

# ***NX-2500** Series*

NX-2500MT / NX-2500MS / NX-2500YT / NX-2500YS **CNC Turning Center**

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# NX-2500 series

NX-2500 series is new generation high-rigidity and high-precision turning centers developed by Taiwan Takisawa. NX-2500 is adopts slant bed and box guide way design which increase structural rigidity and stability. 4 different turret specifications with optional Y-axis, and tailstock or sub-spindle configurations which can meet variant application requirements. Moreover, it can be equipped with various high-precision accessories and loading/unloading accessories to achieve automatic production.



## 01 Specification Options

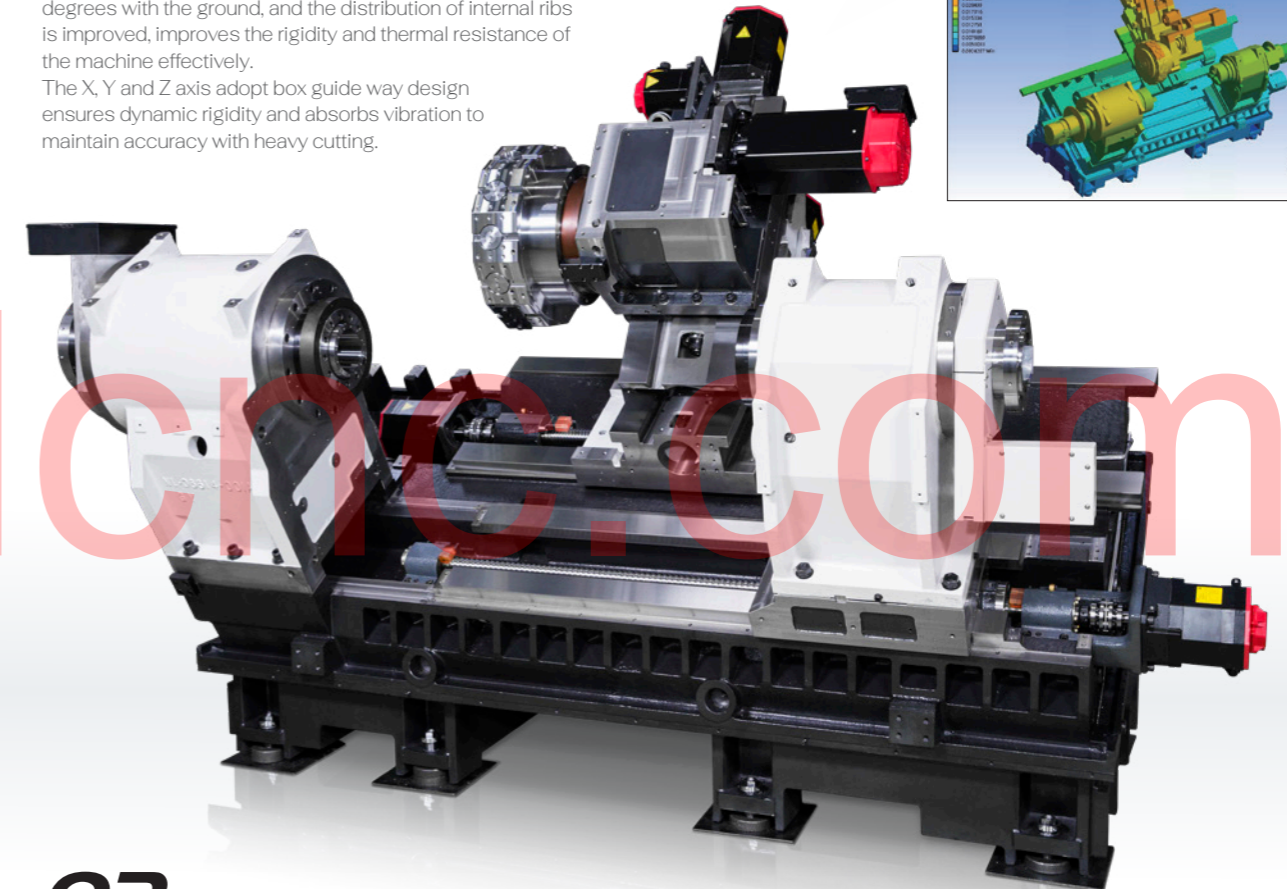
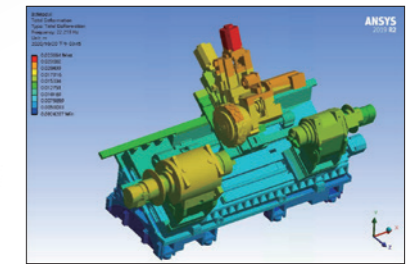
	NX-2500MT	NX-2500YT	NX-2500MS	NX-2500YS
Built-In Motor Spindle	●	●	●	●
Left C Axis	●	●	●	●
Right C Axis	-	-	●	●
Milling Turret	T15 Standard	●	●	●
	T15 BMT65	◎	◎	◎
	T12 Standard	◎	◎	◎
	T12 BMT65	◎	◎	◎
Y-Axis	-	●	-	●
Servo Tailstock	●	●	-	-

● Standard ◎ Optional - Nope

## 02 Workpiece Size

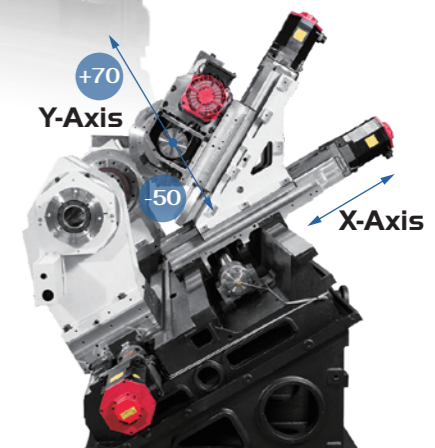
	NX-2500	MT	YT	MS	YS
Max. Turning Diameter				400	
Max. Turning Length		T15 Std.: 742 (T12 Std.: 731 / T15 BMT65: 736 / T12 BMT65: 736)			
Max. Bar Work Capacity Diameter		75 (80 / 90)		75 (80 / 90) / 51 (65)	

A finite element analysis is introduced in the design phase, compared with previous models, the X-axis is reduced to 30 degrees with the ground, and the distribution of internal ribs is improved, improves the rigidity and thermal resistance of the machine effectively. The X, Y and Z axis adopt box guide way design ensures dynamic rigidity and absorbs vibration to maintain accuracy with heavy cutting.



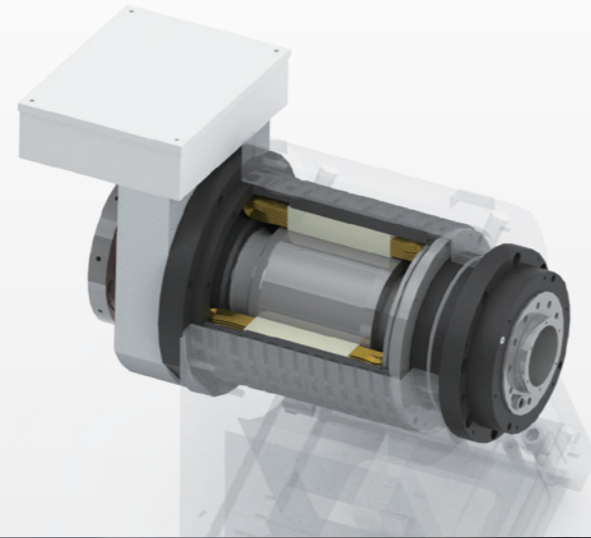
## 03 Travel & Rapid Traverse

	NX-2500MT	NX-2500YT	NX-2500MS	NX-2500YS
X-Axis Travel	270	270	270	270
X-Axis Rapid Traverse	25	25	25	25
Z-Axis Travel	800	800	800	800
Z-Axis Rapid Traverse	25	25	25	25
Y-Axis Travel	-	+70 ~ -50	-	+70 ~ -50
Y-Axis Rapid Traverse	-	12.5	-	12.5
B-Axis Travel	810	810	810	810
B-Axis Rapid Traverse	20	20	30	30



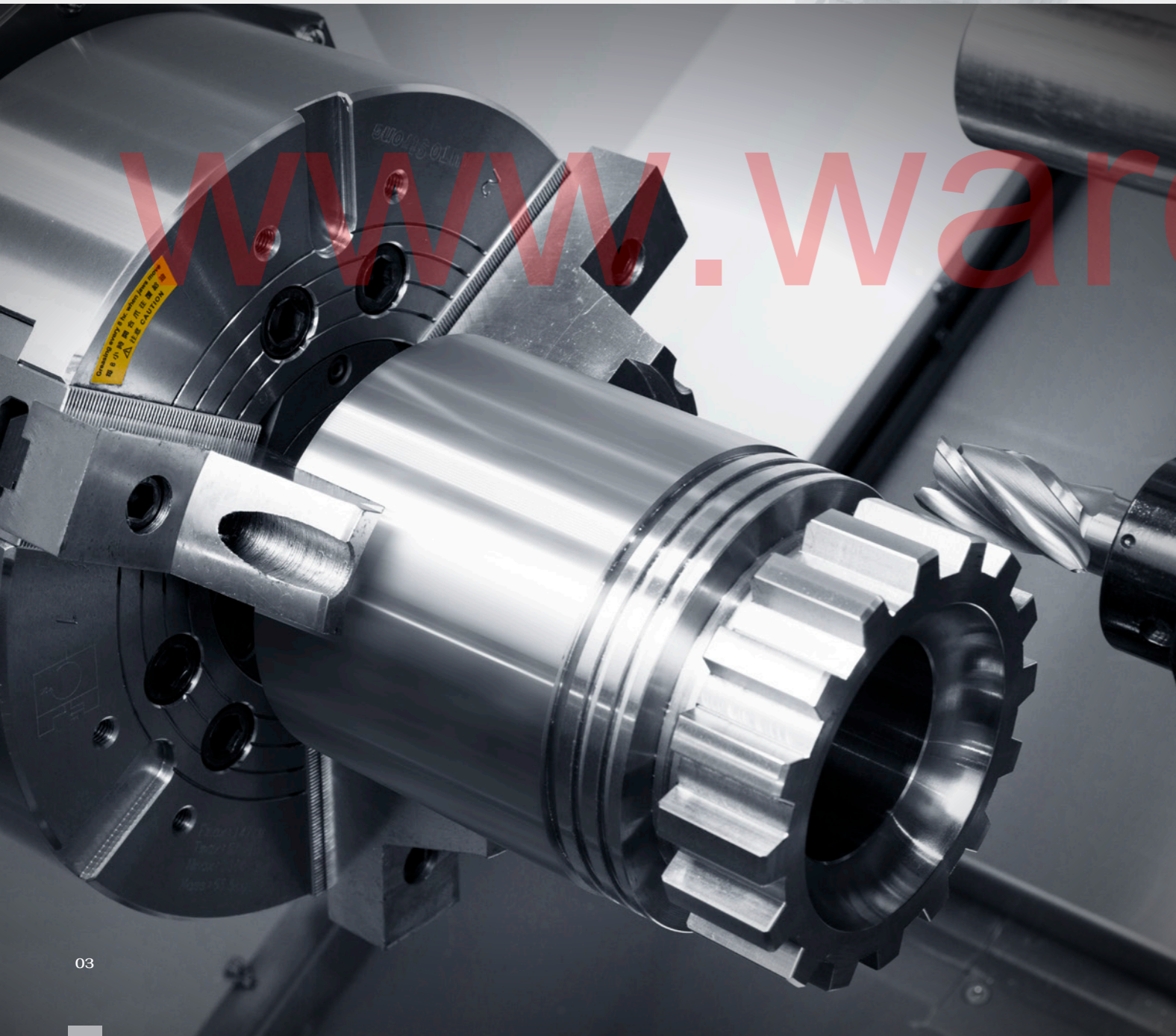
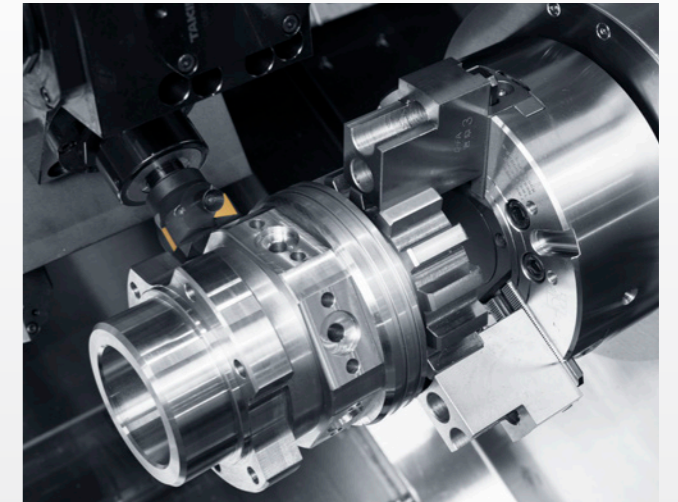
# Spindle

The left and right spindles are equipped with built-in motors, provide high precision, low vibration and low noise, capable to achieve better surface roughness of the workpiece.

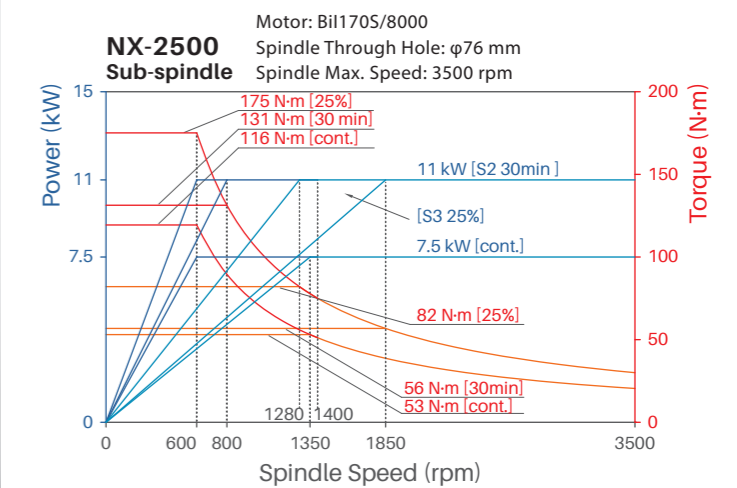
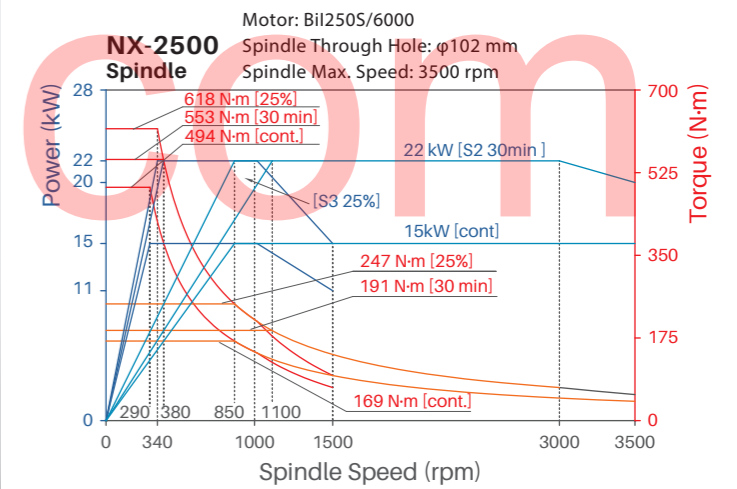
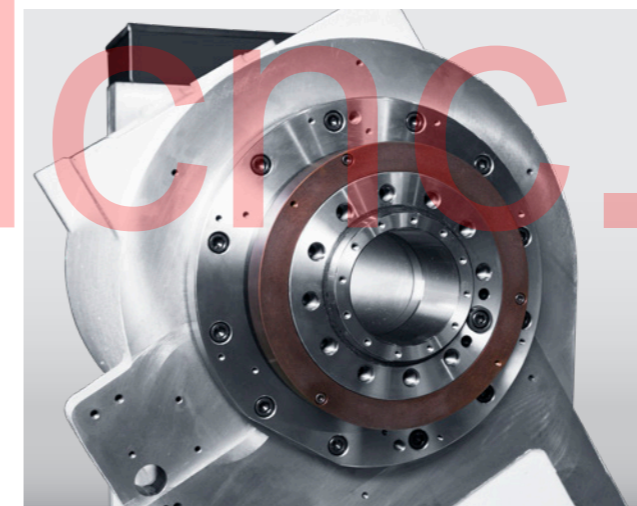


	Left Spindle	Right Spindle*	
Spindle Nose	A2-8	A2-6	
Spindle Speed	3500	3500	rpm
Through Hole Diameter	102	76	mm
Bearing Inside Diameter	140	110	mm
Motor Output	22 / 15	11 / 7.5	kW
Max. Torque	618	175	N·m
Standard Chuck Size	10	8	inch

\*For NX-2500MS, NX-2500YS Only

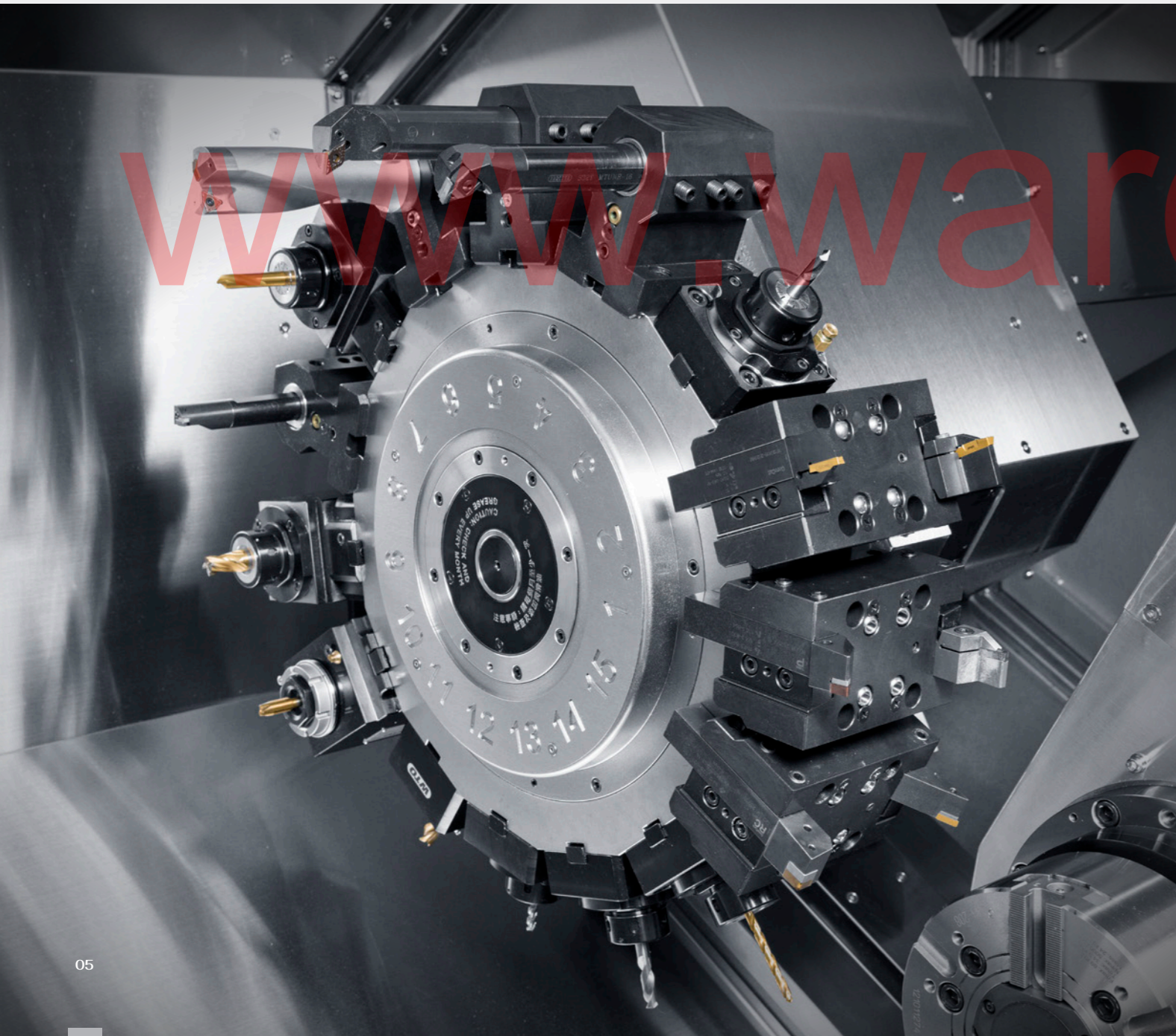


Spindle Output Diagram



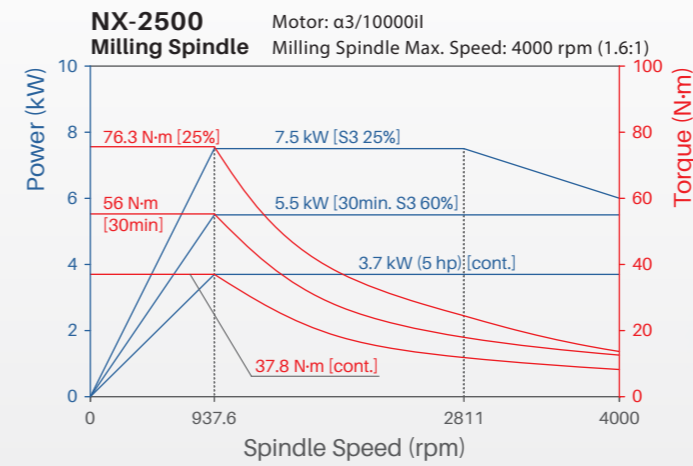
# Turret

Taiwan Takisawa high-rigidity, high-precision turning-milling turrets benefit from tool change mechanism which uses a large diameter of curved tooth bevel gear. Capable to handle combined machining such as milling, drilling and tapping rather than turning to improve the engineering concentration and processing accuracy of parts processing. Variant tool systems with 12 and 15 tool stations, standard ER32, standard ER40 and BMT65, 4 specifications of milling turret are available.

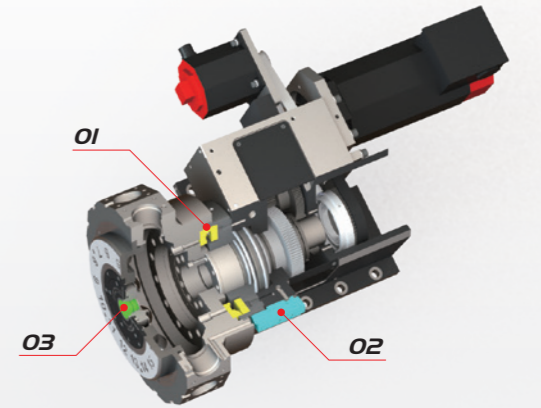


## Milling Spindle

### Spindle Output Diagram

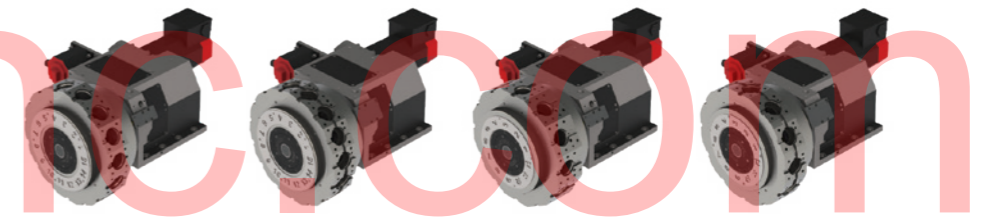


### Turret Structure



- O1** Curvic Coupling O.D. 280 mm performs high rigidity and accuracy
- O2** Ready for 70 bar high pressure coolant
- O3** Easy to grease up

## Tool System



Tool System	T15 Standard	T15 BMT65	T12 Standard	T12 BMT65	
Number of Tools	15	15	12	12	
OD Tool Shank Dim.	25	25	25	25	mm
ID Tool Shank Dia.	40	40	50	40	mm
Milling Shank Dia.	20	20	26	20	mm
Milling Collet Specification	ER32	ER32	ER40	ER32	
Milling Spindle Speed	4000				rpm
Motor Output	7.5 / 5.5 / 3.7				kW
Max. Torque	76.3				N·m

## Special Tool Holders

- O1** Gear Hobbing
- O2** Broaching
- O3** Power Skiving
- O4** Adjustable Angle Milling

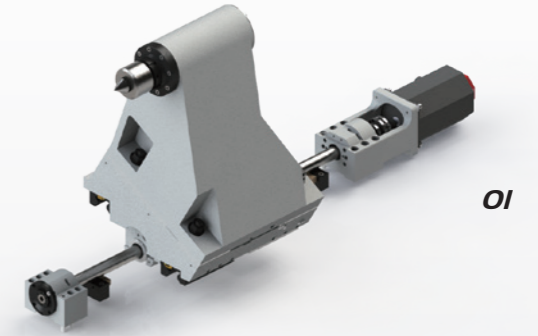


# Tailstock

NX-2500MT and NX-2500YT are equipped with servo tailstock. The tailstock is driven by servo motor, with advantages of easy operation and fast movement. In case of heavy load condition, rotary spindle of tailstock with fixed center can be selected.

## 01 Servo Tailstock

Tapered Bore Type	MT.5	
Tailstock Thrust	1 ~ 4	kN
Travel	810	mm
Rapid Traverse	20	m / min
Approach	1	m / min
Retract	20	m / min



01

## 02 Servo Tailstock Function

Through the dialog UI interface, it is convenient to set the servo tailstock thrust and origin and other parameters.



02

## 01 Tailstock with Rotary Spindle

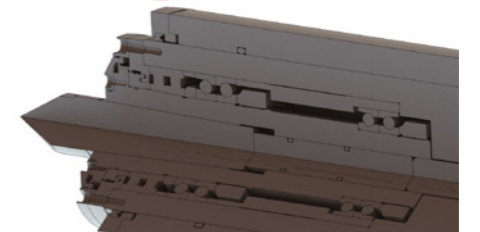
Recommended for heavy-duty use.

## 02 Chip Conveyor Type

Depending on the part material and chip size, the hinge type or scraper type can be selected.

## 03 Chip Conveyor Configuration

Optional right disposal type or rear disposal type.



01

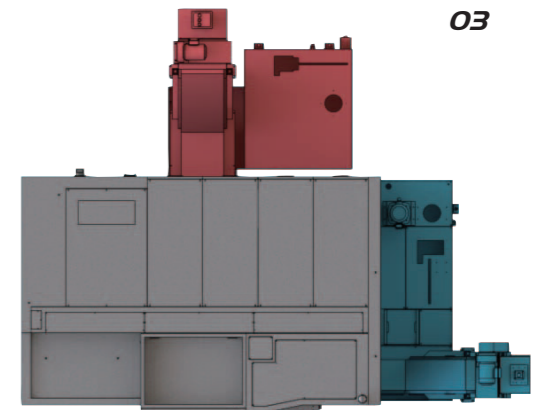
Hinge Type  
Chip Conveyor

Scraper Type  
Chip Conveyor

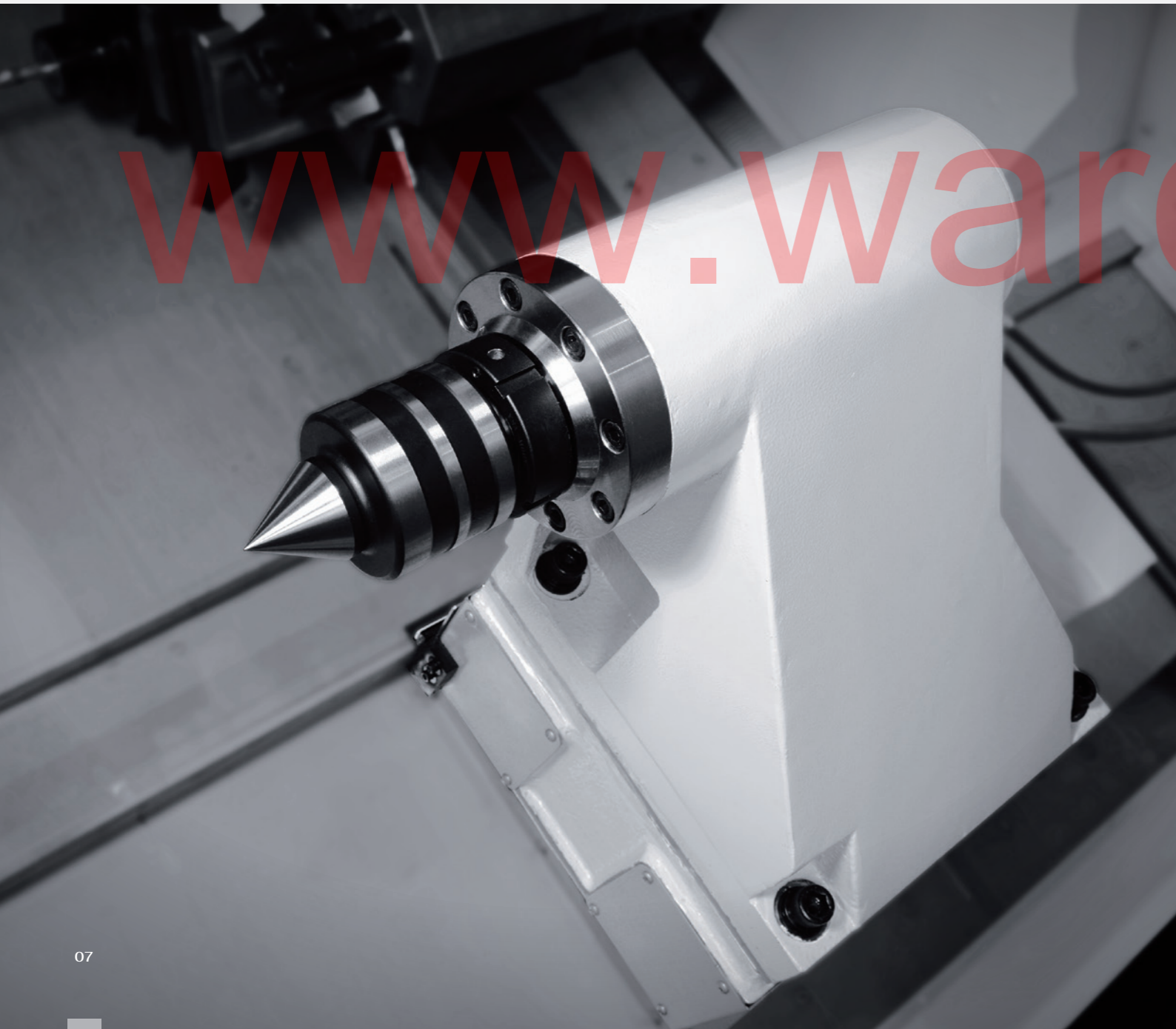
02



Chip Type	Curly Metallic Chip Steel / Aluminum	Power Metallic Chip Foundry / Aluminum / Brass	Non-Metallic
Hinge Type	○	×	○
Scraper Type	×	○	×



03

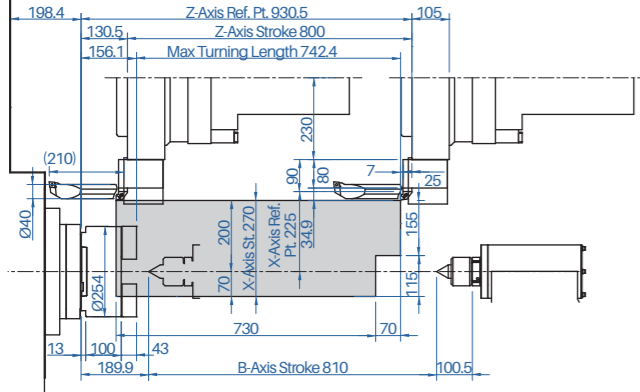


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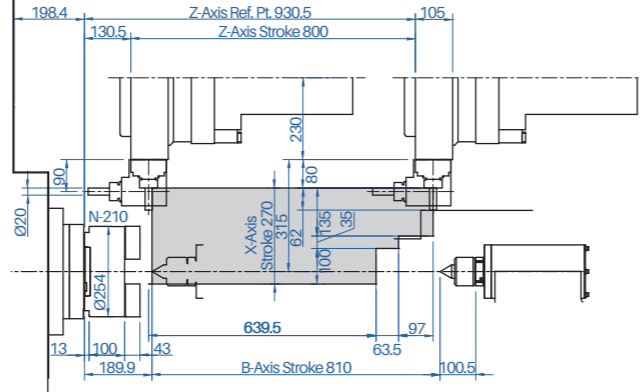
# Travel Range

## NX-2500MT / NX-2500YT

**T15 Standard**

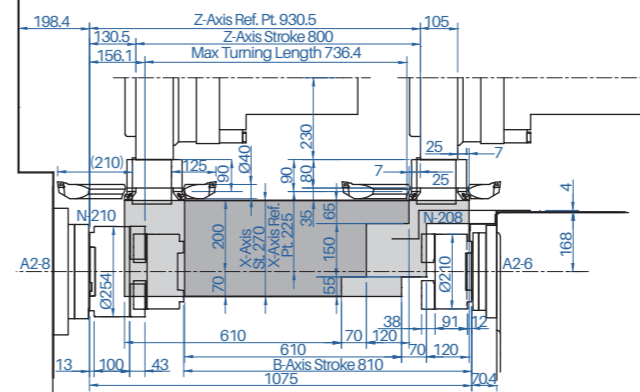


**T15 Standard**

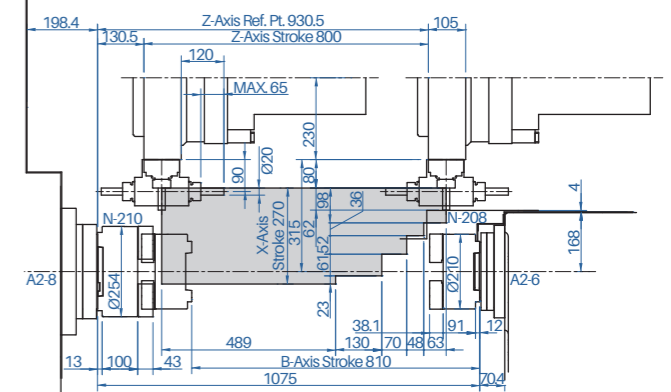


## NX-2500MS / NX-2500YS

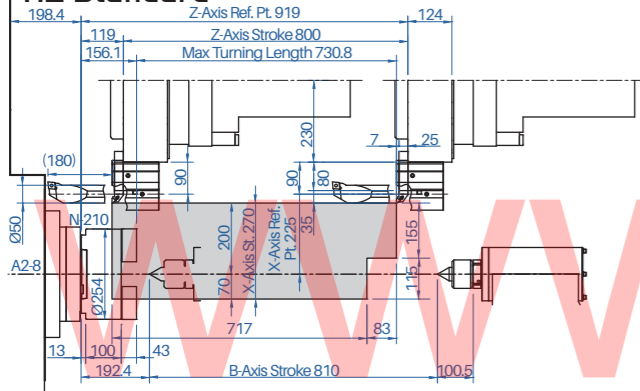
**T15 Standard**



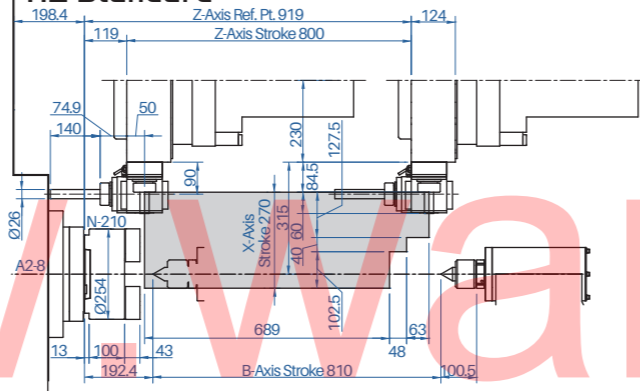
**T15 Standard**



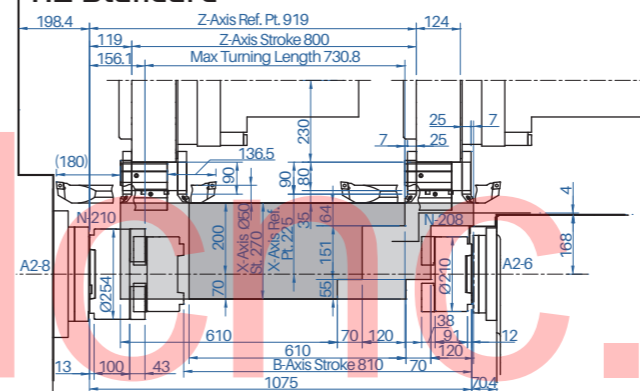
**T12 Standard**



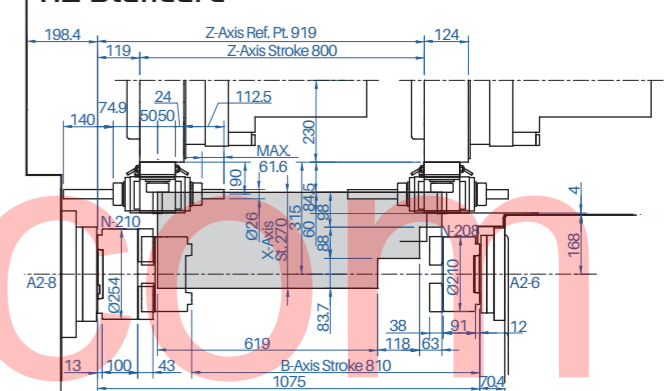
**T12 Standard**



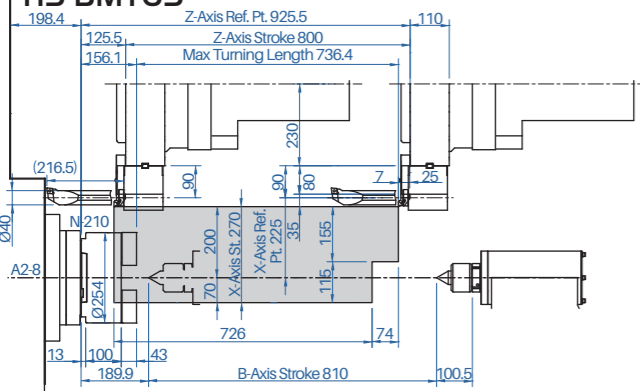
**T12 Standard**



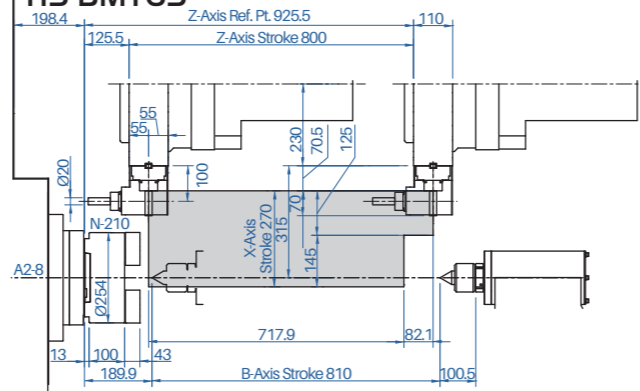
**T12 Standard**



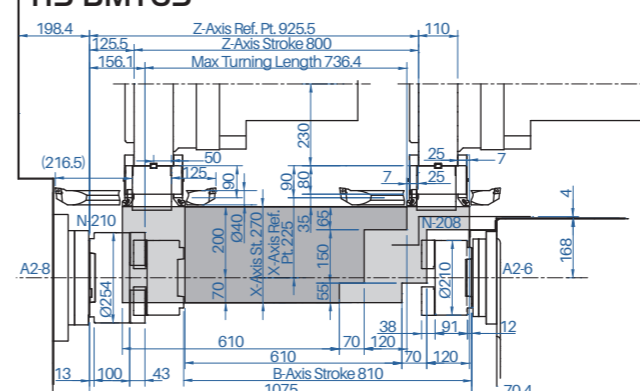
**T15 BMT65**



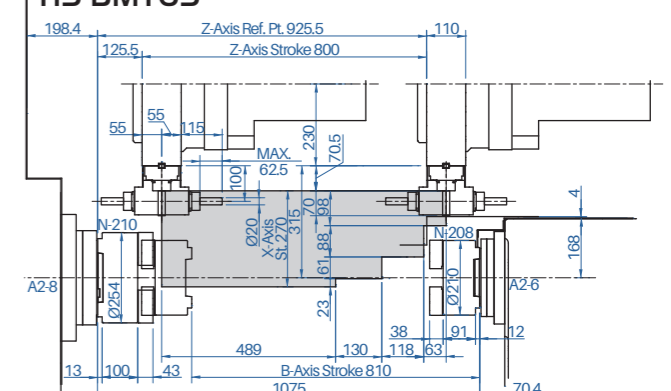
**T15 BMT65**



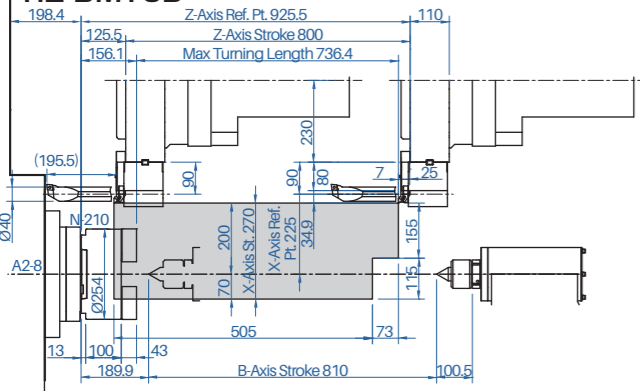
**T15 BMT65**



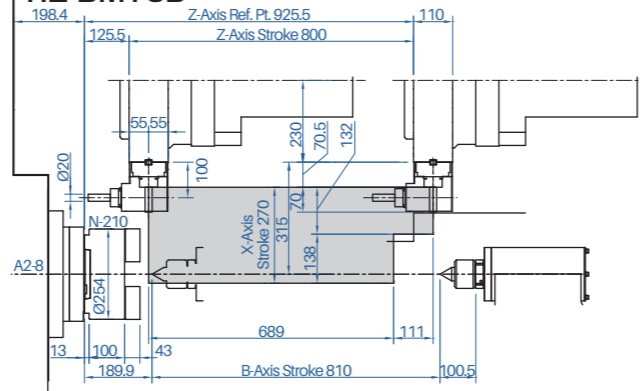
**T15 BMT65**



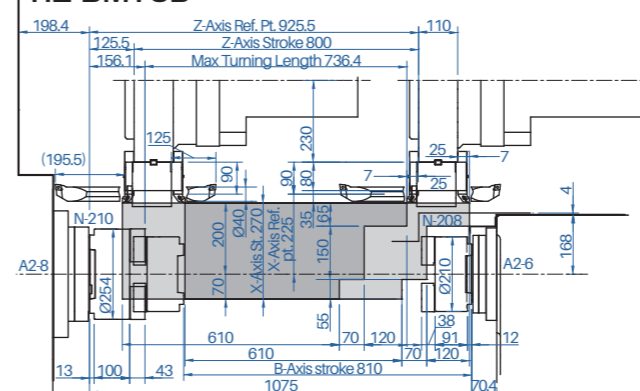
**T12 BMT65**



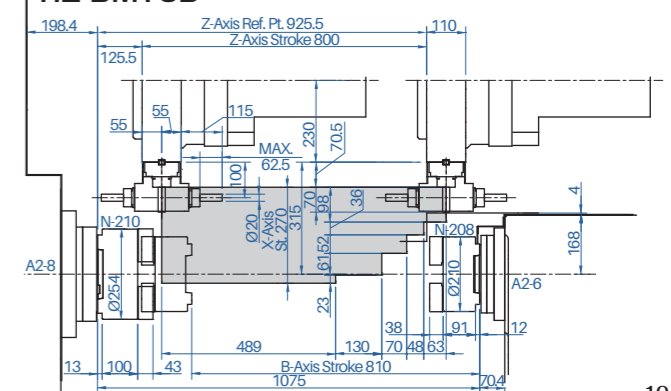
**T12 BMT65**



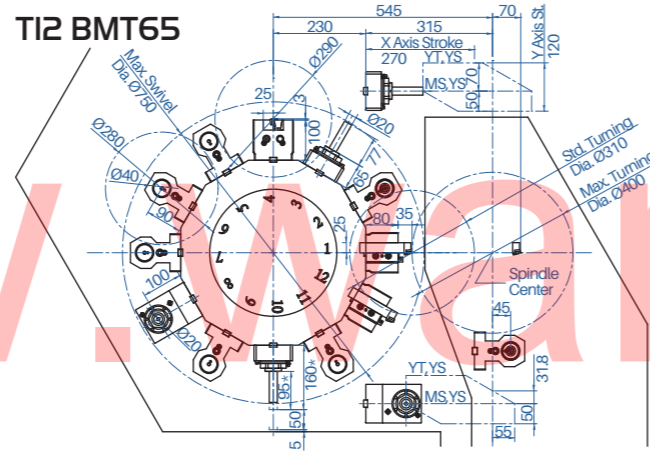
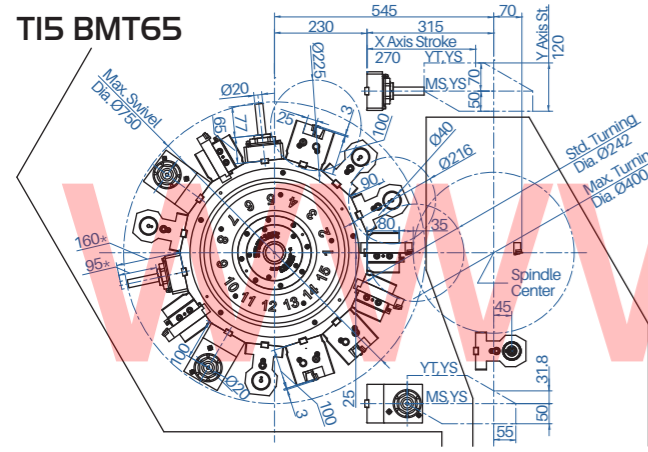
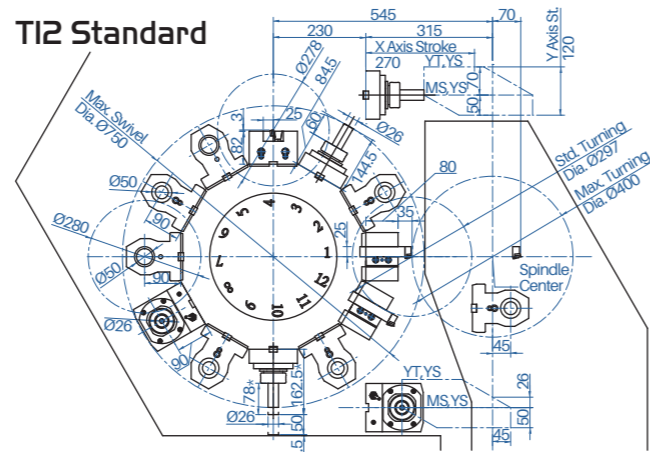
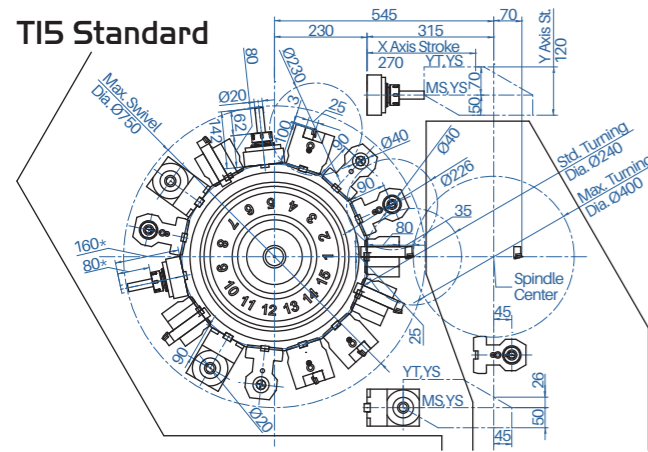
**T12 BMT65**



**T12 BMT65**

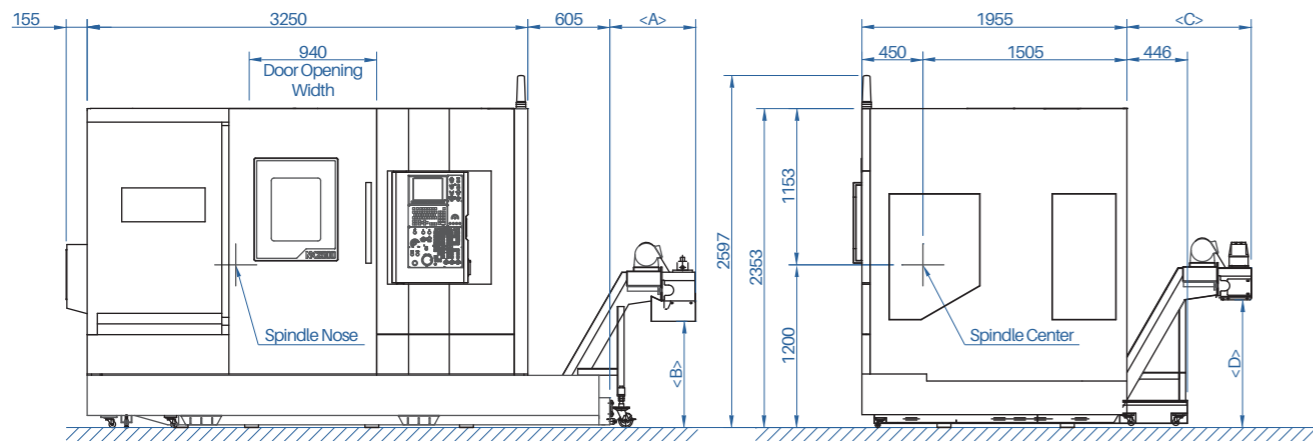


# Interference



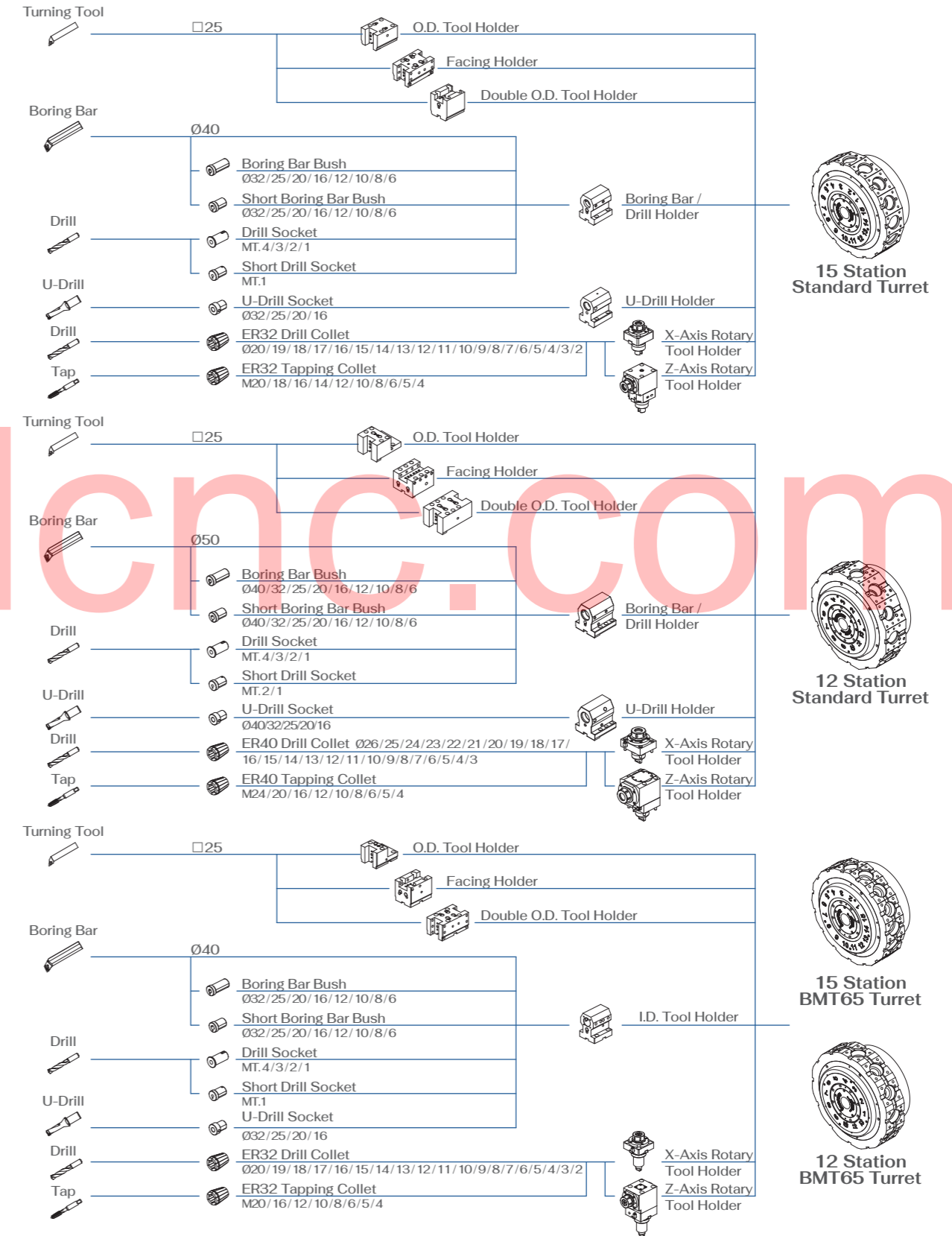
# Machine Dimensions

Dimension Type	Right Disposal		Rear Disposal	
	A	B	C	D
Standard	737	909	1255	863
CE	657	784	1255	863
Italy	962	1024	1455	1060
Switzerland	882	1174	1455	1210
U.S.A.	909	1217	1455	1210



# Tooling System

**NX-2500MT / NX-2500YT / NX-2500MS / NX-2500YS**



# Machine Specifications

		NX-2500			
Item		MT	YT	MS	YS
Capacity	Max. Swing	820			
	Standard Turning Diameter	T15 STD.: 240 (T12 STD.: 297 / T15 BMT65: 242 / T12 BMT65: 310)			
	Max. Turning Diameter	400			
	Max. Turning Length	T15 STD.: 742 (T12 STD.: 731 / T15 BMT65: 736 / T12 BMT65: 736)			
	Dist. Between Centers	-		265 ~ 1075	
Travel	X-Axis Travel	270			
	Z-Axis Travel	800			
	Y-Axis Travel	-	+70 - 50	-	+70 - 50
	B-Axis Travel	810			
Left Spindle	Spindle Speed	3500			
	Spindle Nose	A2-8			
	Through Hole Dia.	102			
	Max. Bar Work Capacity	75 (80 / 90)			
	Bearing Diameter	140			
Right Spindle	Spindle Speed	-	3500		
	Spindle Nose	-	A2-6		
	Through Hole Dia.	-	76		
	Max. Bar Work Capacity	-	51 (65)		
	Bearing Diameter	-	110		
Turret	Number of Tools	T15 STD. (T12 STD. / T15BMT65 / T12BMT65)			
	OD Tool Shank Dim.	25 (25 / 25 / 25)			
	ID Tool Shank Dia.	40 (50 / 40 / 40)			
	Milling Shank Dia.	20 (26 / 20 / 20)			
	Spindle Speed	4000			
Tailstock	Tailstock Type	Live Centre (Revolving Center)		-	
	Tapered Bore Type	MT. 5		-	
Feedrate	X-Axis Rapid Traverse	25			
	Z-Axis Rapid Traverse	25			
	Y-Axis Rapid Traverse	12.5			
	B-Axis Rapid Traverse	20	30		
Motor	Left Spindle Motor	22 / 15			
	Right Spindle Motor	-	11 / 7.5		
	Milling Spindle Motor	7.5 / 5.5 / 3.7			
	Index Motor	1.2			
	X-Axis Servo Motor	3			
	Z-Axis Servo Motor	3			
	Y-Axis Servo Motor	3			
	B-Axis Servo Motor	2.5			
Machine Size	Height	2353			
	Width	3250			
	Depth	1955			
	Weight	7550	7800	7750	8000

# Standard and Optional Accessories

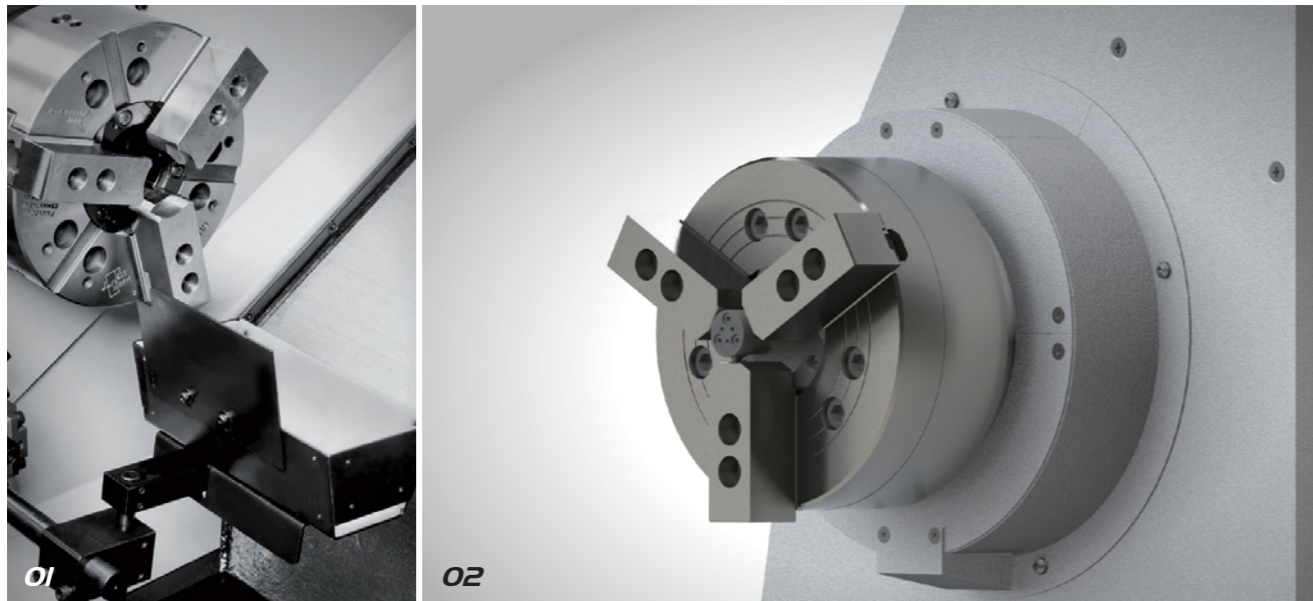
		NX-2500			
Accessories		MT	YT	MS	YS
Built-In Motor Left Spindle		●	●	●	●
Built-In Motor Right Spindle		-	-	●	●
Servo Tailstock with Live Centre		●	●	-	-
Servo Tail stock with Revolving Center		◎	◎	-	-
O.D Tool Holder		●	●	●	●
Face Tool Holder		●	●	●	●
U-Drill Tool Holder		●	●	●	●
Boring Bar Tool Holder		●	●	●	●
Boring Bar Bush (Ø6 / Ø8 / Ø10 / Ø12)		●	●	●	●
Boring Bar Bush (Ø16 / Ø20 / Ø25 / Ø32 / Ø40*)		●	●	●	●
U-Drill Bush (Ø16 / Ø20 / Ø25 / Ø32 / Ø40*)		●	●	●	●
Short Boring Bar Bush (Ø6 / Ø8 / Ø10 / Ø12)		-	-	●	●
Short Boring Bar Bush (Ø16 / Ø20 / Ø25 / Ø32 / Ø40*)		-	-	●	●
Drill Bush (MT.1 / MT.2 / MT.3 / MT.4)		◎	◎	◎	◎
Short Drill Bush (MT.1 / MT.2*)		-	-	◎	◎
X-Axis Milling Holder		●	●	●	●
Z-Axis Milling Holder		●	●	●	●
Automatic Tool Setter (Left Spindle Only)		◎	◎	◎	◎
Manual Tool Setter		◎	◎	◎	◎
Linear Scales		◎	◎	◎	◎
Coolant Pump (450W)		●	●	●	●
Coolant Pump (715W / 750W / 900W / 1400W)		◎	◎	◎	◎
Coolant Chiller		◎	◎	◎	◎
Nut Cooling Ball Screw		◎	◎	◎	◎
Hydraulic System		●	●	●	●
Hydraulic Oil Cooling		◎	◎	◎	◎
Hydraulic Pressure Sensor		●	●	●	●
Lubrication System		●	●	●	●
Hydraulic Chuck		●	●	●	●
Collet Chuck		◎	◎	◎	◎
Foot Switch		●	●	●	●
LED Interior Light		●	●	●	●
LED TAKISAWA Light		●	●	●	●
LED Signal Tower		●	●	●	●
Chip Cart		●	●	●	●
Right Side Chip Conveyor		◎	◎	◎	◎
Rear Side Chip Conveyor		◎	◎	◎	◎
Parts Catcher		◎	◎	◎	◎
Parts Conveyor		◎	◎	◎	◎
Automatic Bar Feeder and Interface		◎	◎	◎	◎
Auto Door		◎	◎	◎	◎
Safety Door Switch		◎	◎	◎	◎
Safety Light Curtain		◎	◎	◎	◎
Air Blow		◎	◎	◎	◎
Oil Skimmer		◎	◎	◎	◎
Oil Mist Collector		◎	◎	◎	◎
Parts Counter		◎	◎	◎	◎
Automatic Power-Off		◎	◎	◎	◎

● Standard ◎ Optional - Nope

\*Ø40 Bush can Only be Used for T12 Standard Turret



## Special Specification Example



**01** Left Spindle Parts Catcher

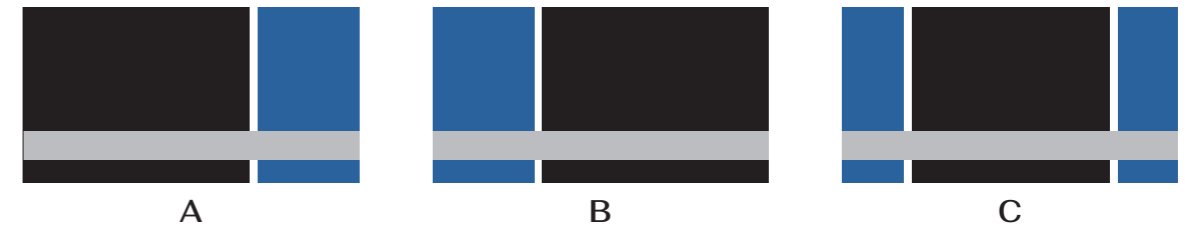
Max. Parts Dia.	90	mm
Max. Parts Length	190	mm
Max. Parts Weight	3	kg

**02** Parts Pusher

Pusher Stroke	95	mm
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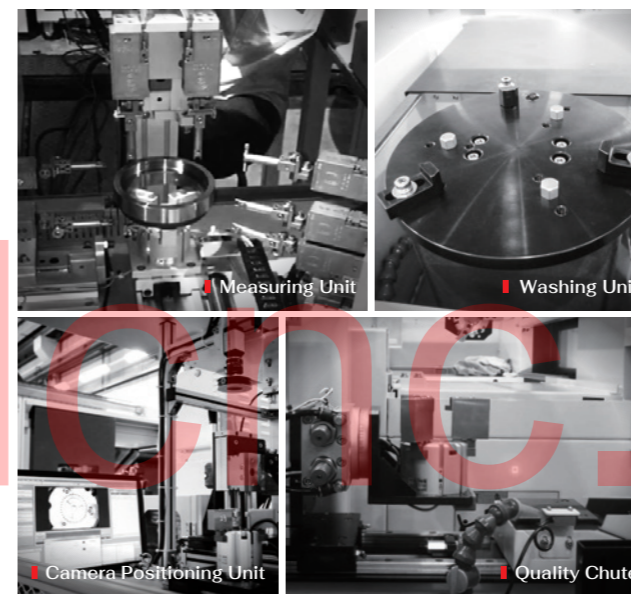
## High Speed Gantry Loader System

### Layout Variations



■ Lathe  
■ Gantry Loader  
■ Workpiece Feeder

### Peripheral Equipment



### Gantry Loader Specifications

<b>Feedrate</b>		
X-Axis Rapid Traverse	180	m / min
Z-Axis Rapid Traverse	150	m / min
<b>Working Size</b>		
O.D	160	mm
Length	100	mm
Weight	3 (x2)	kg

### Work Feeder Specifications

Pallet	16	pcs
Loading Weight	40	kg
Max. Height	450	mm
Worker Feeder Width	610	mm

## Highly Accurate Optional Equipment

There are special requirements for precise machining accuracy and it is necessary to use approved high-precision optional equipment.

Please contact us for advice on these options.

- 01** Linear Scales
- 02** Automatic I Manual Tool Setter
- 03** Nut Cooling Ball Screw
- 04** Cutting Fluid Cooling
- 05** High Pressure Coolant
- 06** Hydraulic Oil Cooling



## Turn-Key Solution

