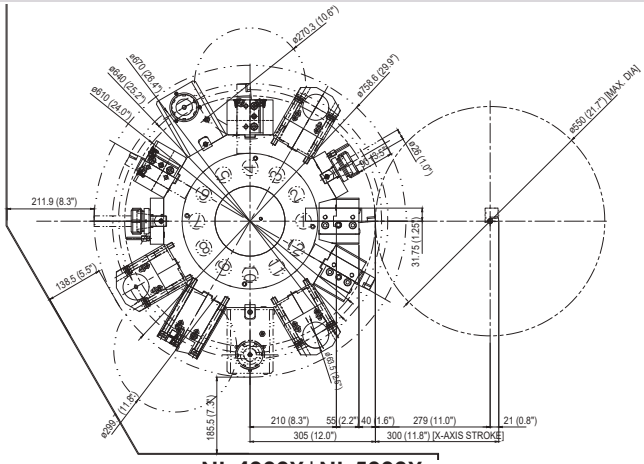
NL 4000Y



NL 5000Y

Turret Head Interference

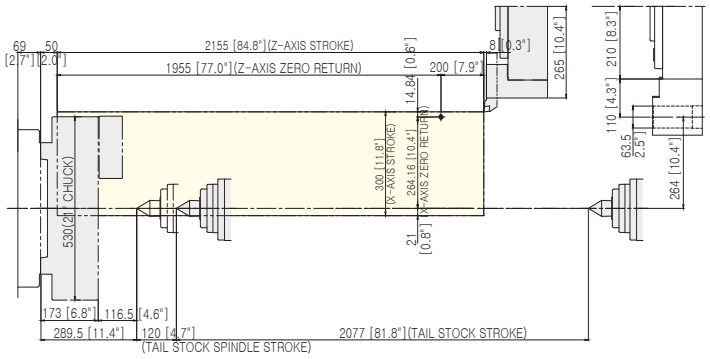
Unit: mm(inch)



NL 4000Y | NL 5000Y

Work Range

Unit: mm(inch)

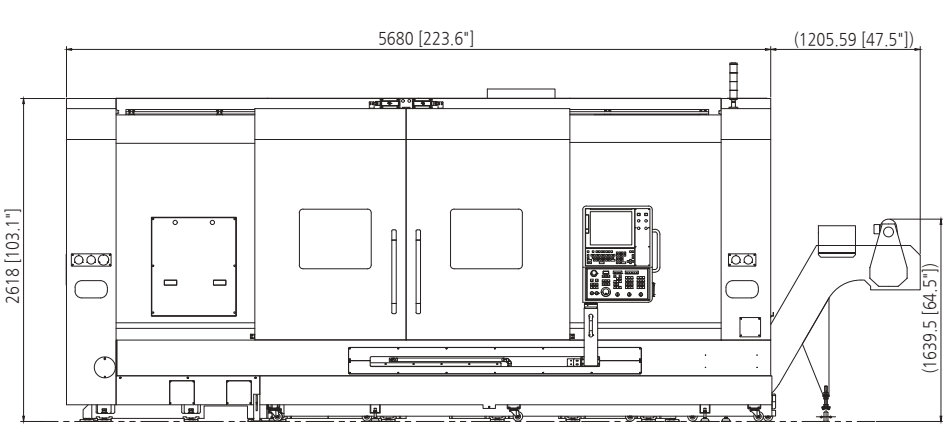


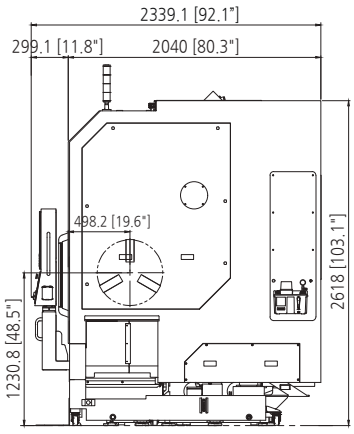
NL 5000LY

Machine Dimensions

Unit: mm(inch)

NL 4000LY | NL5000LY





Machine Specifications

DESCRIPTION			NL 4000LY	NL 5000LY
CAPACITY	Swing over the bed	mm(inch)	900(35.43)	
	Swing over the cross slide	mm(inch)	850(33.46)	
	Max. machining diameter	mm(inch)	550(21.65)	
	Max. machining length	mm(inch)	2,017(79.41)	1,992(78.43)
	Chuck size	Inch	18	21
	Bar working dia.	mm(inch)	116.5 (4.59)	165.5(6.52)
SPINDLE	Spindle speed	rpm	2,000	1,500
	Spindle motor (Cont./Max.)	kW(Hp)	30/45(40/60)	
	Spindle nose	ASA	A2-11	A2-15
	Spindle torque (Max.)	N.m(ft.lbs)	2,687(1,981)	3,105(2,289)
	Spindle through hole dia.	mm(inch)	132(5.2)	181(7.13)
TRAVEL	Rapid traverse (X/Z/Y)	m/min(ipm)	16/20/10(630/787/394)	
	Travel (X/Z/Y)	mm(inch)	300/2,155/150(11.81/84.84/5.91)	
	Feed motor (X/Z/Y)	kW(hp)	7/6/7(9.4/8/9.4)	
TURRET	Number of tool stations	st.	12	
	OD tool size	mm(inch)	□32(1.25)	
	Max. boring bar size	mm(inch)	Ø60(2.5)	
	Indexing time	sec	0.25/step	
	Milling tool holder type	-	BMT75	
	Max. rotary tool spindle speed	rpm	4,000	
	Rotary tool motor power	kW(hp)	7.5/11/15 (10/14.8/20.1)	
TAILSTOCK	Tailstock travel	mm(inch)	2,077(81.77)	
	Quill diameter	mm(inch)	140(5.51)	
	Quill travel	mm(inch)	120(4.72)	
	Taper of tailstock spindle	-	MT#5 (Built-in)	
BED TYPE		-	45° Slant	
ELECTRIC POWER SUPPLY		kVA	60	
REQUIRED FLOOR SPACE		mm(inch)	5,720x2,340(225.2x92.1)	
MACHINE WEIGHT		kg(lbs)	14,800(32,628)	15,000(33,069)
CONTROLLER		-	Fanuc 0*i*-TF	

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Standard Accessories

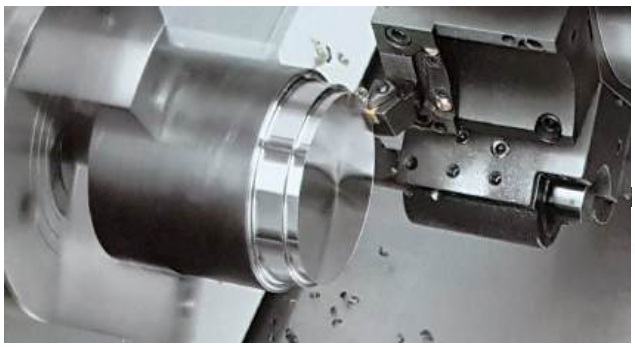
- Coolant unit 10bar (140PSI)
- Work light (LED lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
- Leveling blocks
- Chuck clamp foot switch
- Chuck clamp confirmation
- Manual/Part list
- Door interlock
- Tailstock in-out foot switch

Optional Accessories

- Chip conveyor
- Dual pressure chucking
- Auto door
- Coolant gun
- Tool presetter
- Oil skimmer
- Steady rest prep

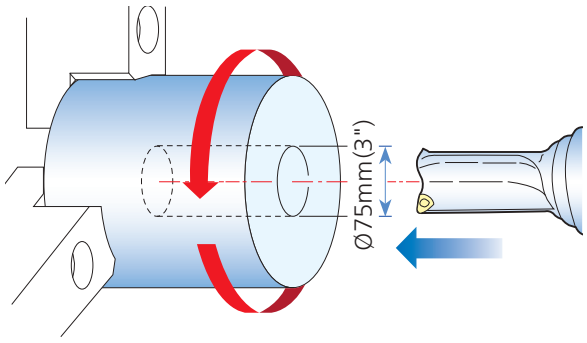
Turning Performance

Heavy-duty cutting <O.D.>



Machine type	NL 2500
Material <JIS>	S45C
Spindle speed	367 min^{-1}
Depth of cut	8 mm (0.312 inch)
Cutting speed	152 m/min (500 fpm)
Feedrate	0.5 mm/rev (0.020 ipr)

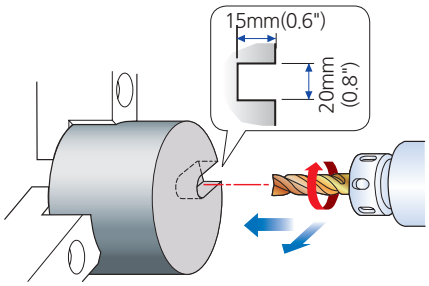
Insert Drill



Machine type	NL 2500
Material <JIS>	S45C
Spindle speed	417 min^{-1}
Drill diameter	75 mm (3 inch)
Feedrate	0.15 mm/rev (0.006 ipr)

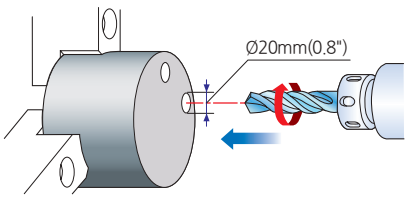
Milling Capacity (material <JIS>:S45C)

End mill <Ø20mm(0.8") High-speed steel>



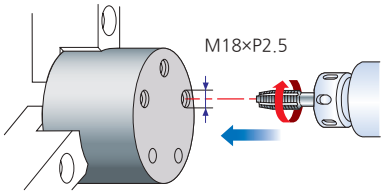
Machine type	NL 2500
Material <JIS>	S45C
Rotary tool spindle speed	320 min^{-1}
Depth of cut	15 mm (0.6 inch)
Cutting speed	20 m/min (65.6 fpm)
Feedrate	65 mm/min (2.5 ipm)

Drill <Ø20mm(0.8") High-speed steel>



Machine type	NL 2500
Material <JIS>	S45C
Rotary tool spindle speed	391 min^{-1}
Cutting speed	25 m/min (82.0 fpm)
Feedrate	105 mm/min (4.1 ipm)

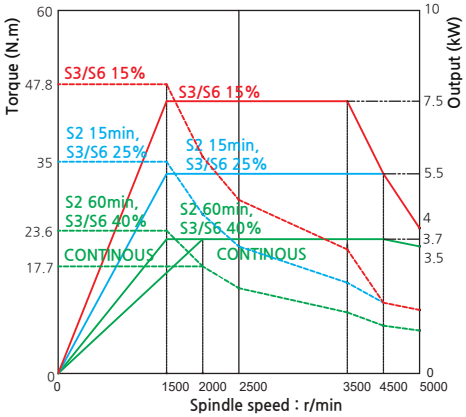
Tap <N18xP2.5>



Machine type	NL 2500
Material <JIS>	S45C
Rotary tool spindle speed	160 min^{-1}
Cutting speed	10 m/min (32.8 fpm)
Feedrate	400 mm/min (15.7 ipm)

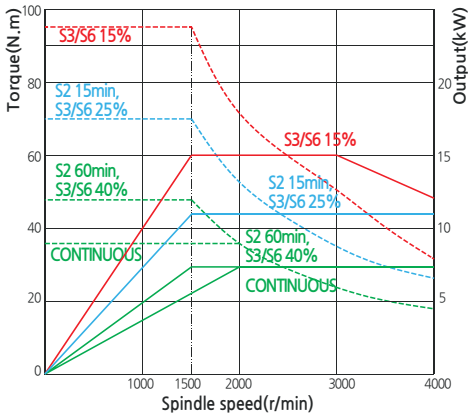
Rotary Tool Spindle Output Diagram

BMT 65



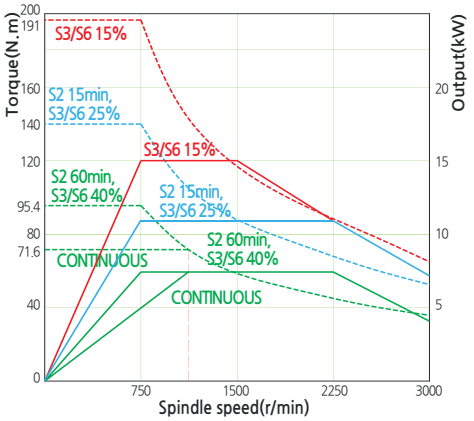
NL 2500 I NL 3000

BMT 75



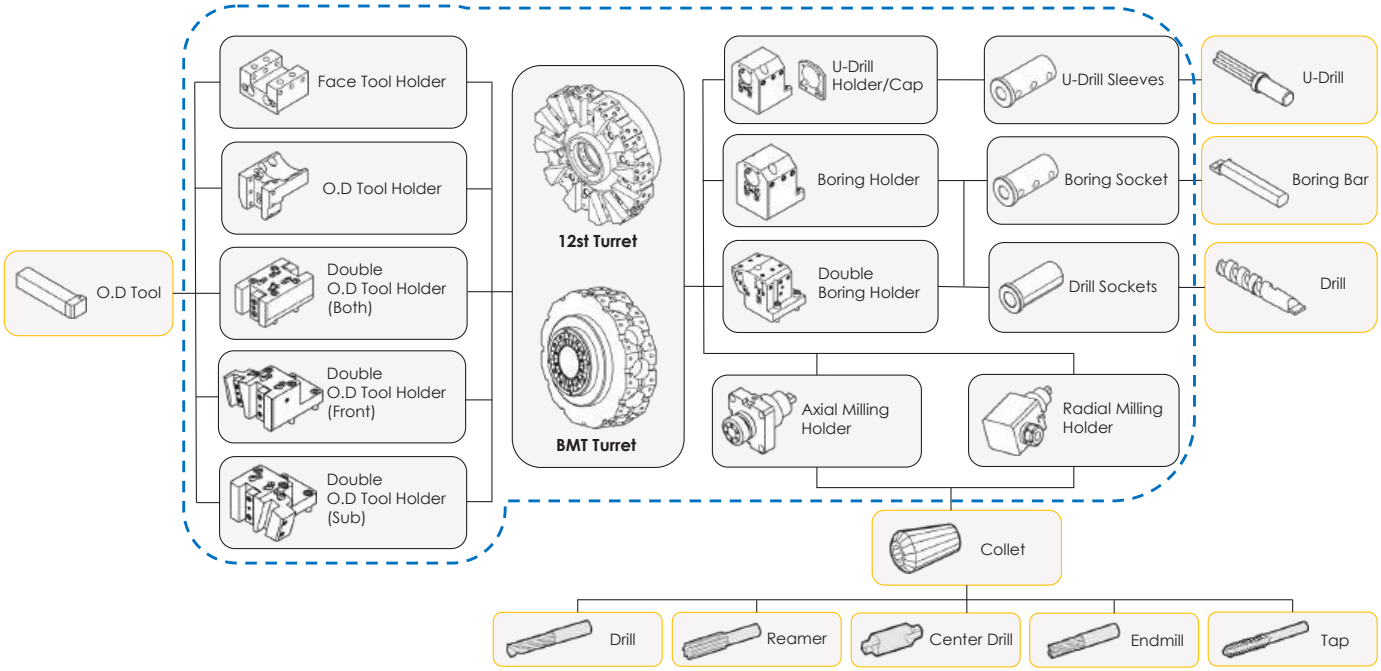
NL 4000 I NL 5000

BMT 85



NL 6000

Tooling System



Standard Tooling Packages

Unit: mm(inch)

ITEM			NL1500 NL2000	NL1500M NL2000M	NL2500 NL3000	NL2500M NL3000M	NL4000 NL5000	NL4000M/Y NL5000M/Y	NL6000	NL6000M	NL 2000SY	NL 2500SY	NL2000Y	NL2500Y
Turning Holder	O.D Holder	Single	-	3	-	3	1	4	1	4	1	1	2	3
		Double(Both)	-	-	-	-	-	-	-	-	1	3	-	-
		Double(Front)	-	-	-	-	-	-	-	-	1	1	1	1
		Double(Sub)	-	-	-	-	-	-	-	-	1	-	-	-
	Facing Holder	-	2	1	2	1	1	1	1	1	1	-	1	1
Boring Holder	U-Drill holder	Single	3	4	6	4	1	1	2	1	2	2	3	2
		Double	-	-	-	-	-	-	-	-	1	1	1	1
	Boring holder	Single	3	-	-	-	4	2	3	2	-	-	-	-
Driven Holder	Axial Milling Holder	Standard	-	1	-	1	-	1	-	1	1	1	1	1
	Radial Milling Holder	Standard	-	1	-	1	-	1	-	1	1	1	1	1
Sleeve	Boring	Ø10(3/8")	1	1	1	1	-	-	-	-	1	1	1	1
		Ø12(1/2")	1	1	1	1	1	1	-	-	1	1	1	1
		Ø16(5/8")	1	1	1	1	1	1	1	1	1	1	1	1
		Ø20(3/4")	2	2	2	2	1	1	1	1	1	1	1	1
		Ø25(1")	2	2	2	2	1	1	1	1	1	1	1	1
		Ø32(1 1/4")	2	2	2	2	1	1	1	1	1	1	1	1
		Ø40(1 1/2")	-	-	2	2	1	1	1	1	-	1	-	1
		Ø50(2")	-	-	-	-	1	1	1	1	-	-	-	-
		Ø60(2 1/2")	-	-	-	-	-	-	1	1	-	-	-	-
	Sub Boring	Ø10(3/8")	-	-	-	-	-	-	-	-	1	1	1	1
		Ø12(1/2")	-	-	-	-	-	-	-	-	1	1	1	1
		Ø16(5/8")	-	-	-	-	-	-	-	-	1	1	1	1
		Ø20(3/4")	-	-	-	-	-	-	-	-	1	1	1	1
	Drill	MT2	1	1	-	-	1	1	1	1	1	-	1	-
		MT3	1	1	1	1	1	1	1	1	1	1	1	1
		MT4	-	-	1	1	1	1	1	1	-	1	-	1
		MT5	-	-	-	-	1	1	1	1	-	-	-	-

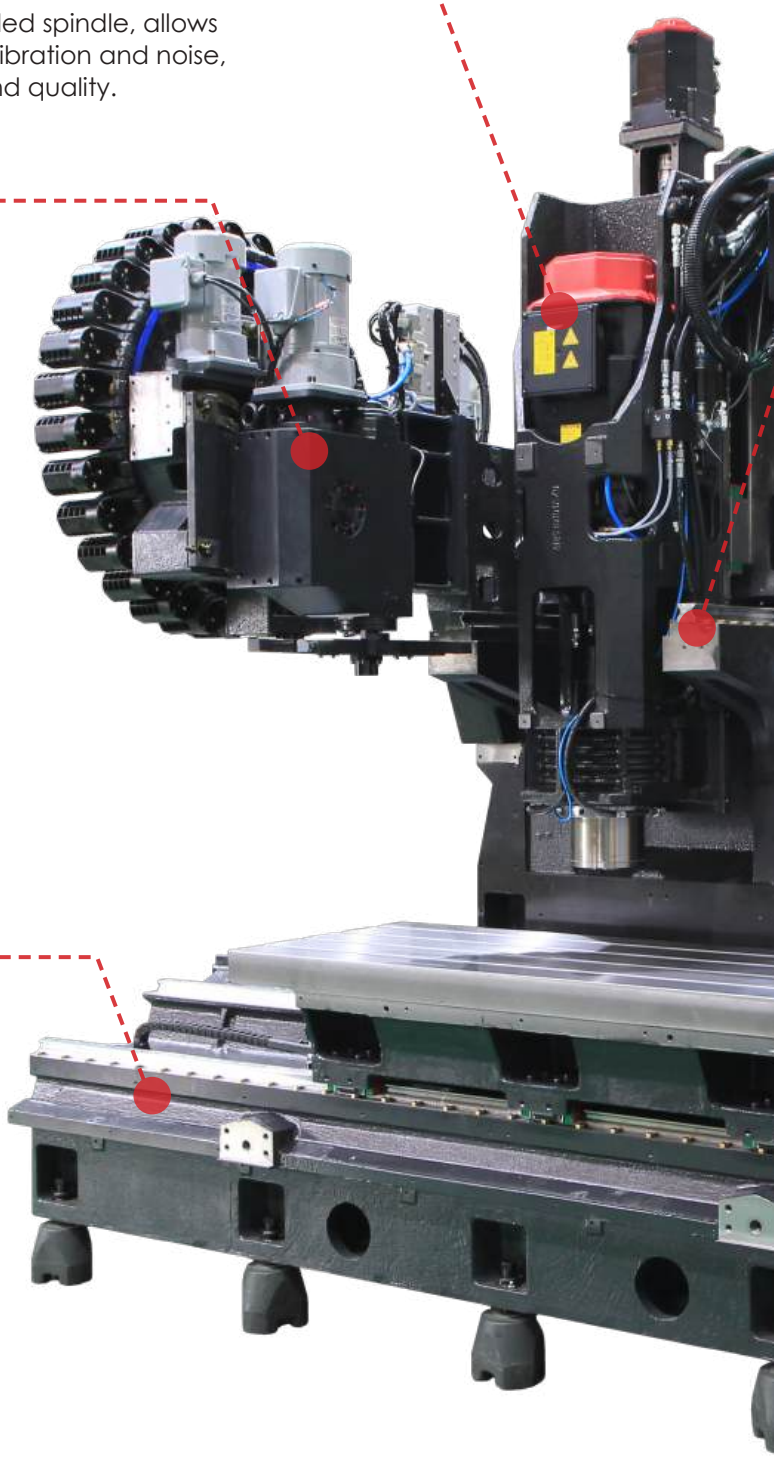
NV Series - Vertical Machining Center Machine Construction

Direct Drive Spindle

High-performance, directly coupled spindle, allows high-speed processing with low vibration and noise, increase machining accuracy and quality.

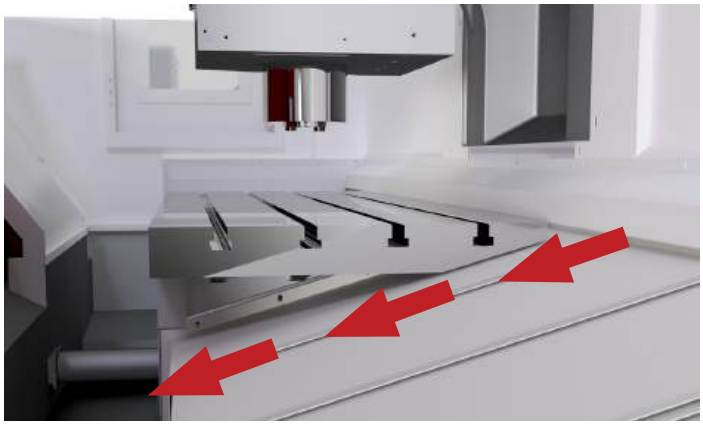
ATC Magazine

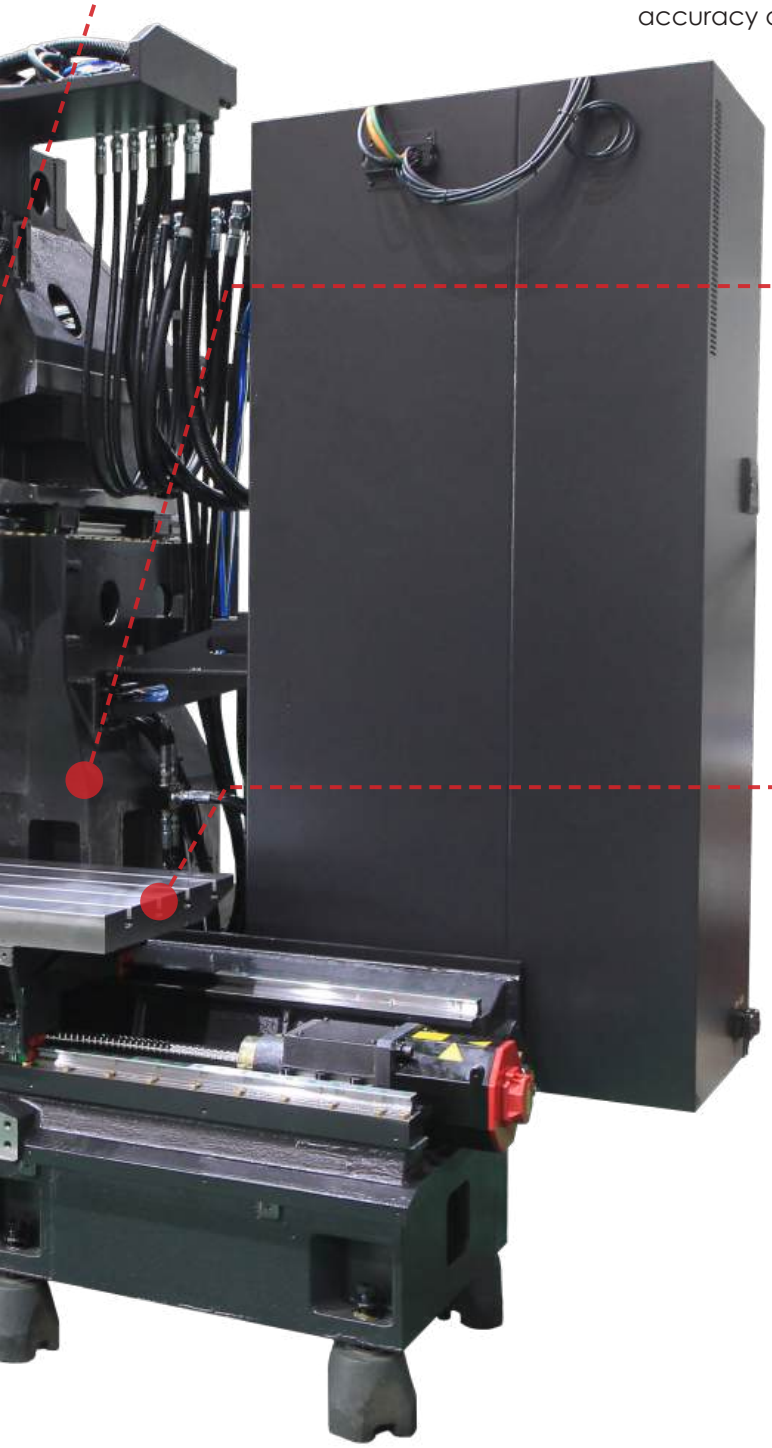
Holds up to 30 tools as standard to cover a wide range of tools selection ensure flexible machining conditions. Tool magazine service door in the front of the machine for easier, faster and more convenient access.



Bed

Slant bed design allowing chips generated during machining to fall directly to chip conveyor without the need for installing internal screw conveyor. Such design enables superior chip dispose out of the machine, less noise and require less maintenance compared to machines that equip with internal screw conveyors.





Y-Axis Structure

By mounting a saddle on the upper part of the column which has extended casting support structure for Y-axis, the over-hang issue is eliminated, positioning accuracy and machining quality are improved.

Wide Column Design

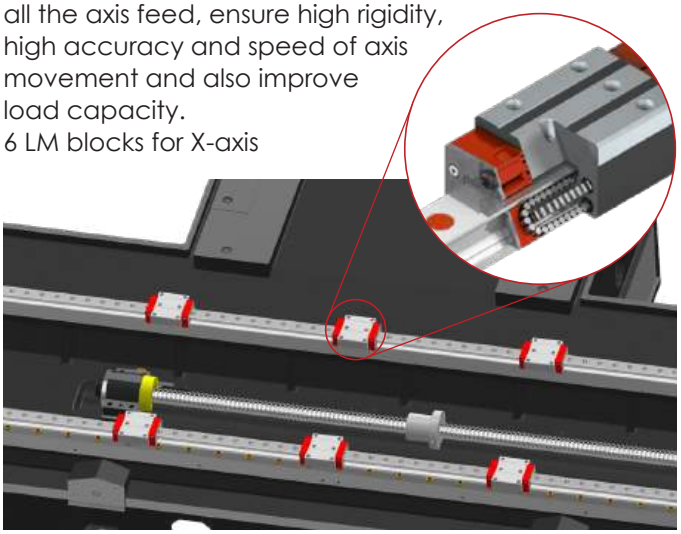
Design for extra wide column base and increased width of the contact surface between the column and the bed, improve vibration absorption ability and enhance machine stability and rigidity.

Table

No stacking axis for table, the table only travels as X-axis, allowing better machining stability.

Wider workpiece mounting area compared to competitive machines within the same floor space.

High rigid roller type LM guideways are applied for all the axis feed, ensure high rigidity, high accuracy and speed of axis movement and also improve load capacity.
6 LM blocks for X-axis



NV 5500L 12,000 RPM, BT40/CAT40, Ram type Column

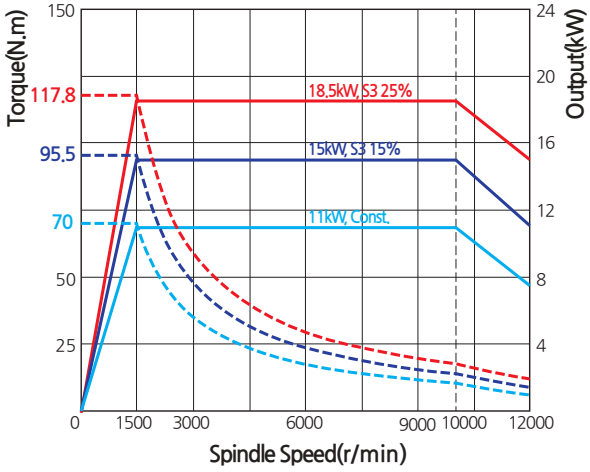
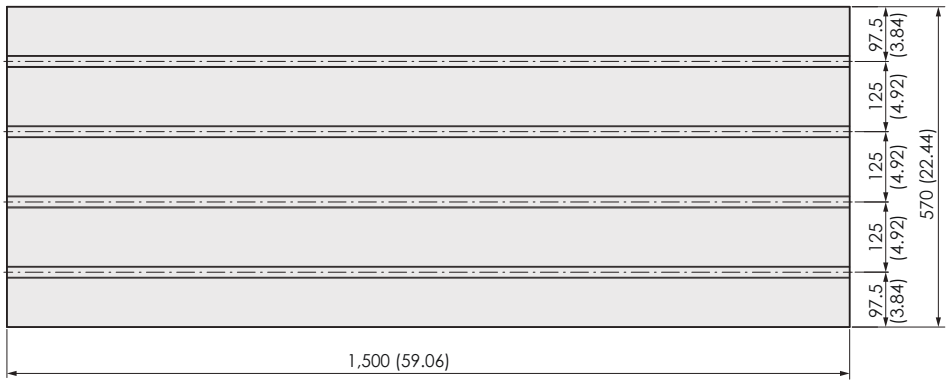
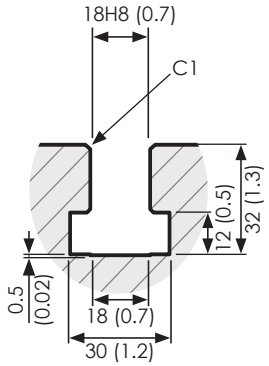


Table Dimensions

Unit: mm(inch)



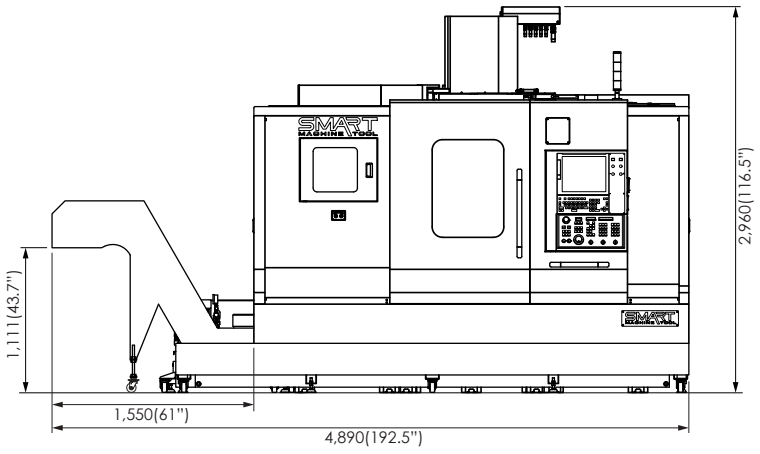


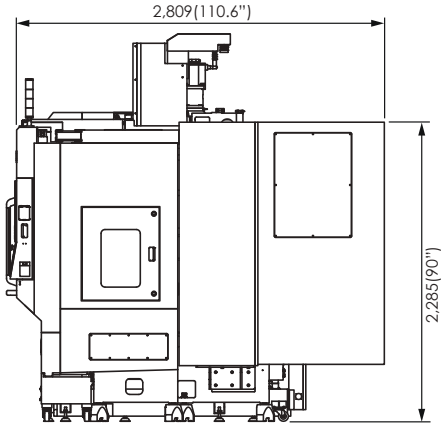
NV 5500L

Machine Dimensions

Unit: mm(inch)

NV 5500L





Machine Specifications

DESCRIPTION				NV 5500L
FEED	Travel Distance (X/Y/Z)		mm(inch)	1,350/570/510(53.15/22.44/20.08)
	Rapid Traverse Rate (X/Y/Z)		m/min(ipm)	36/36/30(1,417/1,417/1,181)
	Distance From Spindle Nose to Table Top		mm(inch)	130~640(5.12~25.2)
	Slide Type		-	LM Roller Guide
TABLE	Table Size		mm(inch)	1,500 x 570(59.06 x 22.44)
	Table Loading Capacity		kg(lb)	1,000(2,204.62)
	T Slot (WxP / No. of Slots)		mm(inch)	18H8xP125(0.71x4.92) - 4 ea
SPINDLE	Taper		-	ISO #40
	Max. Spindle Speed		rpm	12,000
	Spindle Output (Cont./Max)		kW(Hp)	11/18.5(14.8/24.8)
	Max. Spindle Torque		N.m(ft.lbs)	117.8(86.9)
ATC	Type of Tool Shank		-	BT 40 [CAT 40]
	Tool Storage Capacity		ea	30 [40]
	Max. Tool Diameter	Continuous	mm(inch)	ø80(3.15)
		Without Adjacent Tools	mm(inch)	ø125(4.92)
	Max. Tool length		mm(inch)	300(11.81)
	Max. Tool Weight		kg(lb)	8(17.64)
	Method of Tool Selection		-	Memory Random
	Tool Changing Time (Tool to Tool/Chip to Chip)		sec	1.3/3.7
POWER SUPPLY	Electric Power Supply		kVA	40
MACHINE DIMENSION	Height		mm(inch)	2,960(116.54)
	Length		mm(inch)	2,809(110.59)
	Width		mm(inch)	4,890(192.52)
	Weight		kg(lb)	6,565(14,473)
Control	NC System		-	Fanuc 0i-MF

- Figures in inches are converted from metric measurements.
- Design and specifications are subject to change without notice.

[ ] : Option

Standard Accessories

- Direct drive spindle
- 30 ea ATC magazine storage
- Head coolant 1.1kW
- Splash guard with side coolant tank
- Portable MPG
- Manual/Part list
- Tool/Work box
- Door interlock
- Work light (LED lamp)
- Leveling blocks

Optional Accessories

- Through spindle coolant (TSC)
- Chip conveyor
- Oil skimmer
- Renishaw optical receiver (with GUI)
- Bed flushing
- Coolant gun

Notes

Notes

NC Unit Specifications / FANUC Series

● : Standard ○ : Option

ITEM		Specification	0*i*-TF Plus	0*i*-MF Plus
Controlled axis	Controlled axes	X,Z / X,Z,C / X,Z,Y,C / X,Z,Y,B,C / X,Z,Y,B,C,A	2/3/4/5/6 Axis	3 Axis (X,Y,Z)
	Additional control axes	5 axes (Max.)	-	○
	Max. simultaneously controlled axis		4	4
	Least command increment	0.001mm / 0.0001"	●	●
Operation functions	Pulse handle feed	X1, X10, X100	●	●
	Feedrate per minute	0*i*-TF: G98 / 0*i*-MF: G94	●	●
	Feedrate per revolution	0*i*-TF: G99 / 0*i*-MF: G95	●	●
Interpolation functions	Linear interpolation	G01	●	●
	Circular interpolation	G02, G03	●	●
	Dwell	G04	●	●
	Polar coordinate interpolation	G12.1, G13.1	●	-
	Cylindrical interpolation	G07.1	●	●
	Helical interpolation		○	●
	Fine surface machining		-	●
	Variable lead thread cutting	G34	●	-
	Continuous threading		●	●
	Reference position return	G28	●	●
	Reference position return check	G27	●	●
Feed function	Rapid traverse rate override	F0%, 25%, 50%, 100%	●	●
	Feedrate override	0 ~ 200%	●	●
	AI contour control II	200 blocks	○	●
Spindle function	Spindle orientation		●	●
	Rigid tapping		●	●
	Arbitrary speed threading		○	○
Program input	Absolute/incremental programming		●	●
	Inch/metric conversion	G20 / G21	●	●
	Program restart		●	●
	Retraction for rigid tapping		○	●
	Max. programmable dimension	±999999.999mm/±99999.9999	●	●
	M function	M3 digit	●	●
	Custom macro		●	●
	Canned cycle for drilling		●	●
	Direct drawing dimension programming		●	-
	Programmable data input	G10	●	●
	Optional block skip		●	●
	Workpiece coordinate system	G52 ~ G59	●	●
	Number of registerable programs		1000EA	1000EA
Setting and display	Alarm & Operator history display		●	●
	Run hour and parts count display		●	●
	Display spindle & servo overload		●	●
	Self-diagnosis function		●	●
	Extended part program editing		●	●
	Display screen		15" Touch panel	15" Touch panel
Others	Memory card and USB interface		●	●
	Embeded ethernet		●	●
	Part program storage size	2 Mbyte (5120m)	●	●
	Manual guide *i*		●	●
	*i*HMI		●	●

SMART MACHINE TOOL

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❖ Design and specifications subject to change without notice.

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