

SMART
MACHINE TOOL

NL 2000/2500 SY-Y

High performance Y-Axis CNC Turning Centers



NL Series

NL 2000ASY, NL 2000BSY
NL 2000AY, NL 2000BY
NL 2500SY, NL 2500Y

Chuck Size

6", 8", 10"

INAXES
CNC MACHINERY

WWW.CNC-INAXES.CZ

NL Series

Designed by Smart Machine Tool engineers with many years of experience, NL Series turning centers guarantee ultra-high precision, flexible, and reliable machining performance.



		NL 2000ASY	NL 2000BSY	NL 2500SY
Swing Over Bed	mm	685	685	685
Max. Machining Length	mm	750	740	700
Main Spindle Chuck	mm	153 (6")	203 (8")	254 (10")
Spindle Speed	rpm	6,000	4,500	4,000
Turret Type	-	BMT55	BMT55	BMT65
Sub Spindle Chuck	mm	153 (6")	203 (8")	203 (8")
Travel (X/Z/Y)	mm	256/830/110	256/830/110	256/830/105

NL 2000 | 2500 with Y-Axis

- Y-Axis enables complex shape machining capability
- Wide box guideways machined from one-piece casting promote heavy duty cutting
- High spindle power ensures powerful cutting capability
- Built-in sub spindle motor enables fast acceleration/deceleration
- Synchronized control of main and sub spindle for machining flexibility
- High torque servo motor driven tailstock reducing workpiece setup time
- User-friendly operation panel design for efficient machine operation
- Various peripheral equipment and options



		NL 2000AY	NL 2000BY	NL 2500Y
Swing Over Bed	mm	685	685	685
Max. Machining Length	mm	750	740	700
Main Spindle Chuck	mm	153 (6")	203 (8")	254 (10")
Spindle Speed	rpm	6,000	4,500	4,000
Turret Type	-	BMT55	BMT55	BMT65
Tailstock Taper	-	MT#5	MT#5	MT#5
Travel (X/Z/Y)	mm	256/830/110	256/830/110	256/830/110

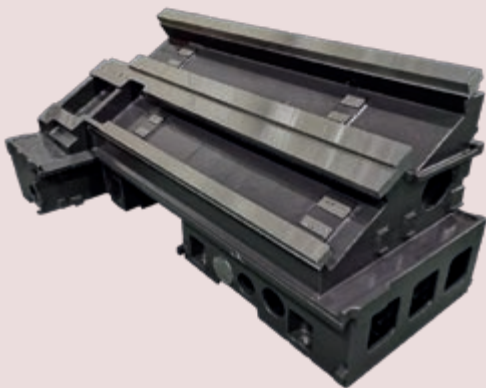
Machine Structure

High Rigidity Body Structure for Heavy-duty Machining



One-Piece Casting Bed

01

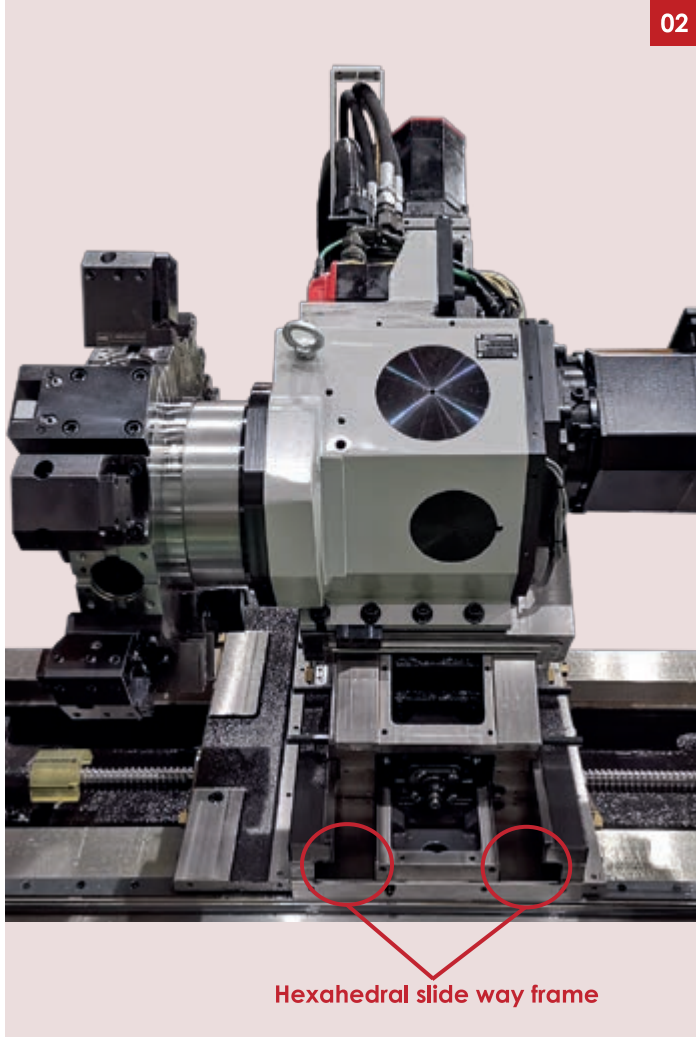


One-piece 30-degree slant bed made out of Meehanite cast iron, which has superb vibration absorption characteristics, provides rigid foundation for all machine components. Such design endures long-term machining accuracy and consistency.

- Precision hand scraping of contact surfaces of all slides, headstock and tailstock with the bed ensure long-lasting machining accuracy and minimal surface wears.



Machine Structure



High Performance Feed Motor

All axis are equipped with high performance feed motor for better travel ability and reducing cycle time.

Wide box guideways and Carriage

Hexahedral design and wide box guideways, machined from one piece casting, promote heavy duty machining.

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

Wide carriage promotes less vibration and allows high precision machining.

Main Spindle

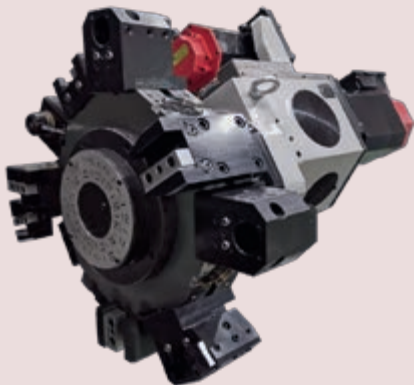
Double row cylindrical roller bearings and angular thrust bearings, ensure high rigidity for heavy cutting and excellent surface finishes.



12-Station Turret

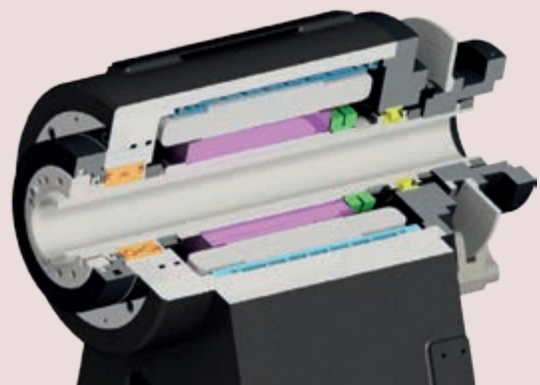
Large diameter 3-piece Curvic coupling for excellence rigidity and extended tool life.

High torque AC servo motor driven ensure fast indexing time, excellence position and repeatability.



Sub Spindle

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



Main Spindle

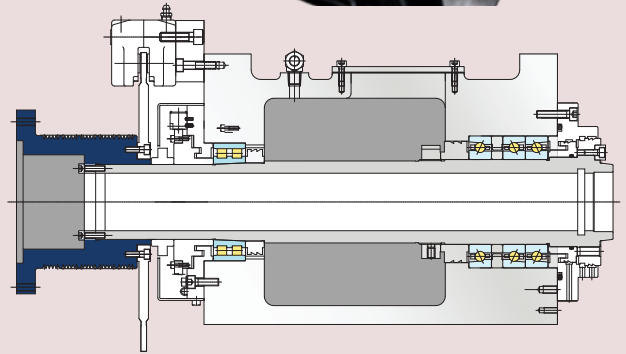
High Accuracy & Performance CNC Turning Center



Main Spindle

Bilateral symmetry body design reduces cause of thermal deformation. Spindle cartridge is designed to be exposed to air in all directions dissipating heat generated by axis movements, maintaining minimal thermal expansion.

		NL 2000ASY/AY	NL 2000BSY/BY	NL 2500SY/Y
Chuck size	mm	153 (6")	203 (8")	254 (10")
Spindle nose	ASA	A2-5	A2-6	A2-8
Max speed	rpm	6,000	4,500	4,000
Thru hole dia.	mm	Ø61	Ø76	Ø91
Draw tube I.D.	mm	Ø52	Ø68	Ø82



- Spindle pulley system is equipped with powerful and reliable Fanuc AC motor to ensure excellence heavy-duty cutting capability.
- PK type pulley belt is used to achieve low vibration, low noise and good surface roughness cutting result even at high speed.

Belt drive **Std.**



NL 2000ASY/AY : 6,000 rpm

Max. Output
18.5 kW

Max. Torque
157 N.m

NL 2000BSY/BY : 4,500 rpm

Max. Output
18.5 kW

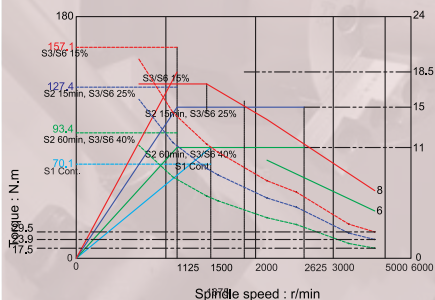
Max. Torque
376 N.m

NL 2500SY/Y : 4,000 rpm

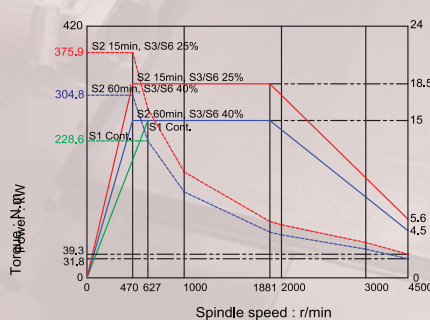
Max. Output
26 kW

Max. Torque
647.4 N.m

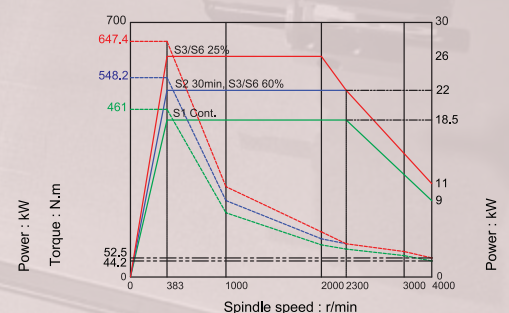
NL 2000ASY/AY



NL 2000BSY/BY



NL 2500SY/Y



Sub Spindle (SY Models)

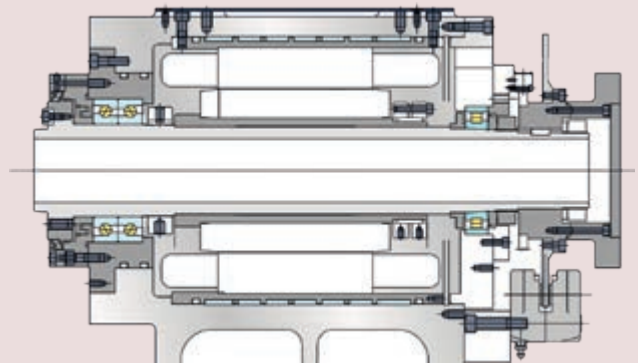
Fast acceleration with high torque



Built-In Sub Spindle Motor

Sub spindle with full C-axis control allows machining on the rear side of workpiece, and a powerful Fanuc built-in motor, provides fast acceleration with high torque and high precision.

		NL 2000ASY	NL 2000BSY	NL 2500SY
Chuck size	mm	153 (6")	203 (8")	203 (8")
Spindle nose	ASA	A2-5	A2-6	A2-6
Max speed	rpm	6,000	5,000	5,000
Thru hole dia.	mm	Ø62	Ø62	Ø62
Draw tube I.D.	mm	Ø52	Ø52	Ø52



SMART
MACHINE TOOL

NL 2000/2500 SY-Y
CNC Turning Centers

Max. Output and Torque

Max. Output

15 kW

Max. Torque

135 N.m

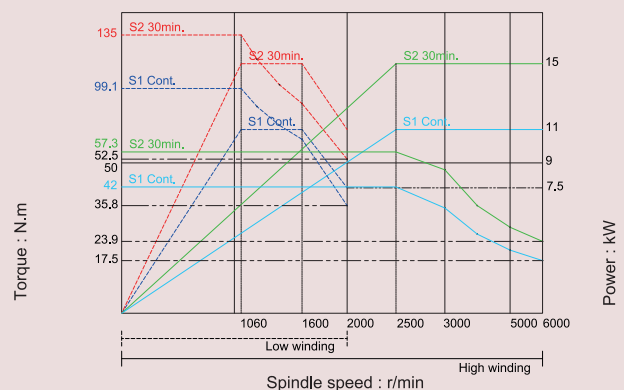
Max. Spindle Speed

Chuck size 153 (6")

6,000 rpm

Chuck size 203 (8")

5,000 rpm

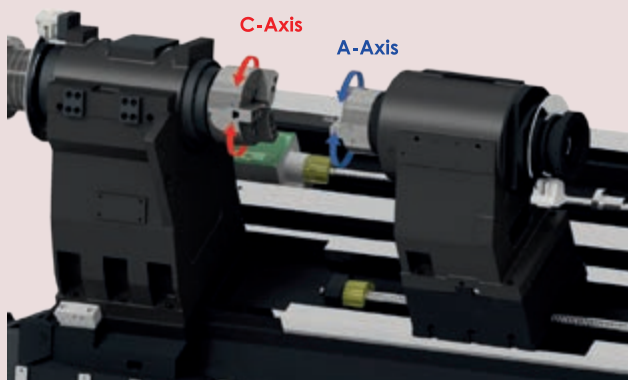


Main & Sub Spindle

Synchronized C and A Axis Indexing

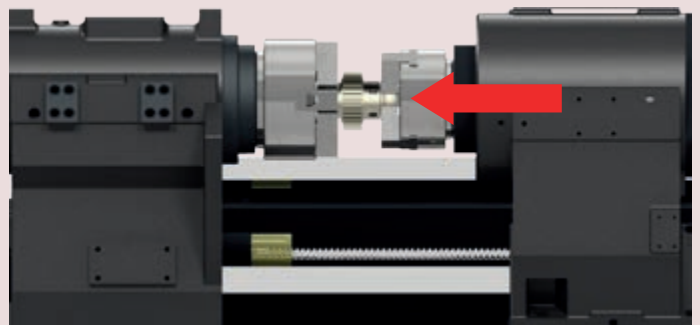
Main spindle (c-axis) and sub spindle (a-axis) synchronization, provides maximum machining flexibility for varieties of workpiece configuration.

(* Optional function)



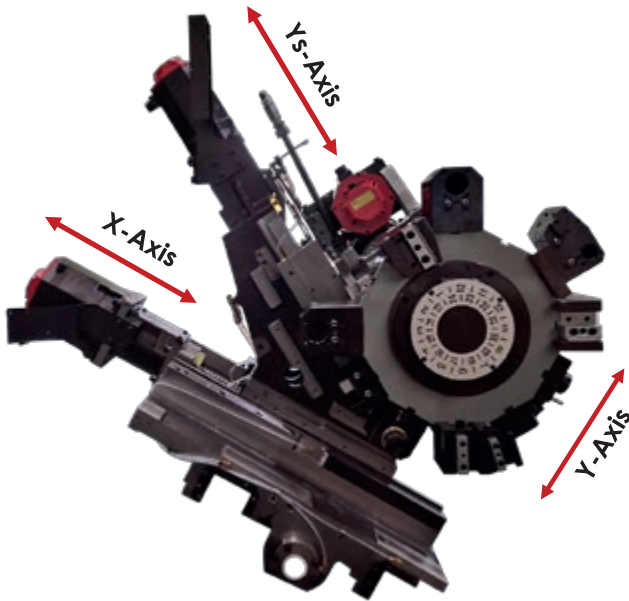
Automatic Part Transfer

Workpiece can be transferred from main spindle to sub spindle without manually handling the part, saving manpower, reducing cycle time and achieving continuous machining with both high speed and high precision.



Y-Axis Machining

Y-Axis Control improves machining accuracy and 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

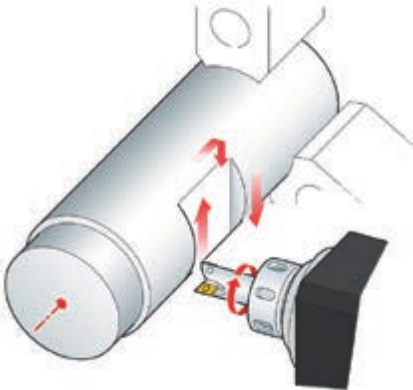
110 (±55) mm

Y-Axis Rapid Traverse

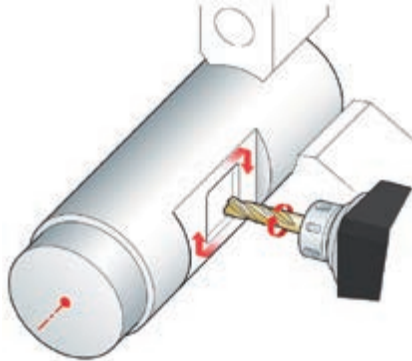
10 m/min

Y-Axis Machining Capability

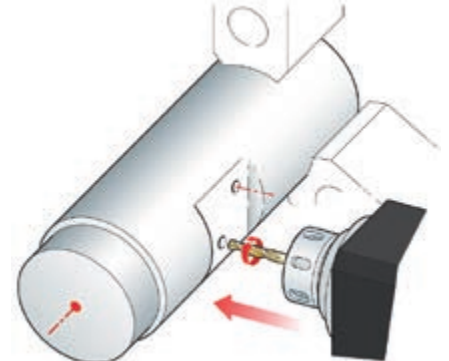
■ Side milling



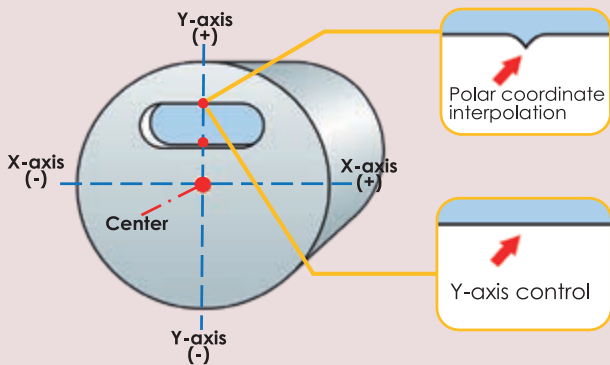
■ Off-center grooving



■ Off-center drilling



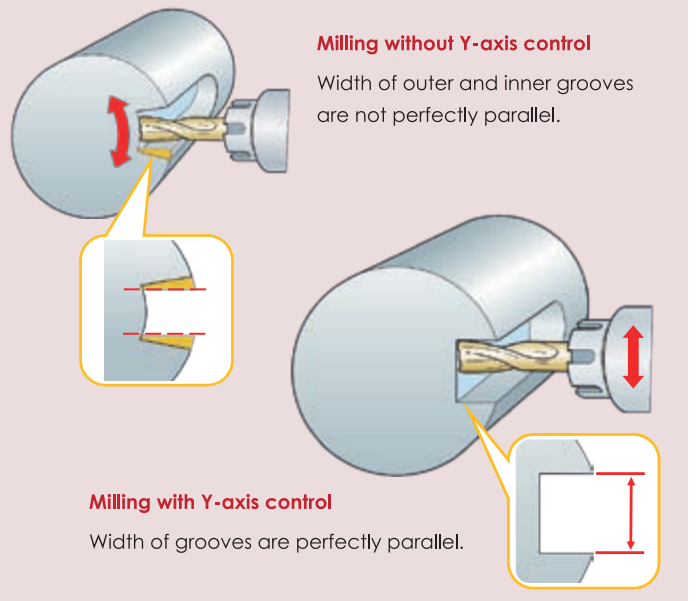
Y-axis control compared to Polar coordinate interpolation



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.

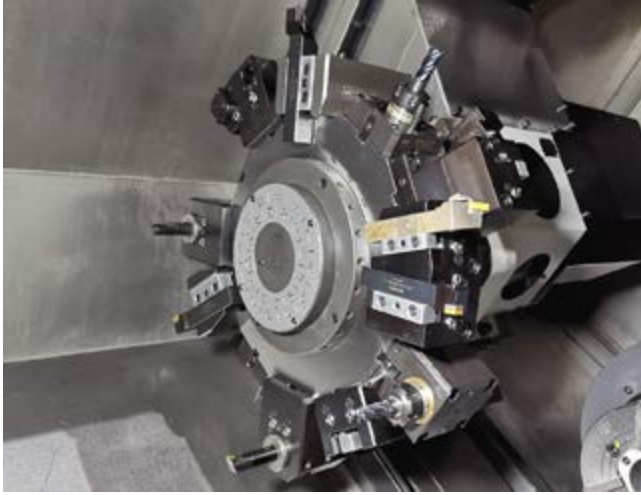


Milling with Y-axis control

Width of grooves are perfectly parallel.

Turret

Finest performance and high precision turret



BMT Mill Turret

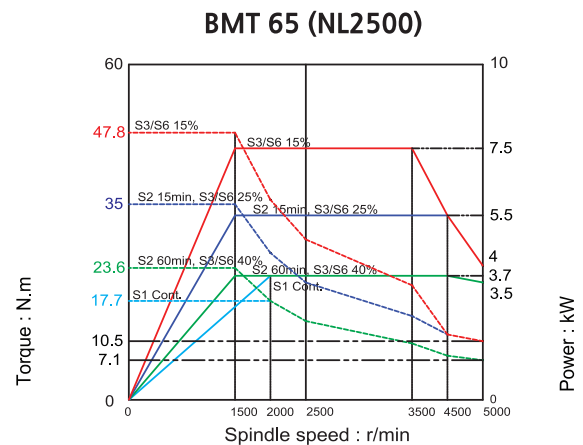
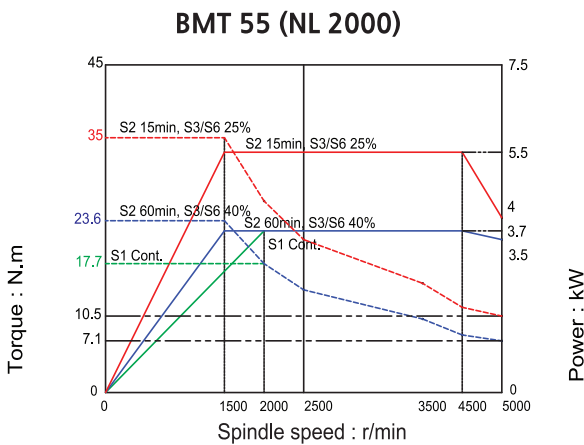
BMT turret is equipped with 2 separated motors for indexing and milling, ensuring high machining performance, reliability and reducing processing time of workpiece.

- **No. of tool stations:** 12 stations (24 positions)
- **Indexing time:** 0.15 sec
- **Max speed of rotary tool:** 5,000 rpm

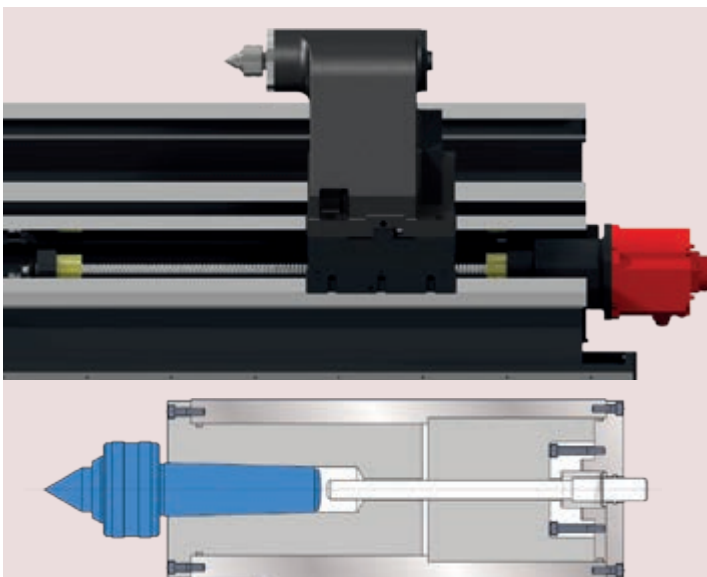
Tool Holder Size

- **Turning holder**
 - Single:** □ 25 mm
 - Double front/sub:** □ 20 mm
- **Boring holder**
 - Single:** NL 2000: ø40 mm , NL 2500: ø50 mm
 - Double:** ø25 mm

Mill Tool Torque Diagram



Tailstock (Y Models)



Servo Tailstock

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

The tailstock base positioning is driven by B-axis ballscrew and high performance servo motor ensure high speed and high precision positioning.

Thrust force setting can be digitally controlled according to part length and diameter for optimal machining accuracy.

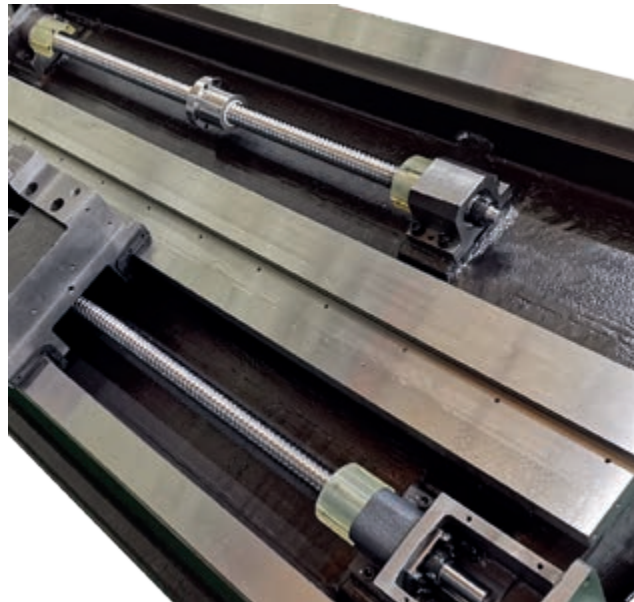
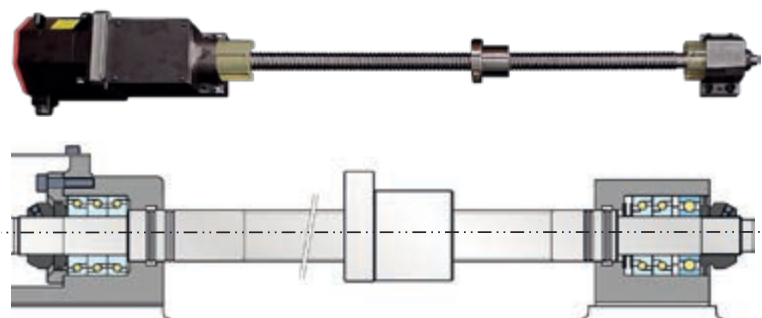
		NL 2000AY	NL 2000BY	NL 2500Y
Tailstock travel	mm	830	830	800
Taper	-	MT#5	MT#5	MT#5

⬡ Ballscrew

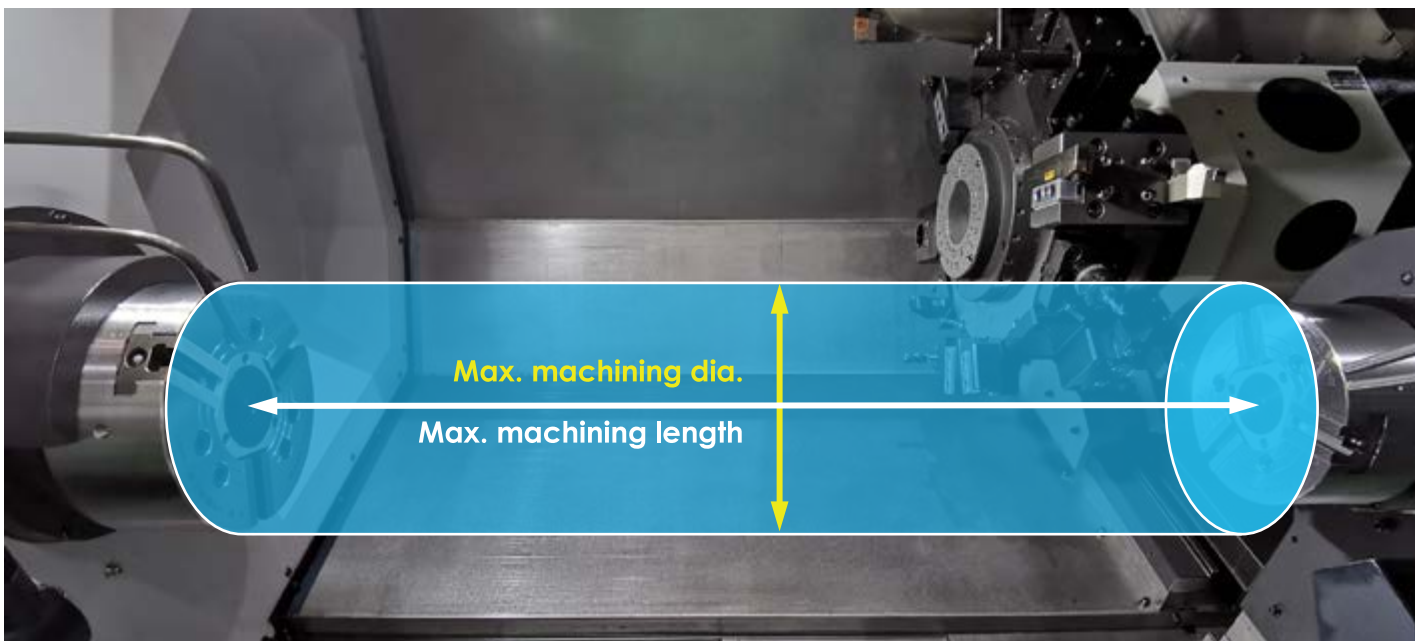
Ultimate rigidity ballscrew

Pre-Tensioned and Double Anchored Ballscrews

All axes ballscrews are pre-tensioned, heat treated and fixed by double anchors on both ends, providing ultimate rigidity and minimal thermal growth. Moreover, both ends of all axes are preloaded with P4 high precision Angular contact ball bearing ensure precise and smooth rotation.



⬡ Machining Area



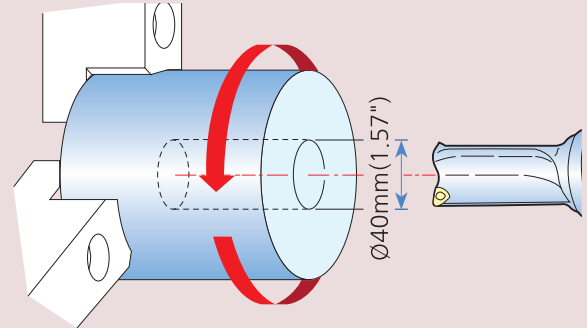
Model	Max. machining dia.	Max. machining length	Bar capacity
NL 2000ASY	Ø406	750	52
NL 2000BSY	Ø406	740	68
NL 2000AY	Ø406	750	52
NL 2000BY	Ø406	740	68
NL 2500SY	Ø376	700	82
NL 2500Y	Ø376	700	

Cutting Performance



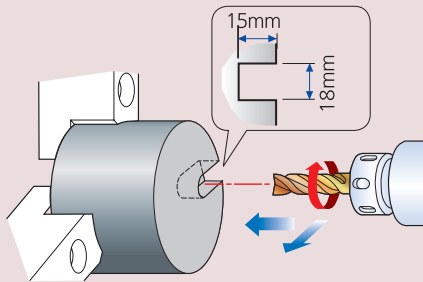
Heavy-duty cutting <O.D.>

Machine type	NL 2500SY
Material <JIS>	S45C
Spindle speed	367 min ⁻¹
Depth of cut	4 mm
Cutting speed	152 m/min
Feedrate	0.5 mm/rev



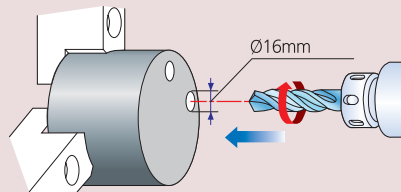
Insert Drill

Machine type	NL 2500SY
Material <JIS>	S45C
Spindle speed	417 min ⁻¹
Drill diameter	40 mm
Feedrate	0.15 mm/rev



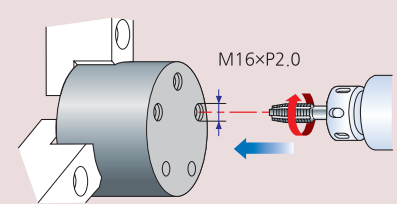
End mill <Ø18mm(0.71") High-speed steel>

Machine type	NL 2500SY
Material <JIS>	S45C
Rotary tool spindle speed	320 min ⁻¹
Depth of cut	15 mm
Cutting speed	20 m/min
Feedrate	65 mm/min



Drill <Ø16mm(0.63") High-speed steel>

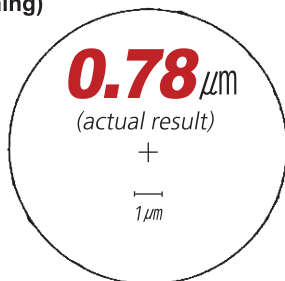
Machine type	NL 2500SY
Material <JIS>	S45C
Rotary tool spindle speed	391 min ⁻¹
Cutting speed	25 m/min
Feedrate	105 mm/min



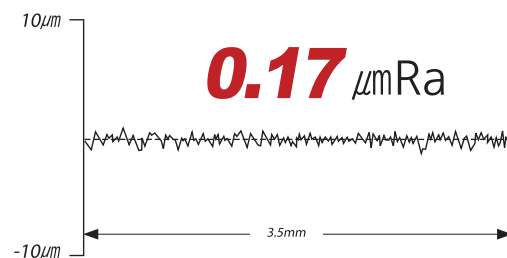
Tap <M16xP2.0>

Machine type	NL 2500SY
Material <JIS>	S45C
Rotary tool spindle speed	160 min ⁻¹
Cutting speed	10 m/min
Feedrate	400 mm/min

Roundness (Turning)



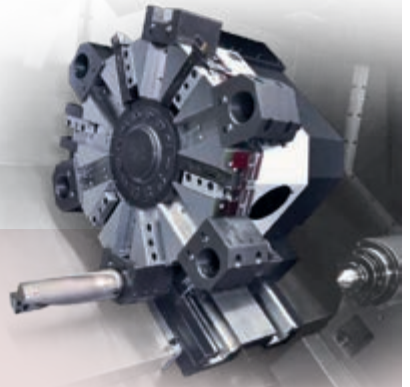
Surface Roughness (Turning)



Machine type	Unit	NL 2500SY
Material	-	Brass (Ø80mm x L60mm)
Tool	-	Diamond tool
Cutting depth	mm	0.1
Feedrate	mm/rev	0.05
Nose radius	mm	0.5

SMART Operation Features

Smart NL Series Turning Centers take operator convenience to the next level, offering key optional accessories as standard features of the machines.



BZi Sensor **Std.**

SMART provides BZi sensor as standard equipment, instead of position coder, for all models of NL series.

Use of BZi sensor helps reduce after sale service cost as BZi sensor does not require maintenance, unlike position coder which need regular service maintenance.

15 Inch Touchscreen Operation Panel **Std.**

15 inch touch type monitor with Fanuc iHMI as standard features, increase ease-of-use and improve operational efficiency.

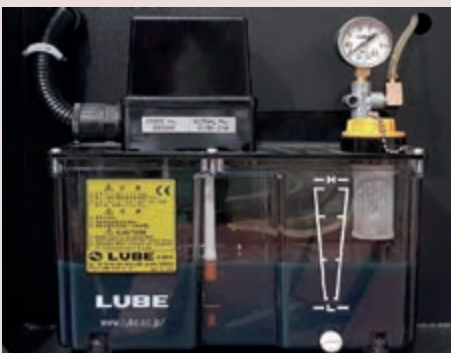
Operator-friendly design and QWERTY keyboard layout for efficient machine operation. Protected sealed buttons to prevent letters and signs from wearing off.

Operator panel swivels up to 90 degrees, providing operators with easy access to the panel while working on the machine.

- 15 inch touchscreen
- QWERTY keyboard
- Fanuc iHMI
- Semi-permanent A/S LED lamping
- Waterproof button
- Big button size
- Replaceable button cap
- Light indicator at 100% driving status



Metered Lubrication System **Std.**



Automatic lubrication dispenser reliably dispenses exact amount of lubrication, only when axes is in operation.

In the event of lubrication line failure, the system generates a warning message on CRT and stops the machine for operation safety.

High Pressure Coolant Pump **Std.** / Oil Skimmer **Std.**



Standard high pressure coolant pump sufficiently cools off the heat generated while cutting, ensuring precision machining and extended tool life, while Oil Skimmer effectively removes oil from coolant.



Belt type oil skimmer



Easy plug-in / remove cable

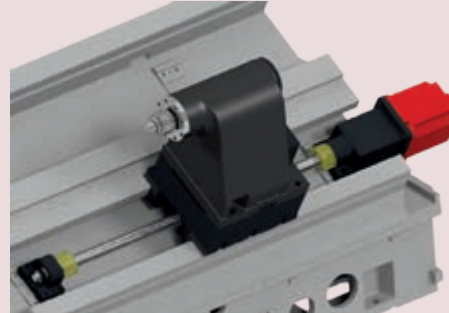
Features

Manual Guide *i* **Std.**



MGI enables operators to program and simulate part programs using a conversational programming without actually running the machine.

Servo Motor Driven Tailstock **Std.**



Servo motor driven tailstock (B-axis) make part set-up faster and easier.

Tool Presetter **Std.**



Tool presetter reduces set-up time by minimizing the need for manual skin cuts, measurement, and entering of tool offsets.

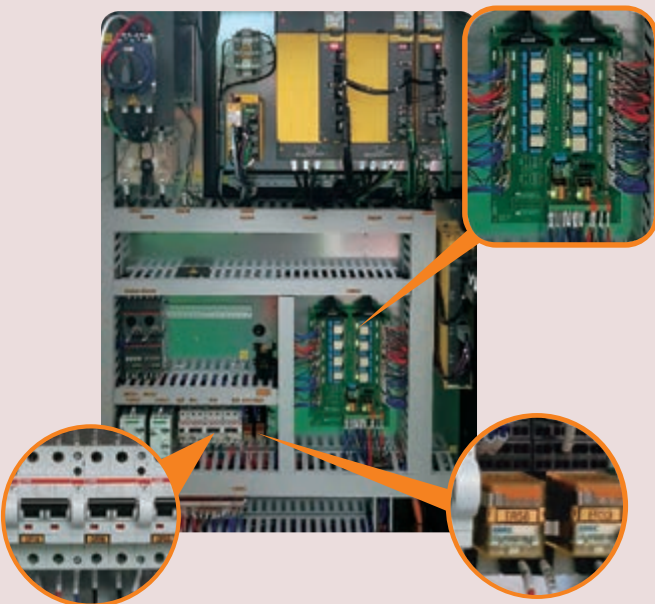
Chip Conveyor **Std.**



Equipped with wide hinged belt, worm gear reducer and torque limiter ensure stable movement and efficiently disposes of chips.

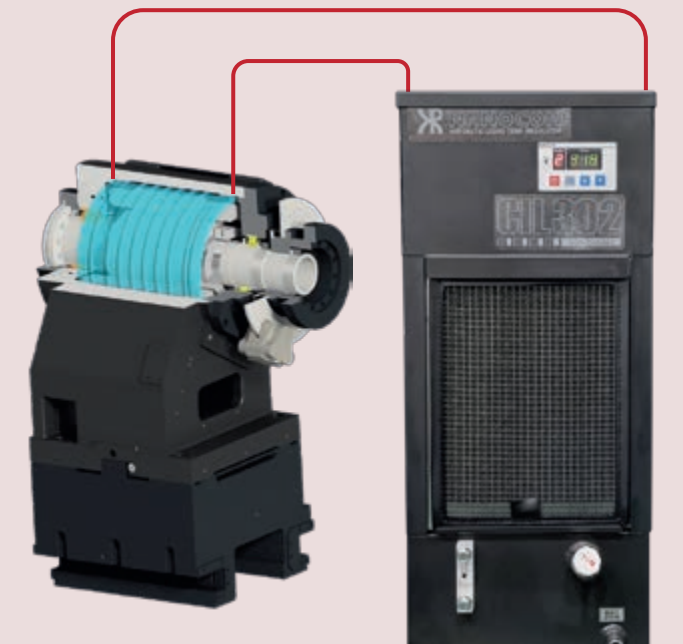
Highly Reliable Electrical Components **Std.**

Brake, power and relay circuits are integrated into one board system to minimize electrical system failure and easily to maintenance and service.



Sub Spindle Oil Cooling Unit **Std.**

Sub spindle is covered by an oil jacket cooling system to reduce thermal expansion and ensure long term machining accuracy.



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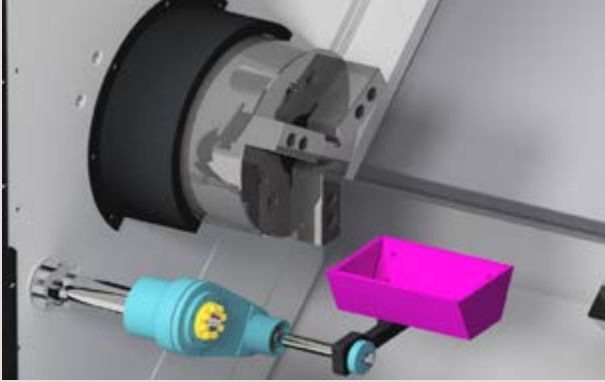
NL 2000/2500 SY-Y
CNC Turning Centers

Smart operation features

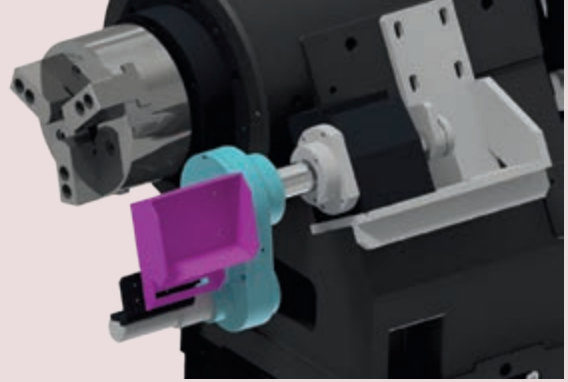
Features

Part Catcher Std.

Automatically catches completed parts after cut-off.



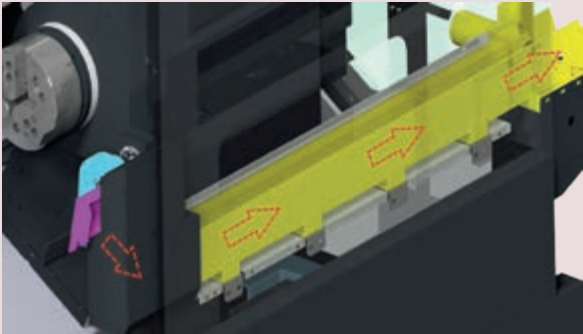
▲ Main spindle part catcher



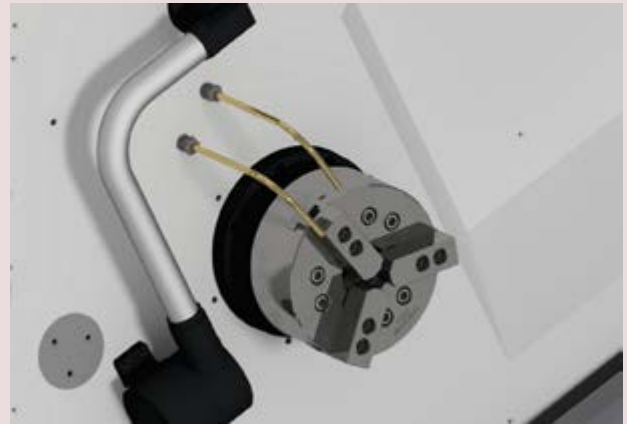
▲ Sub spindle part catcher

Part Conveyor Std.

Internal part feed conveyor automatic transfers completed parts unloaded by sub part catcher to a receiving container for user convenience.



Air Blower Opt.



CE Approved Foot Switch Std.

Air Gun&Coolant Gun Opt.

Connection-ready module design to easily add or remove accessories.



Mist Collector Opt.

Trap harmful oil vapor, coolant mist and fine dusts that formed during machining processes to improve working environment.



Standard & Option Specifications

● : Standard ○ : Option X : Not applicable

		NL 2000				NL 2500	
		ASY	BSY	AY	BY	SY	Y
Spindle and Chucking							
Main spindle chuck	153 mm (6")	●	X	●	X	X	X
	203 mm (8")	X	●	X	●	X	X
	254 mm (10")	X	X	X	X	●	●
Sub spindle chuck	153 mm (6")	●	○	X	X	○	X
	203 mm (8")	X	●	X	X	●	X
Dual pressure chucking		○	○	○	○	○	○
Chuck pressure switch		○	○	○	○	○	○
Chuck clamp foot switch		●	●	●	●	●	●
Chuck clamp confirmation		●	●	●	●	●	●
Jaw							
Hydraulic Hollow chuck		●	●	●	●	●	●
Soft jaw	3 set	●	●	●	●	●	●
Hard jaw	1 set	●	●	●	●	●	●
Special chuck		○	○	○	○	○	○
Tailstock							
Servo motor tailstock		X	X	●	●	X	●
Tailstock taper	MT#5	X	X	●	●	X	●
Coolant							
High pressure coolant pump	20 bar (290 psi)	●	●	●	●	●	●
Oil skimmer		●	●	●	●	●	●
Coolant chiller		○	○	○	○	○	○
Coolant filtration system	25 μm filter	○	○	○	○	○	○
Chuck coolant		○	○	○	○	○	○
Shower coolant		○	○	○	○	○	○
Coolant gun		○	○	○	○	○	○
Chip Disposal							
Side chip conveyor		●	●	●	●	●	●
Chip bucket		○	○	○	○	○	○
Air gun		○	○	○	○	○	○
Air blower system		○	○	○	○	○	○
Oil mist collector		○	○	○	○	○	○
Measurement & Automatic Operation							
Tool presetter	Manual	●	●	●	●	●	●
	Automatic	○	○	○	○	○	○
Linear scale	X/Y/Z axis	○	○	○	○	○	○
Bar feeder interface		●	●	●	●	●	●
Auto door		○	○	○	○	○	○
Parts catcher	Main spindle	○	○	●	●	○	●
	Sub spindle	●	●	X	X	●	X
Part conveyor		●	●	X	X	●	X
Work ejector		●	●	X	X	●	X
Others							
Operation status light tower		●	●	●	●	●	●
Work light (LED lamp)		●	●	●	●	●	●
Manual and part list		●	●	●	●	●	●
Door interlock		●	●	●	●	●	●
Tool/work box		●	●	●	●	●	●
Leveling blocks		●	●	●	●	●	●
Air conditioner		○	○	○	○	○	○

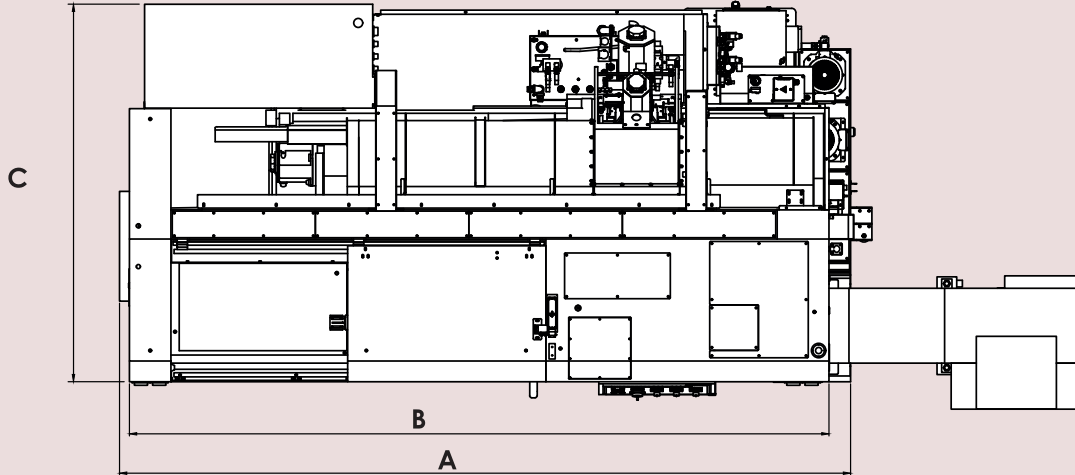
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NL 2000/2500 SY-Y
CNC Turning Centers

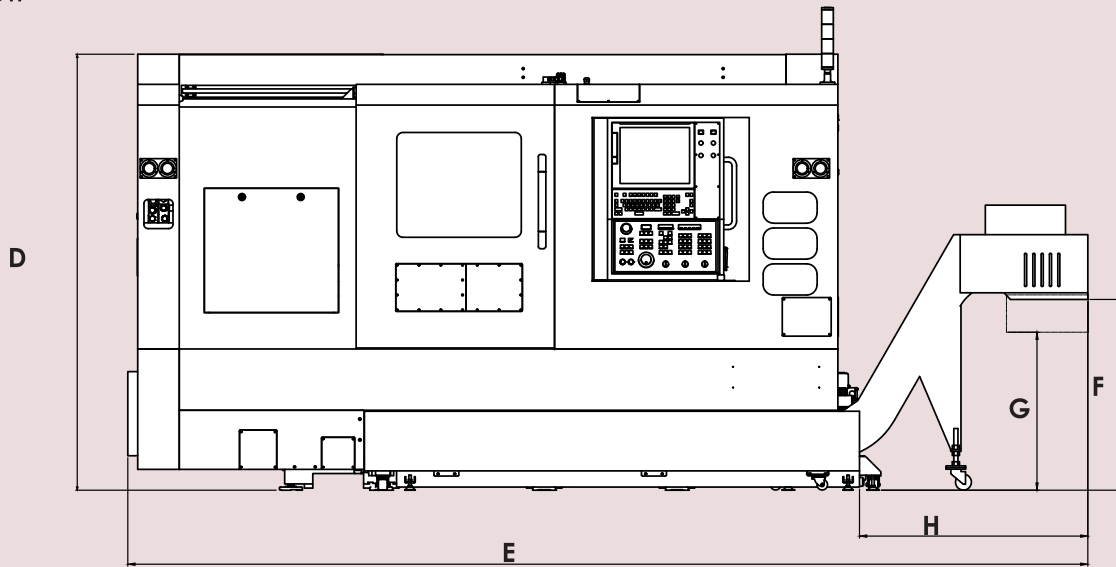
Standard & option
specifications

Machine Dimensions

Top View



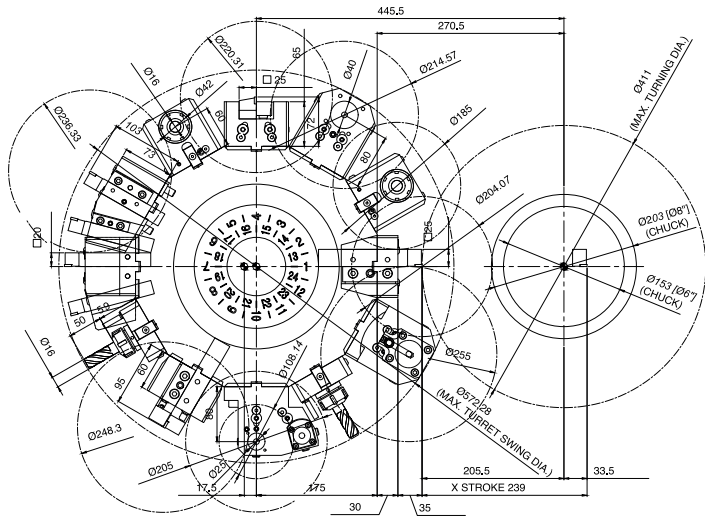
Front View



Unit : mm

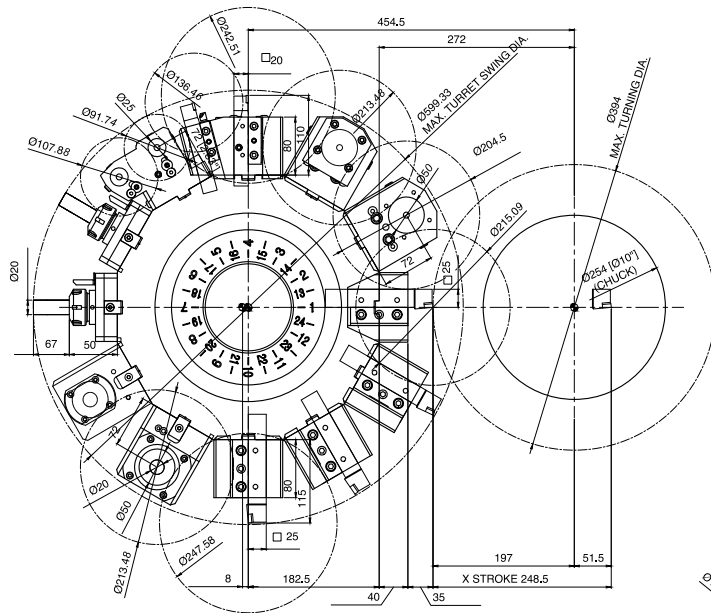
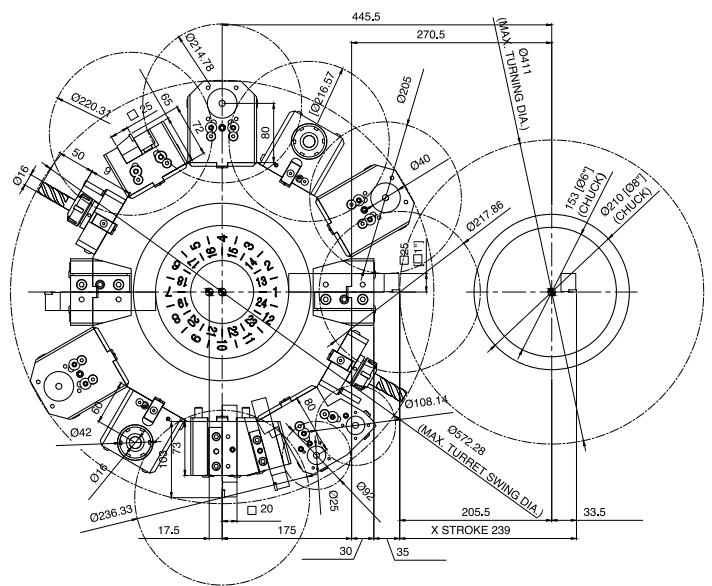
Model	A (Length)	B	C (Width)	D (Height)	E (Length with side chip conveyor)	F (Chip conveyor height)	G	H (Side chip conveyor)
NL 2000ASY/AY	3,477	3,373	1,817.5	2,100	4,577.3	918.8	760.8	1,100.3
NL 2000BSY/BY	3,525				4,625.3			
NL 2500SY/Y	3,640				4,740.3			

Interference



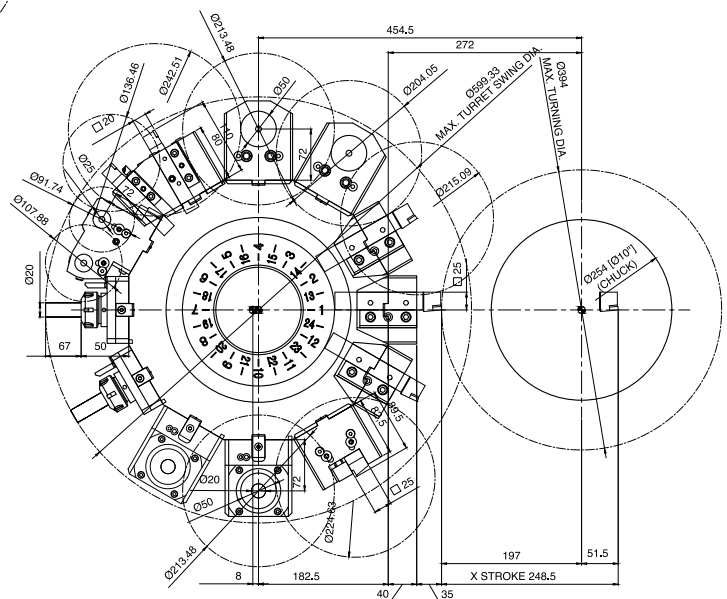
NL 2000AY/BY
(BMT55 12 Station [24 Position])

NL 2000ASY/BSY
(BMT55 12 Station [24 position])



NL 2500Y
(BMT65 12 Station [24 Position])

NL 2500SY
(BMT65 12 Station [24 Position])

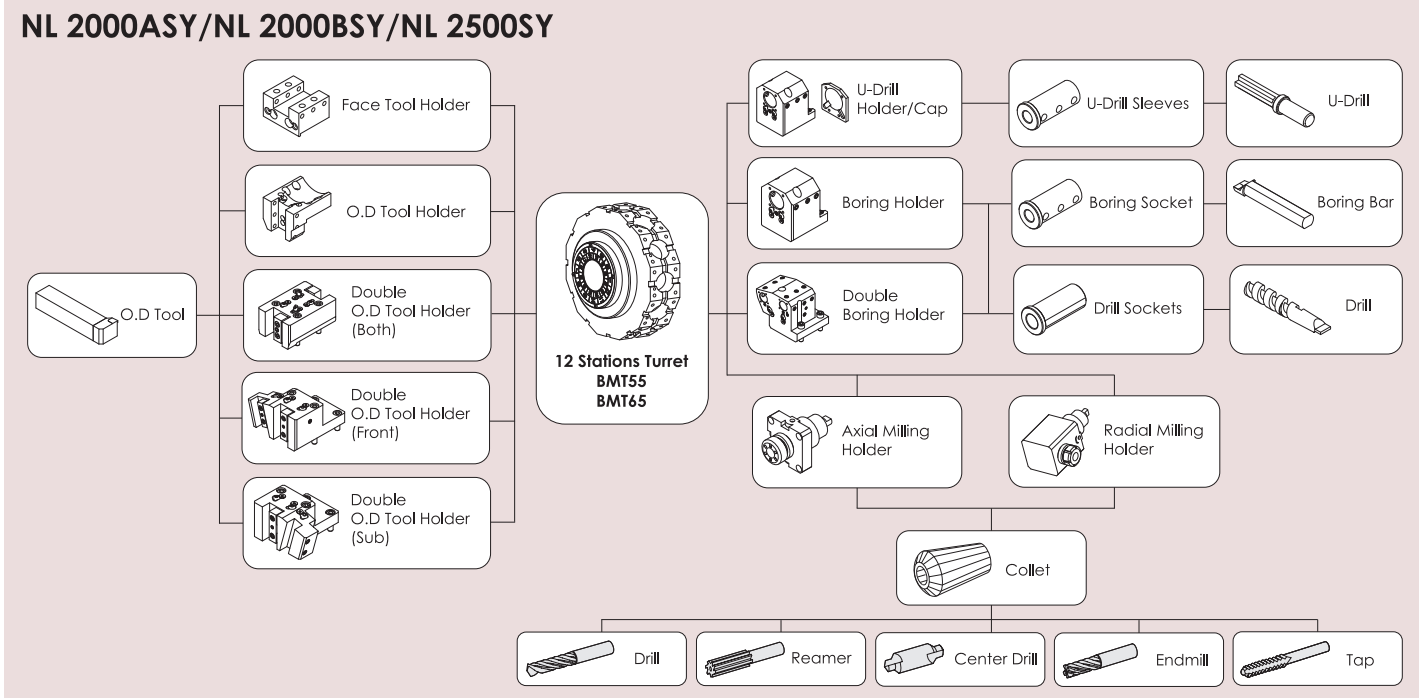


SMART
MACHINE TOOL

NL 2000/2500 SY-Y
CNC Turning Centers

Machine dimensions &
interference

Tooling System

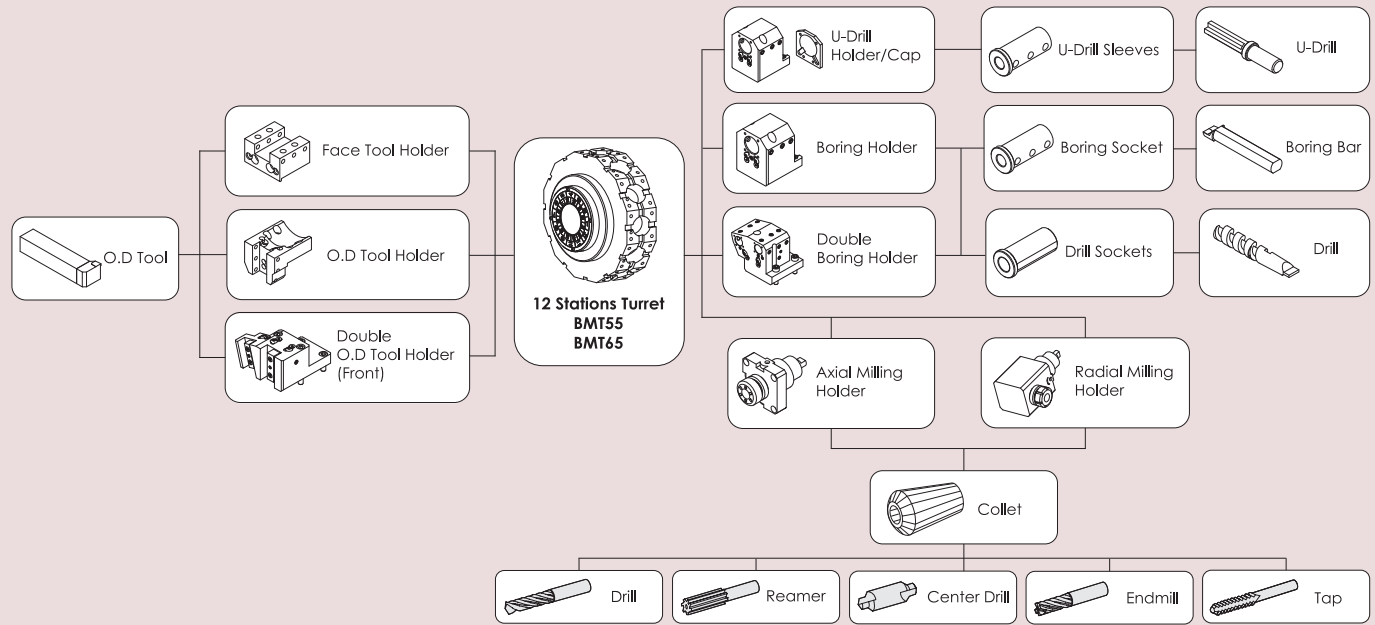


Standard Tooling Parts

Unit : mm

ITEM			NL 2000ASY	NL 2000BSY	NL 2500SY
Turning Holder	O.D Holder	Single	1	1	1
		Double (Both)	1	1	3
		Double (Front)	1	1	1
		Double (Sub)	1	1	-
	Facing Holder	-	1	-	
Boring Holder	I.D Holder	Single	2	2	2
		Double	1	1	1
	U-Drill Cap	-	2	2	
Driven Holder	Axial Milling Holder	Standard	2	2	2
	Radial Milling Holder	Standard	2	2	2
Socket	Boring	Ø10	1	1	1
		Ø12	1	1	1
		Ø16	1	1	1
		Ø20	1	1	1
		Ø25	1	1	1
		Ø32	1	1	1
		Ø40	-	-	1
	Sub Boring	Ø10	1	1	1
		Ø12	1	1	1
		Ø16	1	1	1
		Ø20	1	1	1
	Drill	MT2	1	1	-
		MT3	1	1	1
MT4		-	-	1	

NL 2000AY/NL 2000BY/NL 2500Y



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Standard Tooling Parts

Unit : mm

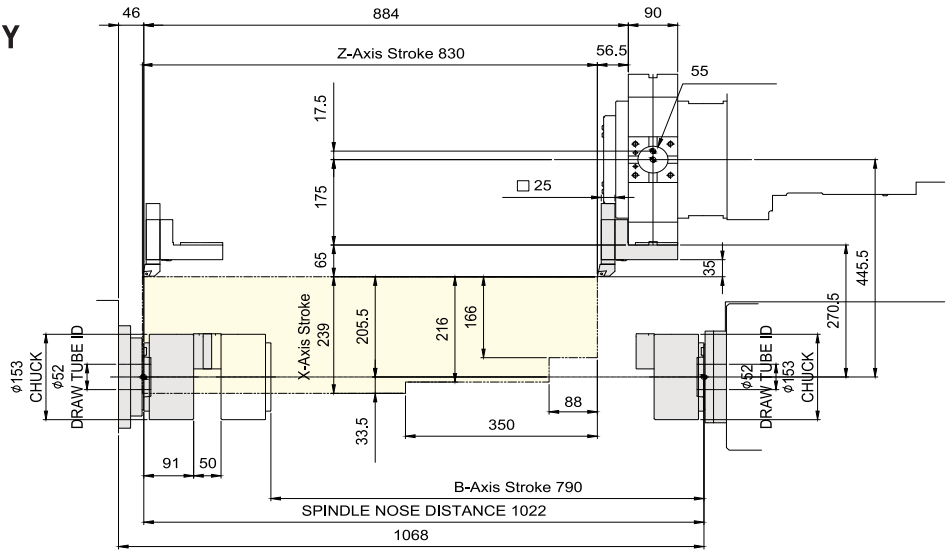
ITEM			NL 2000AY	NL 2000BY	NL 2500Y
Turning Holder	O.D. Holder	Single	2	2	3
		Double (Both)	-	-	-
		Double (Front)	1	1	1
		Double (Sub)	-	-	-
	Facing Holder	-	1	1	
Boring Holder	I.D. Holder	Single	3	3	2
		Double	1	1	1
	U-Drill Cap	-	3	3	2
Driven Holder	Axial Milling Holder	Standard	2	2	2
	Radial Milling Holder	Standard	2	2	2
Socket	Boring	Ø10	1	1	1
		Ø12	1	1	1
		Ø16	1	1	1
		Ø20	1	1	1
		Ø25	1	1	1
		Ø32	1	1	1
		Ø40	-	-	1
	Sub Boring	Ø10	1	1	1
		Ø12	1	1	1
		Ø16	1	1	1
		Ø20	1	1	1
	Drill	MT2	1	1	-
		MT3	1	1	1
		MT4	-	-	1

Tooling system

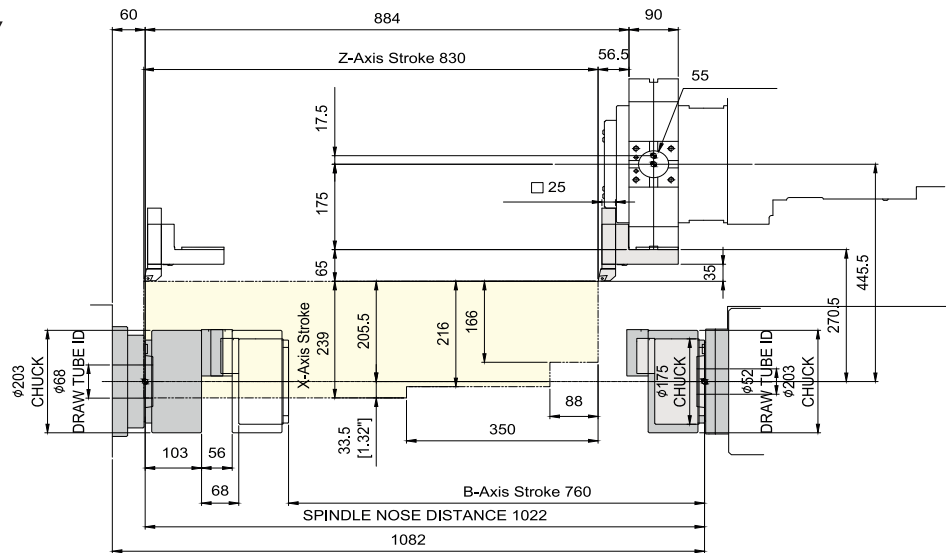
Work Range

Unit : mm

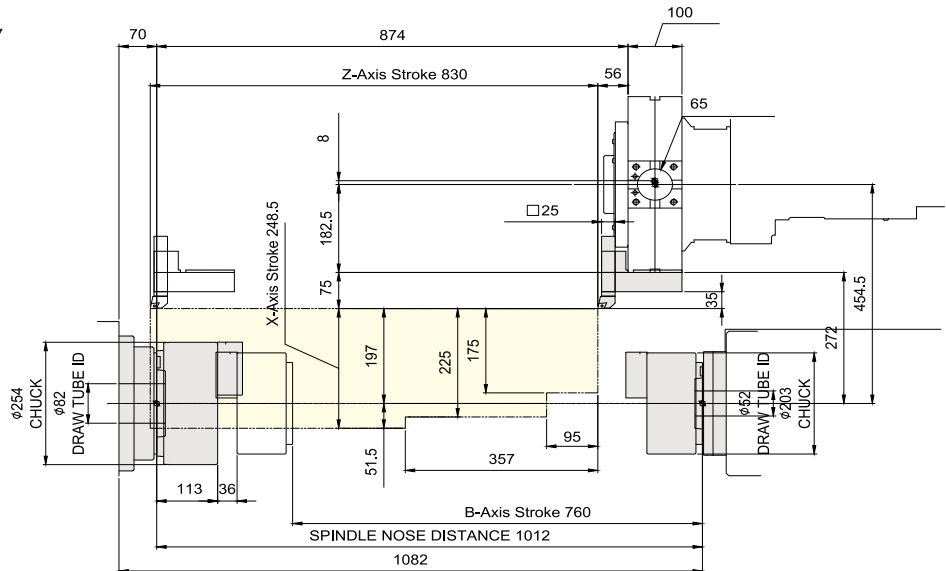
NL 2000ASY



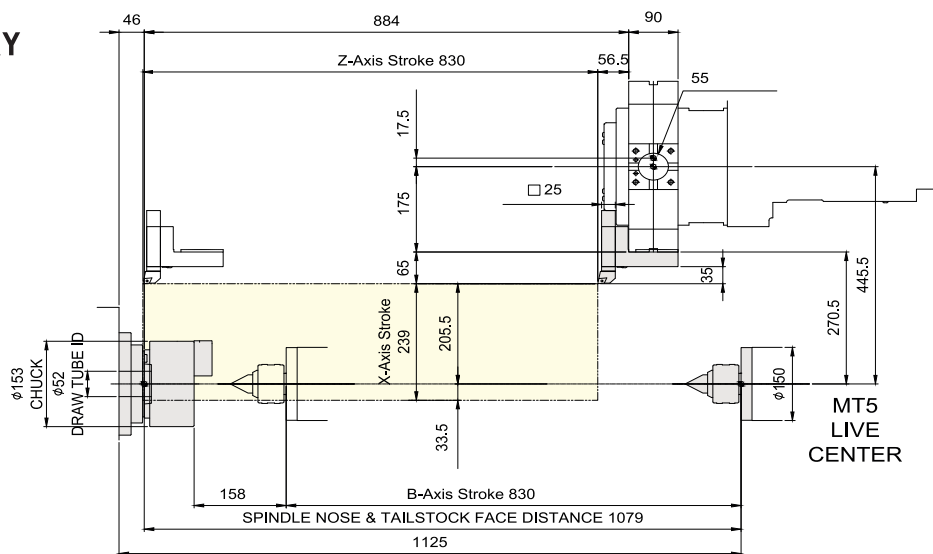
NL 2000BSY



NL 2500SY

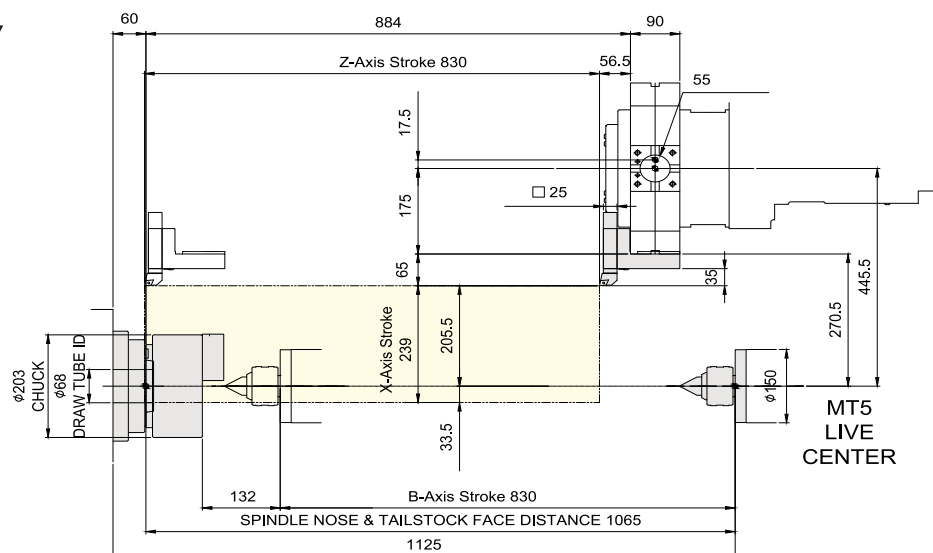


NL 2000AY



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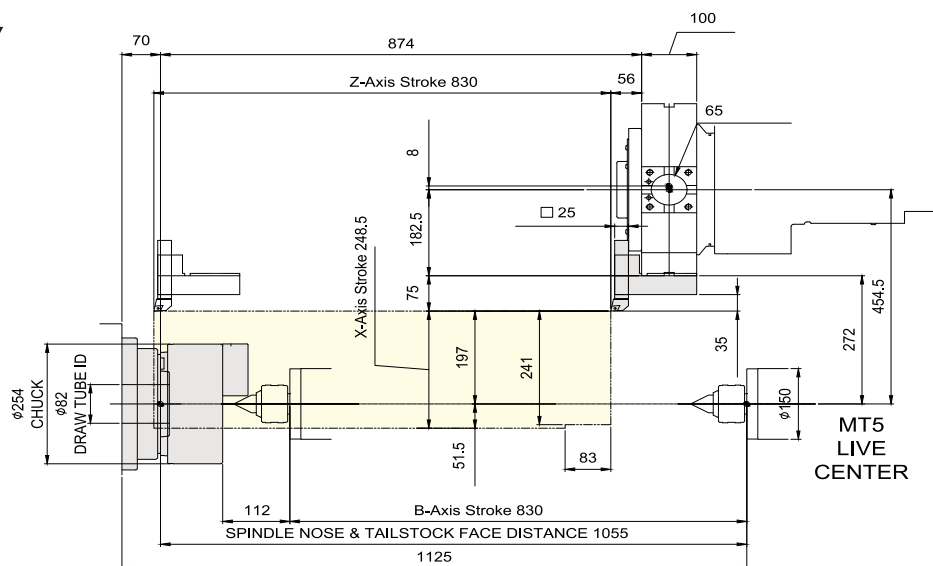
NL 2000BY



NL 2000/2500 SY-Y
CNC Turning Centers

Work range

NL 2500Y



Machine Specifications

[] : Option

DESCRIPTION			NL 2000ASY	NL 2000BSY	NL 2500SY	
CAPACITY	Swing over the bed	mm	685	685	685	
	Swing over the cross slide	mm	575	575	575	
	Max. machining diameter	mm	406	406	376	
	Max. machining length	mm	750	740	700	
SPINDLE	Chuck size	mm	153 (6")	203 (8")	254 (10")	
	Bar working dia.	mm	52	68	82	
	Spindle speed	rpm	6,000	4,500	4,000	
	Spindle motor [Cont./Max.]	kW	11/18.5	15/18.5	18.5/26	
	Spindle torque	N.m	157	376	647	
	Spindle nose	ASA	A2-5	A2-6	A2-8	
	Spindle through hole dia.	mm	61	76	91	
TRAVEL	Rapid traverse	X/Z	m/min	30/30	30/30	30/30
		Y/B	m/min	10/30	10/30	10/30
	Travel	X/Z	mm	256/830	256/830	256/830
		Y/B	mm	110/830	110/800	105/800
	Feed motor	X/Z	kW	3/3	3/3	3/3
		Y/B	kW	1.8/3	1.8/3	1.8/3
TURRET	Number of tool stations	st.	12 (24 positions)	12 (24 positions)	12 (24 positions)	
	OD tool size	mm	□ 25	□ 25	□ 25	
	Max. boring bar size	mm	∅40	∅40	∅50	
	Indexing time	sec	0.15	0.15	0.15	
	Milling tool holder type	-	BMT55	BMT55	BMT65	
	Max. rotary tool spindle speed	rpm	5,000	5,000	5,000	
	Rotary tool motor power	kW	3,7/5.5	3,7/5.5	5,5/7.5	
SUB SPINDLE	Chuck size	mm	153 (6")	203 (8")	203 (8")	
	Bar working dia.	mm	52	52	52	
	Spindle speed	rpm	6,000	5,000	5,000	
	Spindle motor	kW	11/15	11/15	11/15	
	Spindle torque	N.m	135	135	135	
	Spindle nose	ASA	A2-5	A2-6	A2-6	
	Spindle through hole dia.	mm	62	62	62	
BED TYPE	-	30° Slant	30° Slant	30° Slant		
ELECTRIC POWER SUPPLY	kVA	40	40	45		
REQUIRED FLOOR SPACE	mm	3,570 x 1,818	3,570 x 1,818	3,700 x 1,818		
MACHINE WEIGHT	kg	5,700	5,800	6,100		
CONTROLLER	-	Fanuc 0i-TF Plus				

DESCRIPTION			NL 2000AY	NL 2000BY	NL 2500Y	
CAPACITY	Swing over the bed	mm	685	685	685	
	Swing over the cross slide	mm	575	575	575	
	Max. machining diameter	mm	406	406	376	
	Max. machining length	mm	750	740	700	
SPINDLE	Chuck size	mm	153 (6")	203 (8")	254 (10")	
	Bar working dia.	mm	52	68	82	
	Spindle speed	rpm	6,000	4,500	4,000	
	Spindle motor [Cont./Max.]	kW	11/18.5	15/18.5	18.5/26	
	Spindle torque	N.m	157	376	647	
	Spindle nose	ASA	A2-5	A2-6	A2-8	
	Spindle through hole dia.	mm	61	76	91	
TRAVEL	Rapid traverse	X/Z	m/min	30/30	30/30	30/30
		Y/B	m/min	10/30	10/30	10/30
	Travel	X/Z	mm	256/830	256/830	256/830
		Y/B	mm	110/830	110/830	110/830
	Feed motor	X/Z	kW	3/3	3/3	3/3
		Y/B	kW	1.8/3	1.8/3	1.8/3
TURRET	Number of tool stations	st.	12 (24 positions)	12 (24 positions)	12 (24 positions)	
	OD tool size	mm	□ 25	□ 25	□ 25	
	Max. boring bar size	mm	ø40	ø40	ø50	
	Indexing time	sec	0.15	0.15	0.15	
	Milling tool holder type	-	BMT55	BMT55	BMT65	
	Max. rotary tool spindle speed	rpm	5,000	5,000	5,000	
	Rotary tool motor power	kW	3,7/5.5	3,7/5.5	5,5/7.5	
Tailstock	Tailstock travel	mm	830	830	830	
	Taper of tailstock Quill	-	MT#5	MT#5	MT#5	
BED TYPE		-	30° Slant	30° Slant	30° Slant	
ELECTRIC POWER SUPPLY		kVA	40	40	45	
REQUIRED FLOOR SPACE		mm	3,570 x 1,818	3,570 x 1,818	3,700 x 1,818	
MACHINE WEIGHT		kg	5,600	5,700	6,000	
CONTROLLER		-	Fanuc Oi-TF Plus			

SMART
MACHINE TOOL

NL 2000/2500 SY-Y
CNC Turning Centers

Machine specification

NC Unit Specifications / FANUC Series

● : Standard ○ : Option

	ITEM	Specification	● : Standard ○ : Option
Controlled axis	Control axes	5 axes (X, Z, Y, B, C) / 6 axes (X, Z, Y, B, C, A)	●
	Cs contouring control		●
	Least command increment	0.001mm (0.0001 inch), 0.001 deg (C-axis)	●
	Stored limit check before move		●
	C-A axis synchronous control		○
Operation functions	DNC operation	Included in RS-232C interface	●
	DNC operation with memory card	CF card and CF card adapter is required	●
	Wrong operation prevention		●
	Dry run		●
	Single block		●
Interpolation functions	Nano interpolation		●
	Linear interpolation	G01	●
	Circular interpolation	G02, G03	●
	Dwell	G04	●
	Polar coordinate interpolation	G12.1, G13.1	●
	Cylindrical interpolation	G07.1	●
	Helical interpolation		○
	Variable lead thread cutting	G34	●
	Multi / 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%	●
	Pulse handle feed	X1, X10, X100	●
	Override cancel		●
	AI contour control (AICC) I, II	40ea, 200ea (AICC II)	○
	Feedrate per minute / revolution	G98 / G99	●
Rapid traverse block overlap		●	
Auxiliary / Spindle function	Constant surface speed control	G96, G97	●
	Spindle override	0 ~ 150%	●
	Spindle orientation		●
	Spindle synchronous control		●
	Rigid tapping		●
Arbitrary speed threading		○	
Program input	Optional block skip	9EA	●
	Absolute/incremental programming		●
	Canned cycles	G90, G92, G94	●
	Multiple repetitive canned cycle	G70 ~ G76	●
	Program restart		●
	Retraction for rigid tapping		○
	Max. programmable dimension	±999.999.999mm (±99.999.9999 inch)	●
	Custom macro		●
	Canned cycle for drilling		●
	Direct drawing dimension programming		●
	Programmable data input	G10	●
Workpiece coordinate system	G52 ~ G59	●	
Workpiece coordinate system preset		●	
Tool function / Tool & Accuracy compensation	Tool offset pairs	128-pairs	●
	Tool radius/Tool nose radius compensation		●
	Tool geometry/wear compensation		●
	Automatic tool offset		●
	Tool life management		●
	Backlash compensation		●
Data input / output & Interface	Memory card and USB memory input/output		●
	Data server		○
	Embedded Ethernet		●
Others	Manual guide i		●
	iHMI		●
	Part program storage size / No. of registerable programs	2 Mbyte (5120m) / 1000ea	●
	Display unit	15" color LCD with Touch Panel	●