

NT-2000 NT-2500 Series

NT-2000 / NT-2000M
NT-2500 / NT-2500M

Classic High-Performance Turning Center

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NT-2000

NT-2500

series

NT-2000/NT-2500 series is the new generation high-performance turning center of TAKISAWA TAIWAN, succeeded the consistent great rigidity, excellent stability. The sleek appearance is a TAKISAWA family characteristic. For providing user more functions, and meeting various processing demands, the upgraded modular design came up.



Specification Options

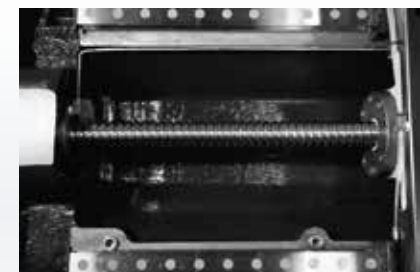
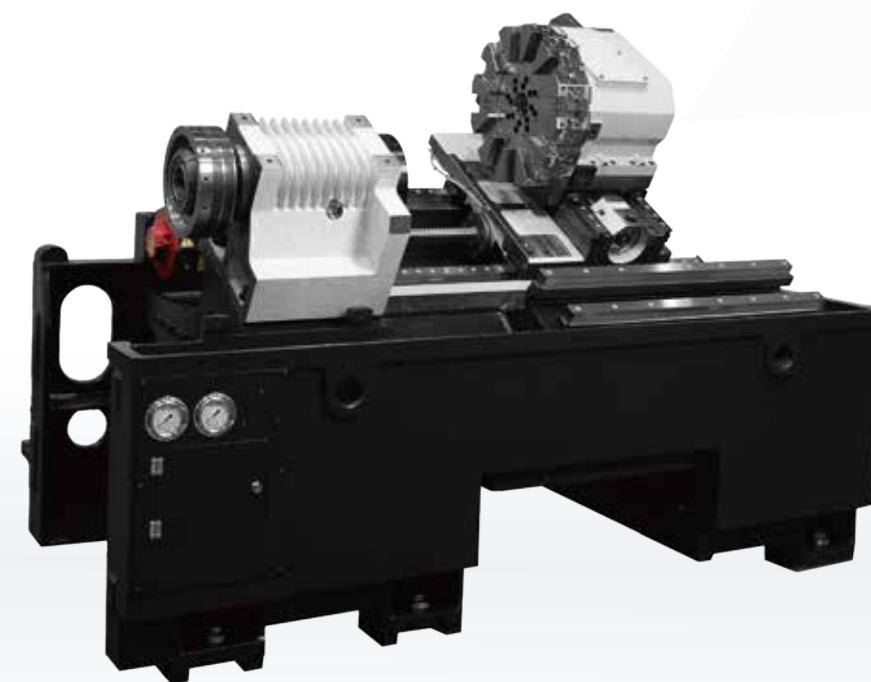
	NT-2000	NT-2000M	NT-2500	NT-2500M
Pulley Driven Spindle Ø63	●	●	-	-
Pulley Driven Spindle Ø76	◎	◎	-	-
Pulley Driven Spindle Ø86	-	-	●	●
Built-in Motor Spindle Ø63	◎	◎	-	-
C-axis function	-	●	-	●
T10 Turning Turret	●	-	●	-
T12 Turning Turret	◎	-	◎	-
T12 Milling Turret	-	●	-	●
Standard Tailstock	◎	◎	◎	◎
PIN Carry Tailstock	◎	◎	◎	◎

● Standard ◎ Optional - None

Working Range

	NT-2000	NT-2000M	NT-2500	NT-2500M	
Max. Turning Dia.	320	280	360(T10)/320(T12)	280	mm
Max. Turning Length	482	447.8	447	412.8	mm
Bar Capacity	52(65)		75		mm

() Optional



With the extended linear guideways and spans for X, Z-axis, the machine rigidity and machining stability has improved, comparing with its class.

Travel and Feedrate

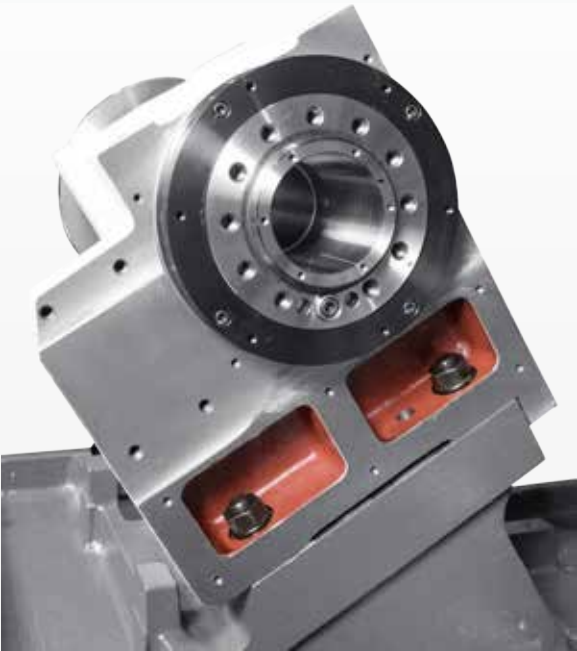
	NT-2000	NT-2000M	NT-2500	NT-2500M	
X-axis Travel	180		200(T10)/180(T12)	180	mm
Z-axis Travel		530			mm
X-axis Rapid Traverse Rate		24(15)			m/min
Z-axis Rapid Traverse Rate		24(18)			m/min

() Optional

Spindle

The high rigidity headstock is designed and manufactured in-house by TAKISAWA. Pursues an ultimate rotational accuracy, which greatly improving the surface accuracy of workpiece.

Various machining tasks can be satisfied with appropriate spindle through hole and main motor type since diverse headstock options.

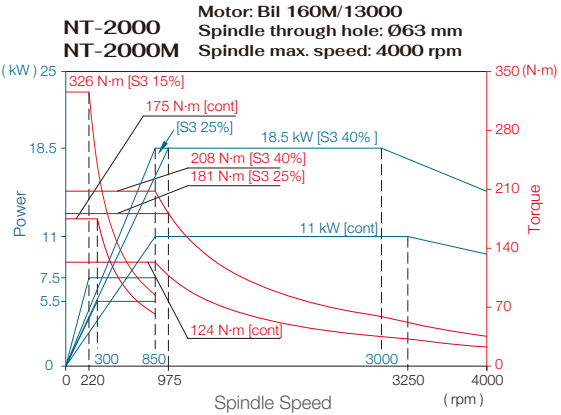
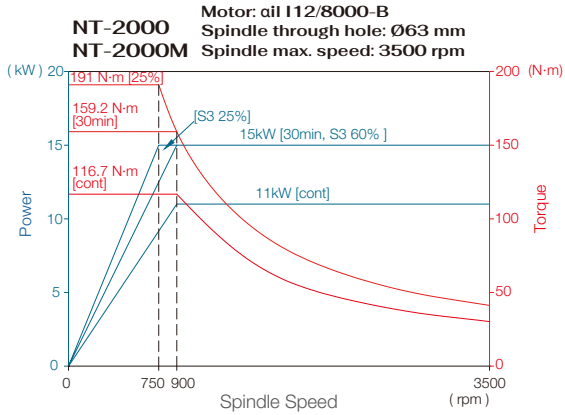
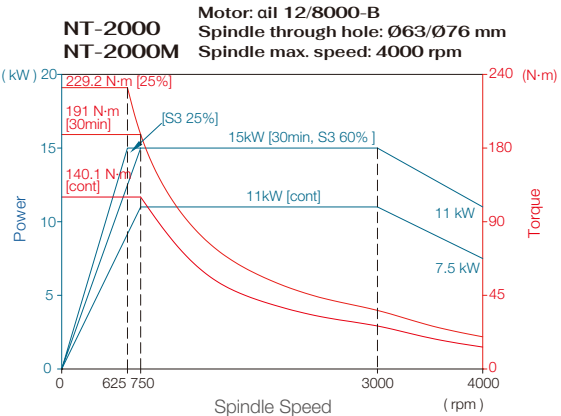
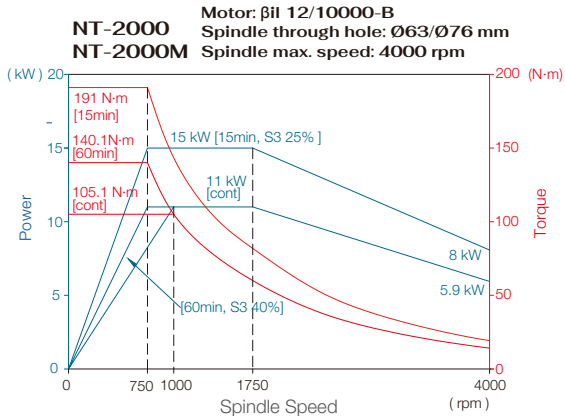
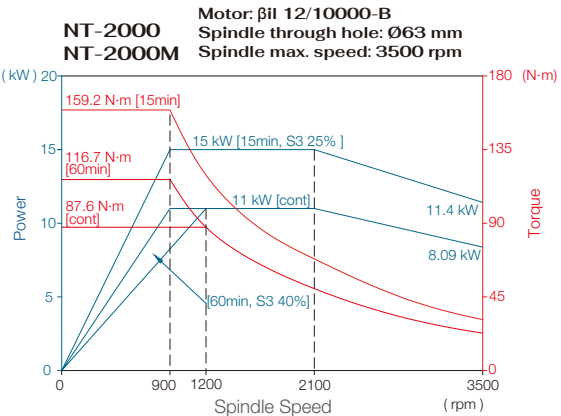
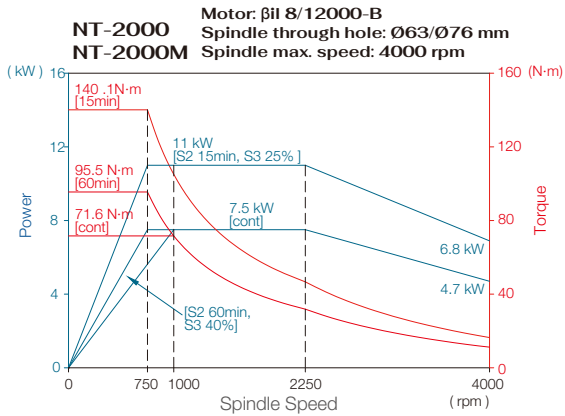
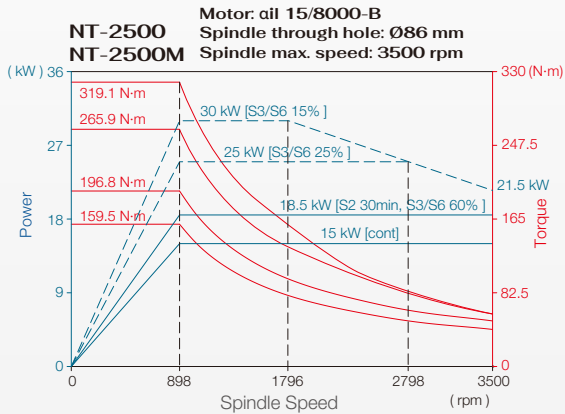


Spindle Specifications

	NT-2000	NT-2000M	NT-2500	NT-2500M
Spindle Speed	3500(4000)		3500	
Chuck Size	8		10	
Spindle Nose	A2-6		A2-8	
Through Hole Dia.	63(76)		86	
Bearing Dia.	100(110)		120	
Motor Output	7.5/11(11/15)(15/18.5)		15/18.5	

() Optional

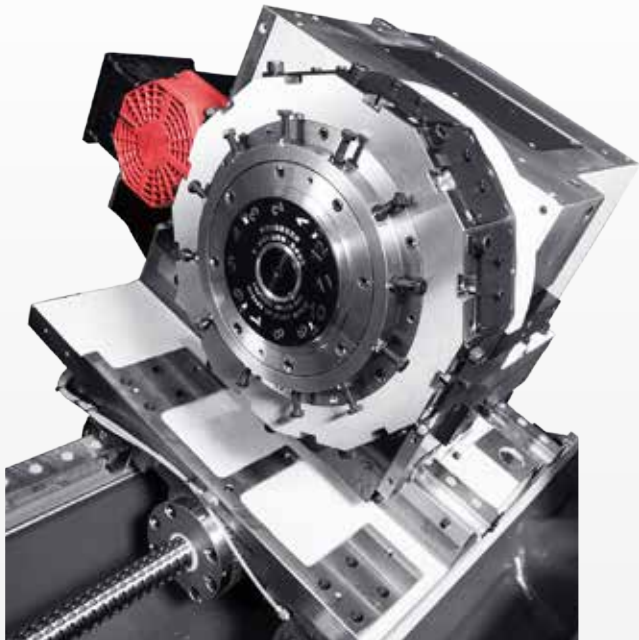
Spindle Output Diagram



Turret

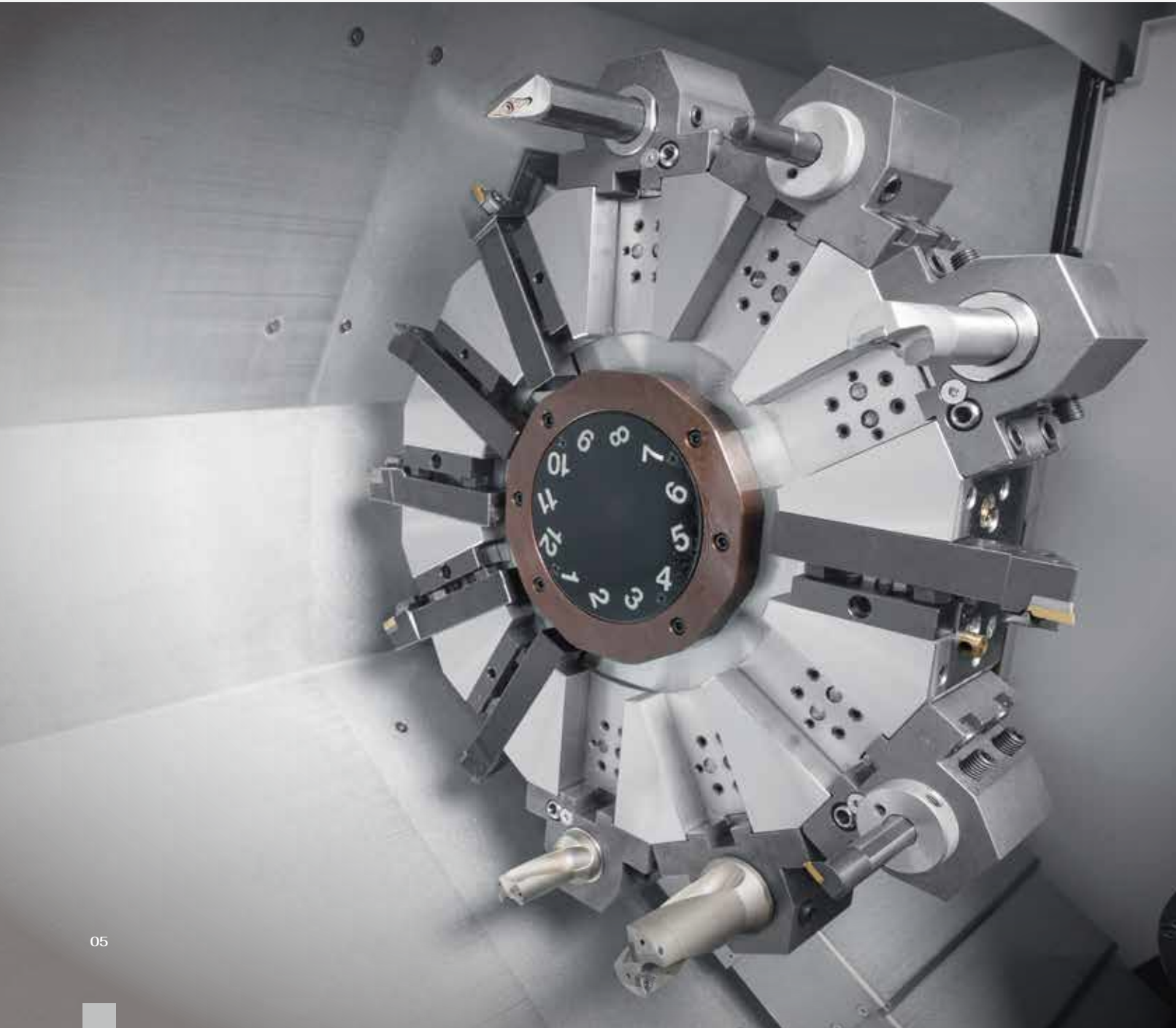
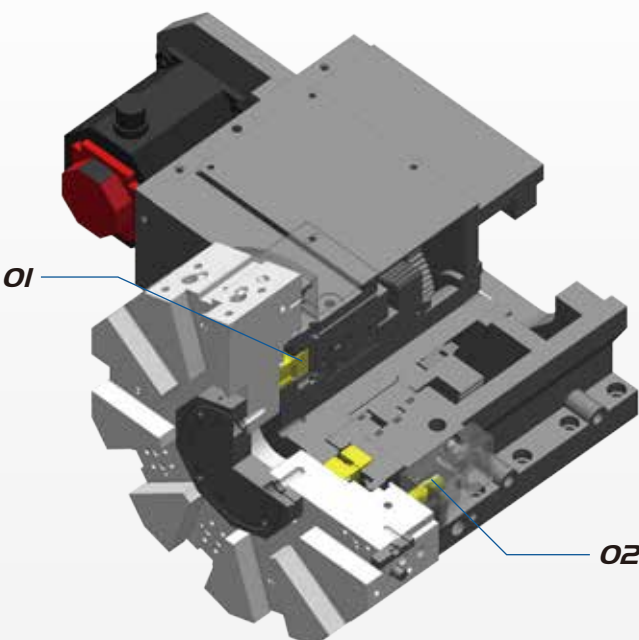
The high-accuracy turret is manufactured in-house by TAKISAWA, which equipped with a large outer diameter curvic coupling, enhancing machining rigidity greatly.

For multi-tasking demands such as shaped milling, drilling, and threading, the machining efficiency can be improved with a milling turret.



Turret Structure

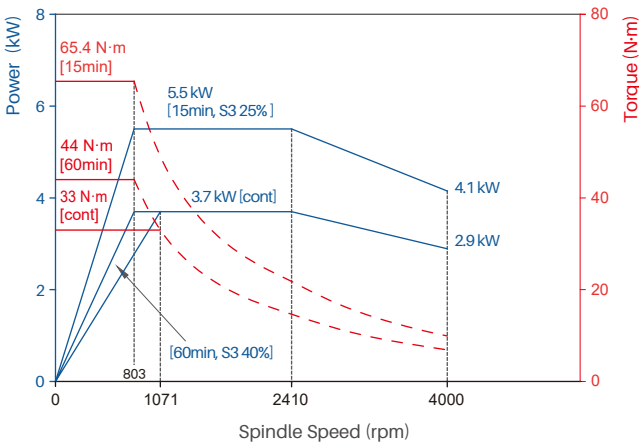
- 01** High rigidity and great accuracy are characteristics of the curvic coupling with diameter 210mm.
- 02** Support the high-pressure cutting demand for 70bar.



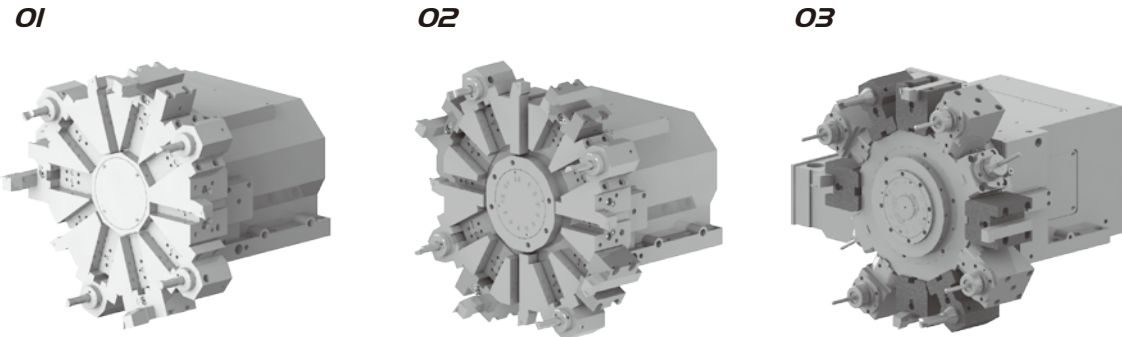
Turret Specifications

	T10	T12	T12
	Turning Turret	Turning Turret	Milling Turret
OD Tool Shank Dia.	25	25	25
ID Tool Shank Dia.	40	40	40
Milling Shank Dia.	-	-	20
Milling Spindle Speed	-	-	4000
Milling Motor Output	-	-	3.7/5.5

Milling Spindle Output Diagram



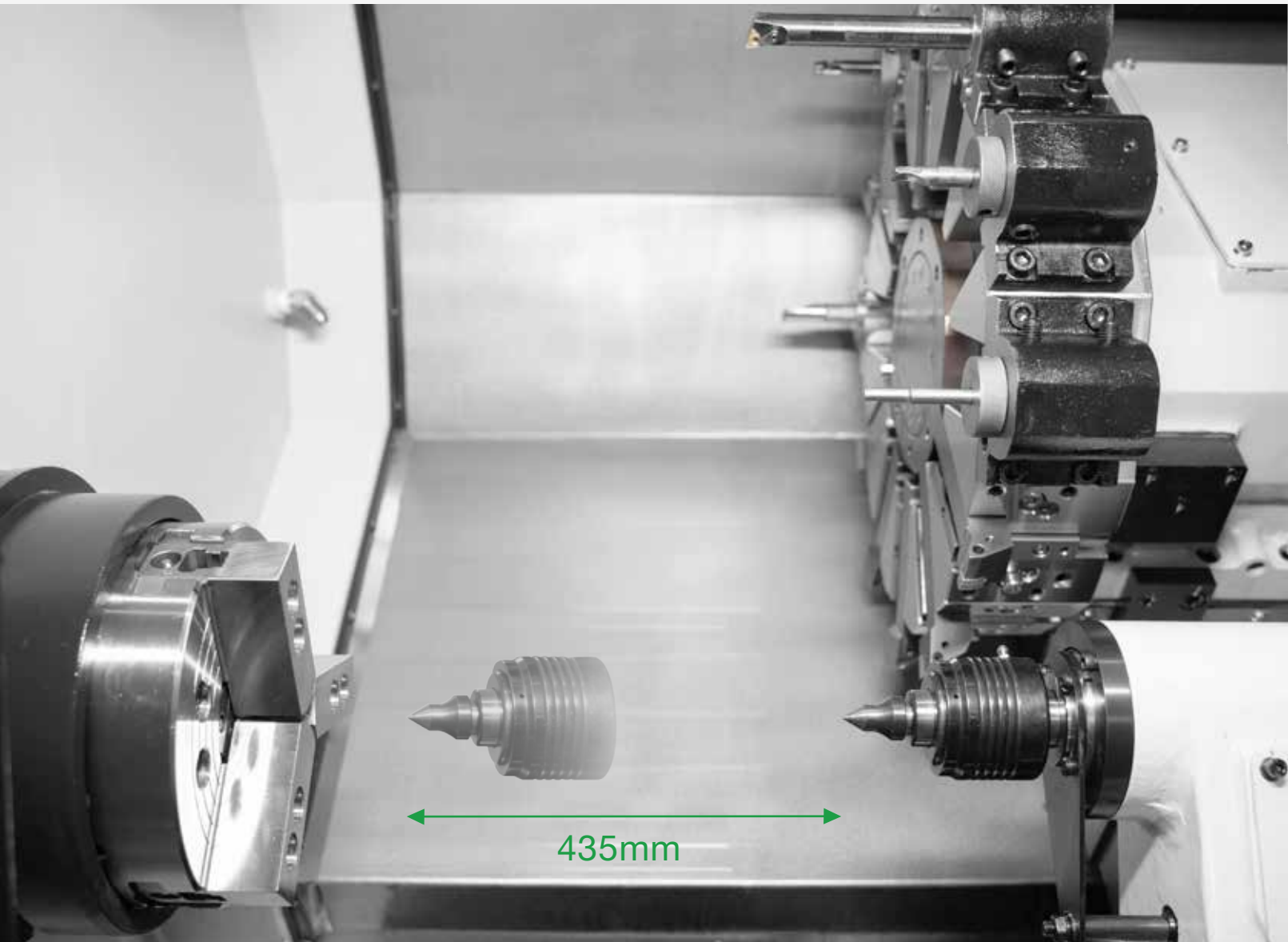
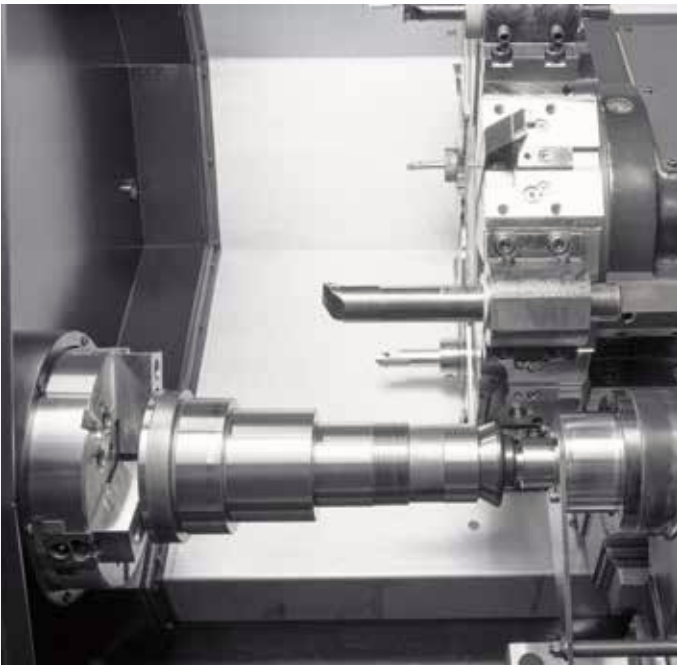
- 01** T10 Turning Turret
- 02** T12 Turning Turret
- 03** T12 Milling Turret



Tailstock

With stable tailstock, it provides the best support for shaft shapes workpiece.

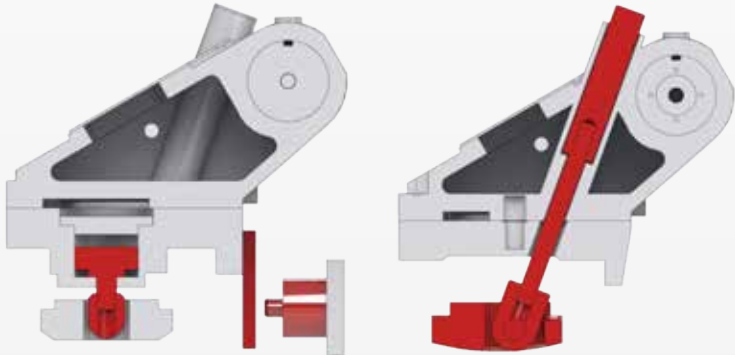
There is optional automatic PIN carry type tailstock, for user-friendly operation.



Tailstock Specifications

Tailstock Travel	435 mm	
Tapered Bore Type	MT.4	
Movement Type	Manual	Pin Carry

※ The designs, specifications, dimensions, and structures in this brochure are subject to change without notice.



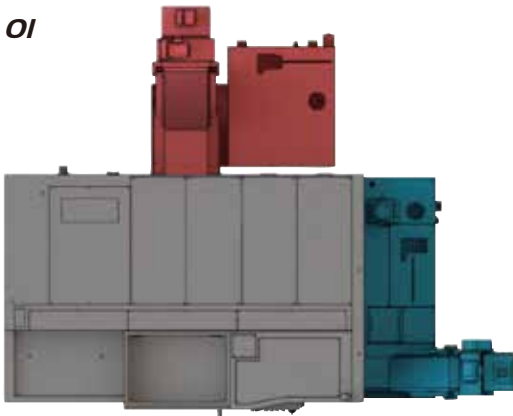
Select a suitable type of tailstock movement based on machining demands.

01 Chip Conveyor Configuration

For the chip conveyor, rightward disposal or rearward disposal are available.

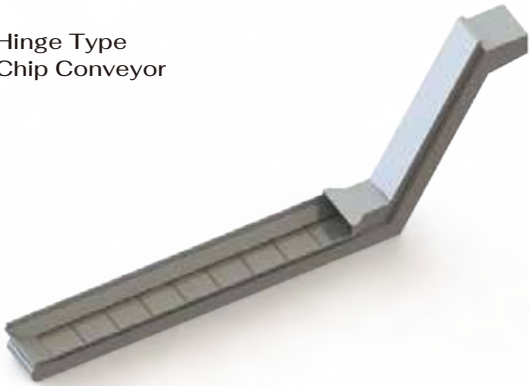
02 Chip Conveyor Type

There are hinge type or scraper type chip conveyor available, based on material and chips size.



02

Hinge Type
Chip Conveyor



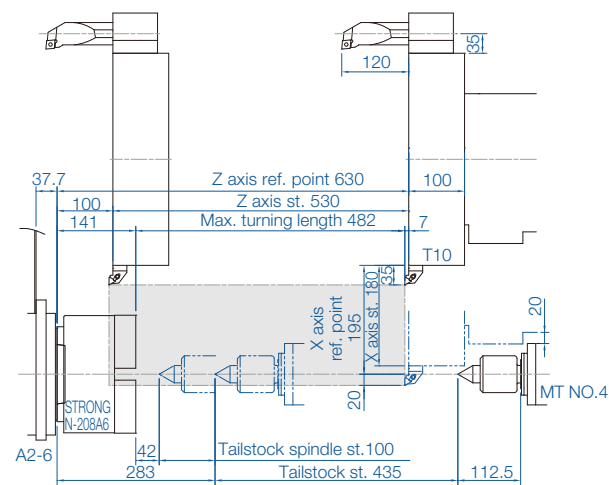
Scraper Type
Chip Conveyor



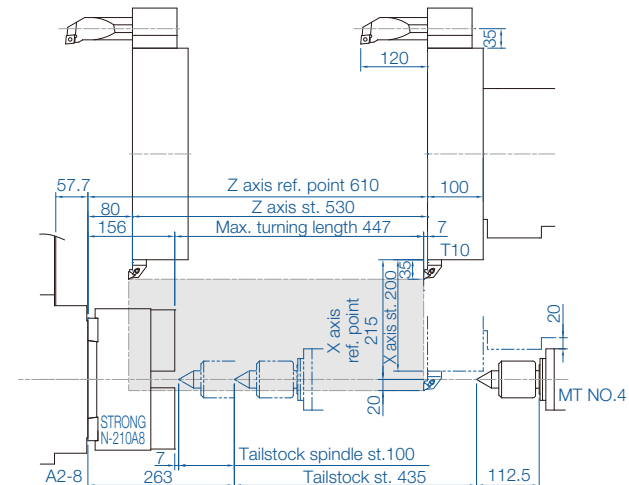
Chip Type	Curly Metallic Chip Steel / Aluminum	Power Metallic Chip Foundry / Aluminum / Brass	Non-metallic Chip
Hinge Type	O	X	O
Scraper Type	X	O	X

Travel Range

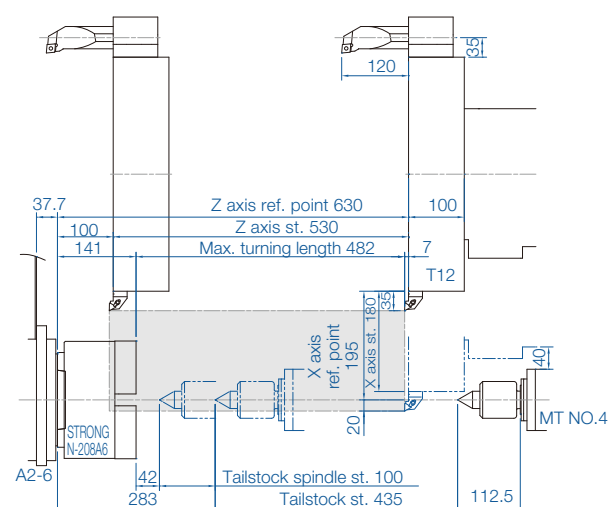
NT-2000 T10 TURNING TURRET



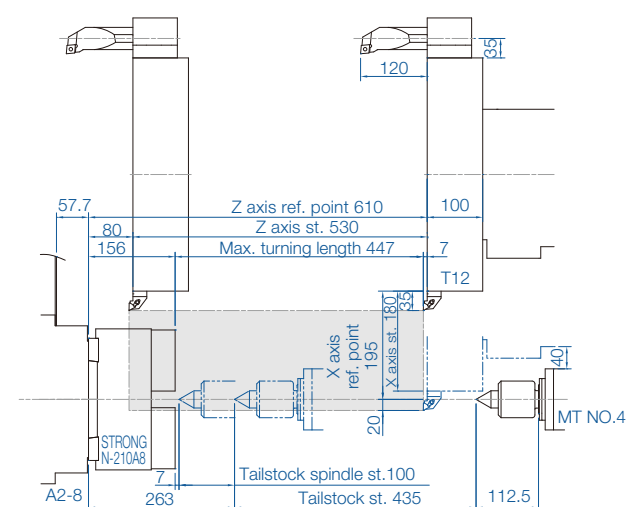
NT-2500 T10 TURNING TURRET



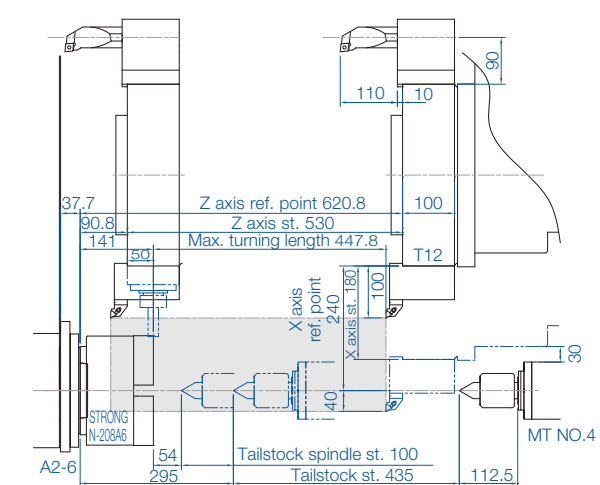
NT-2000 T12 TURNING TURRET



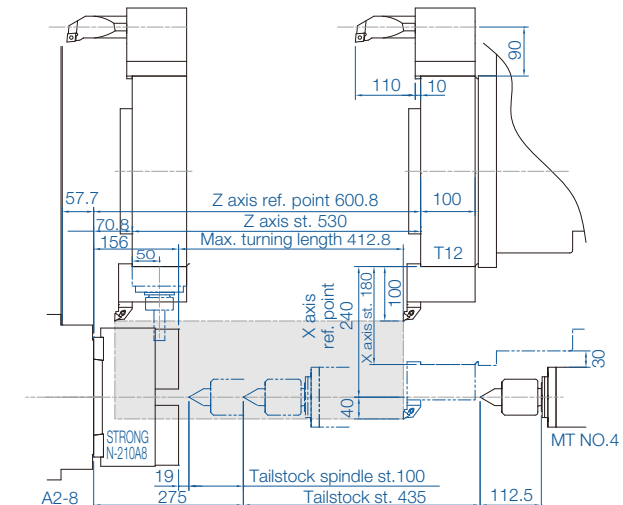
NT-2500 T12 TURNING TURRET



NT-2000M T12 MILLING TURRET

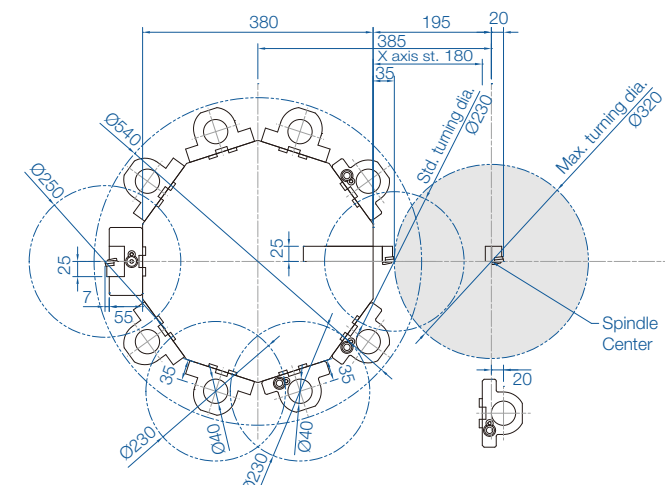


NT-2500M T12 MILLING TURRET

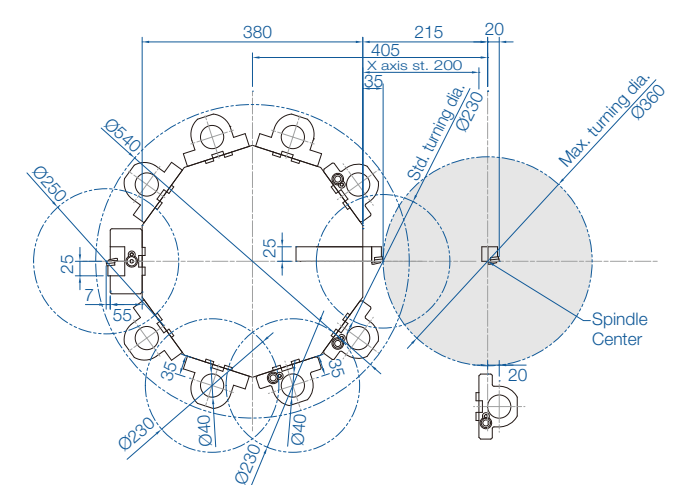


Interference

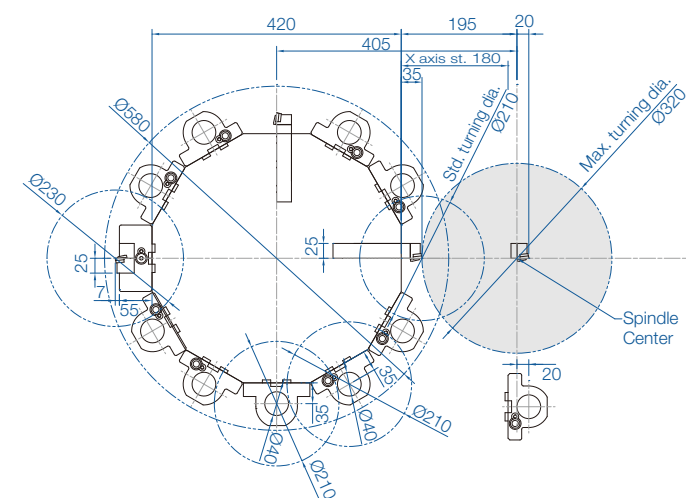
NT-2000 T10 TURNING TURRET



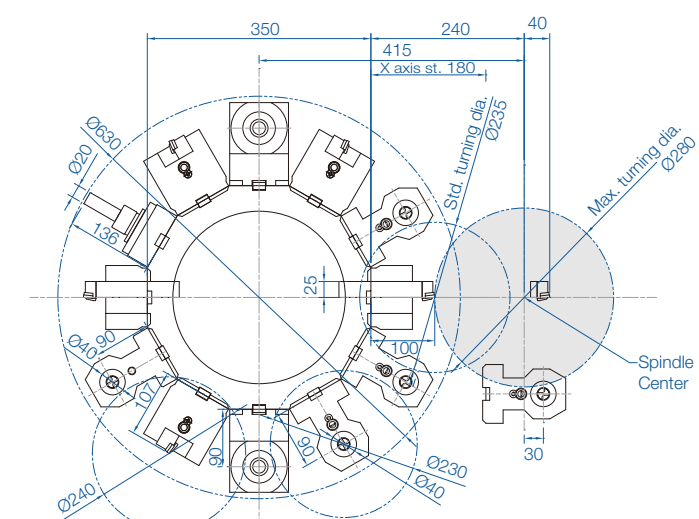
NT-2500 T10 TURNING TURRET



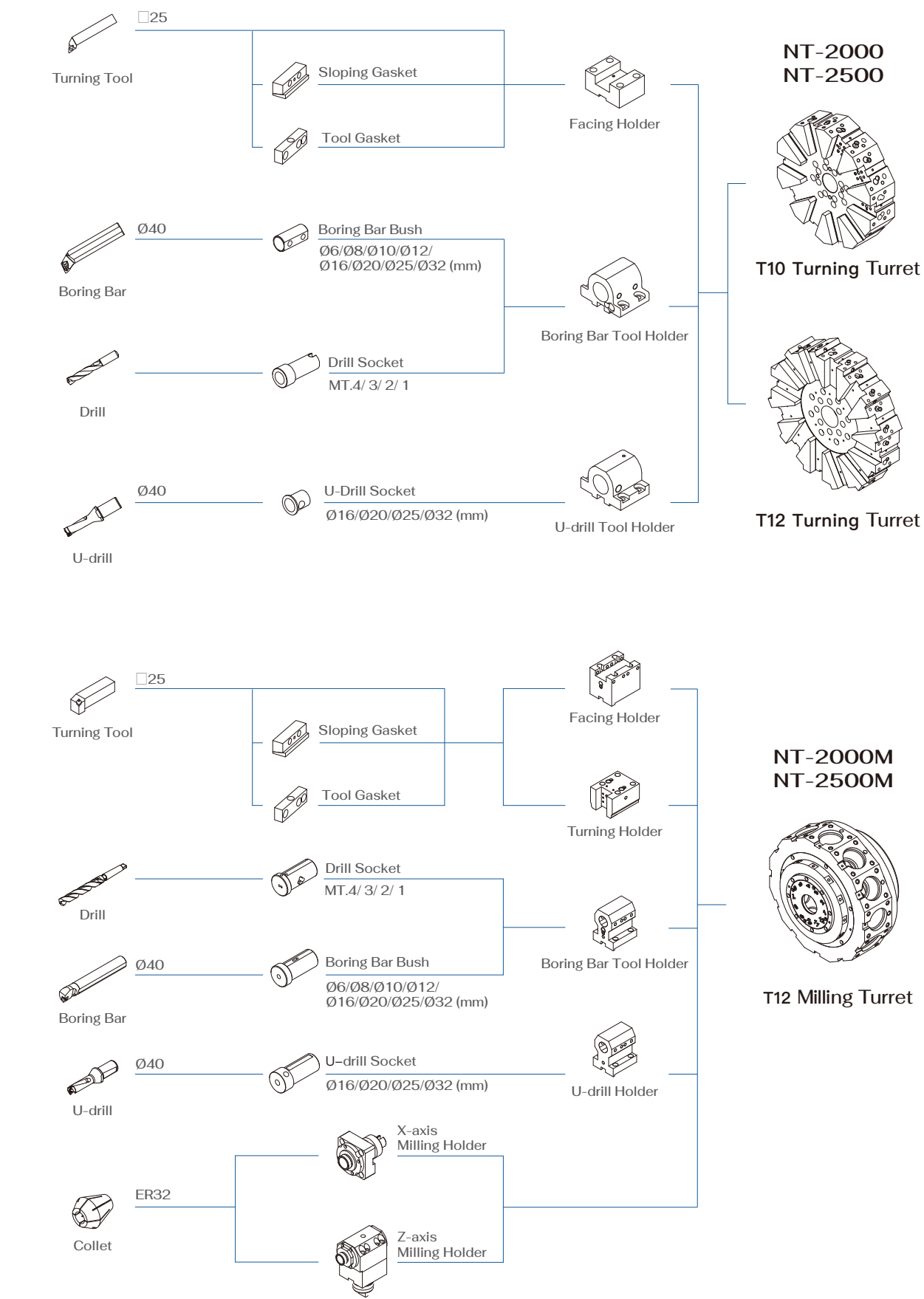
NT-2000 T12 / NT-2500 T12 TURNING TURRET



NT-2000M T12 / NT-2500M T12 MILLING TURRET



Tooling System

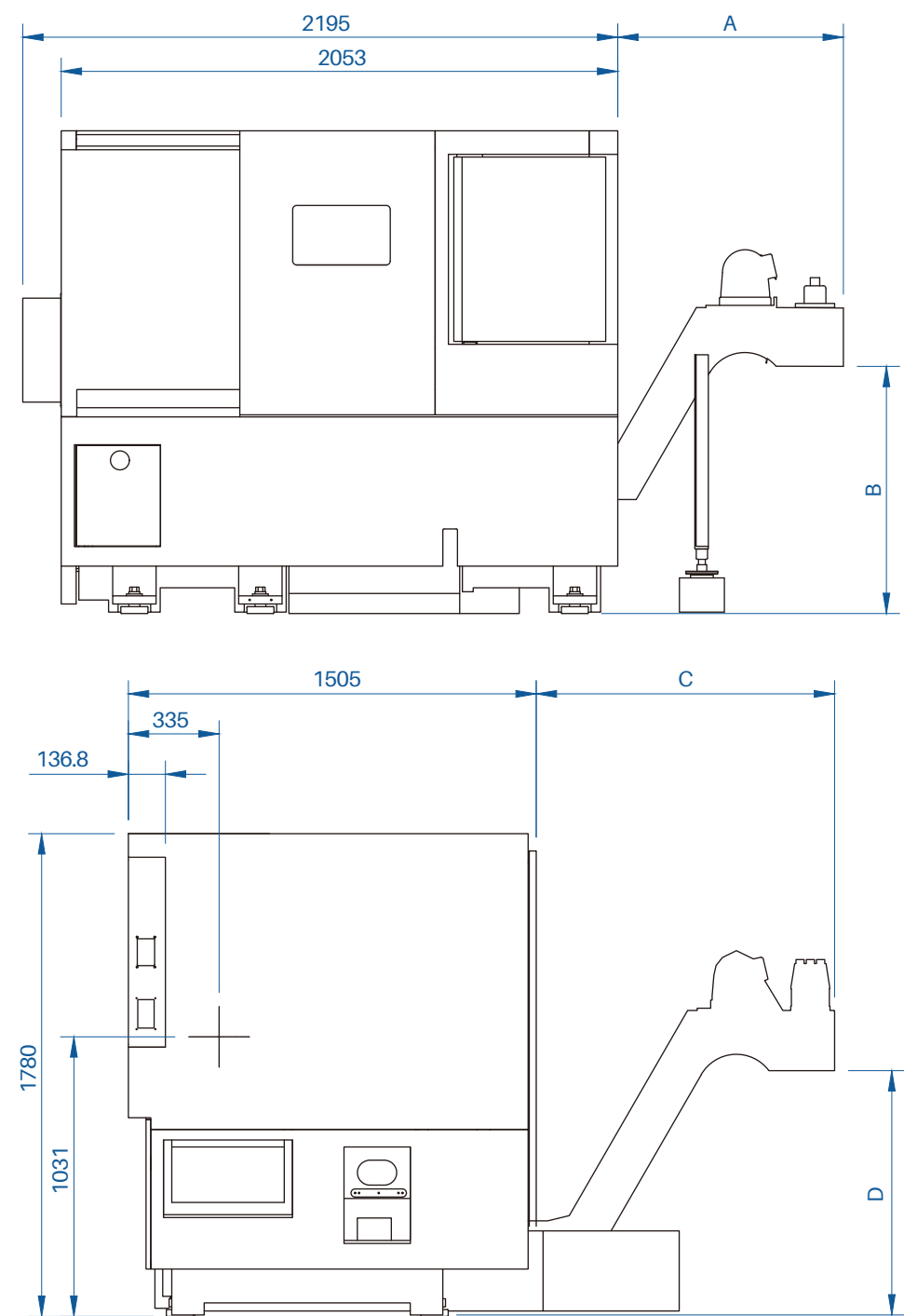


Standard and Optional Accessories

Accessories	NT-2000	NT-2000M	NT-2500	NT-2500M
Pulley Driven Spindle	●	●	●	●
Built-in Motor Spindle	◎	◎	—	—
T10 Hydraulic Servo Turning Turret	●	—	●	—
T12 Hydraulic Servo Turning Turret	◎	—	◎	—
T12 Hydraulic Servo MillingTurret	—	●	—	●
Boring Bar Tool Holder (4 Sets)	●	●	●	●
U-drill Tool holder (1 Set)	●	●	●	●
Facing Tool Holder (1 Set)	●	●	●	●
Turning Tool Holder (1 Set)	—	●	—	●
Boring Bar Bush (06)	◎	◎	◎	◎
Boring Bar Bush (08, 010, 012, 016, 020, 025)	●	●	●	●
Boring Bar Bush (032)	◎	◎	◎	◎
U-drill Socket (016, 020, 025)	●	●	●	●
U-drill Socket (032)	◎	◎	◎	◎
Drill Socket (MT.1, MT.2, MT.3)	●	●	●	●
Drill Socket (MT.4)	◎	◎	◎	◎
X-axis Milling Holder (1 Set)	—	●	—	●
Z-axis Milling Holder (1 Set)	—	●	—	●
Basic Iron Block	●	●	●	●
Tool Gasket	●	●	●	●
Working Light	●	●	●	●
Tool Box	●	●	●	●
Operation Manual	●	●	●	●
Hydraulic Chuck	●	●	●	●
Foot Switch	●	●	●	●
Hydraulic Tailstock with Live Center	◎	◎	◎	◎
Manual PIN Tailstock Base	◎	◎	◎	◎
Automatic PIN Tailstock Base	◎	◎	◎	◎
Sling (2PCS)	◎	◎	◎	◎
Right Disposal Chip Conveyor	◎	◎	◎	◎
Rear Disposal Chip Conveyor	◎	◎	◎	◎
Chip Cart	◎	◎	◎	◎
Coolant Pump (400W)	●	●	●	●
Coolant Pump (715W, 750W, 900W, 1400W)	◎	◎	◎	◎
Tool Setter	◎	◎	◎	◎
Parts Catcher	◎	◎	◎	◎
Parts Conveyor	◎	◎	◎	◎
Automatic Barfeeder & Interface	◎	◎	◎	◎
Pneumatic Automatic Door	◎	◎	◎	◎
Safety Door Switch	◎	◎	◎	◎
Air Blow	◎	◎	◎	◎
Automatic Power-off	◎	◎	◎	◎
Parts Counter	◎	◎	◎	◎
Collect Chuck	◎	◎	◎	◎
Oil Mist Collector	◎	◎	◎	◎

Machine Dimensions

NT-2000/NT-2500 Series



Dimensions of conveyor				
	A	B	C	D
Standard	831	901	1100	901
CE	832	911	1090	901
Italy	1062	1001	-	-
Switzerland	1062	1151	-	-

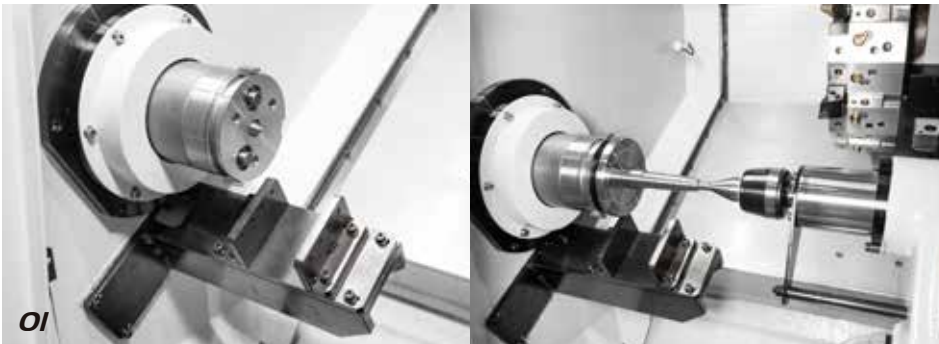
Machine Specifications

Item		NT-2000	NT-2000M	NT-2500	NT-2500M	
Capacity	Swing Over Saddle	mm	320		320	
	Swing Over Bed	mm	400		400	
	Std. Turning Diameter	mm	230(T10)/210(T12)	235	230(T10)/210(T12)	235
	Max. Turning Diameter	mm	320	280	360(T10)/320(T12)	280
	Max. Turning Length	mm	482	447.8	447	412.8
	Bar Capacity	mm	52(65)		75	
Travel	X-axis Travel	mm	180		200(T10)/180(T12)	180
	Z-axis Travel	mm	530		530	
Spindle	Spindle Speed	rpm	3500(4000)		3500	
	Chuck Size	inch	8"		10"	
	Spindle Nose		A2-6		A2-8	
	Through Hole Diameter	mm	63(76)		86	
	Bearing Diameter	mm	100(110)		120	
Turret	Type		T10(T12)	T12	T10(T12)	T12
	Turning Tool Shank	mm	25		25	
	Boring Bar Shank Diameter	mm	40		40	
	Milling Speed	rpm	-	4000	-	4000
	Milling Shank Diameter	mm	-	Ø1 - Ø20	-	Ø1 - Ø20
Tailstock	Tailstock Spindle Travel	mm	435		435	
	Tailstock Spindle Diameter	mm	75		75	
	Taper Hole of Tailstock Spindle		MT.4		MT.4	
	Tailstock Spindle Travel	mm	100		100	
Feedrate	X-axis Rapid Traverse	m/min	24(15)		24(15)	
	Z-axis Rapid Traverse	m/min	24(18)		24(18)	
Motor	Spindle Drive Motor	kW	7.5/11(11/15)(15/18.5)		15/18.5	
	Milling Motor	kW	-	3.7 / 5.5	-	3.7 / 5.5
	Turret Index Motor	kW	1.2		1.2	
	X-axis Drive Motor	kW	1.2		1.2	
	Z-axis Drive Motor	kW	2.5		2.5	
Machine Size	Height	mm	1780		1780	
	Width	mm	2195		2195	
	Depth	mm	1505		1505	
	Weight	kg	4300		4400	

() Optional

※ The designs, specifications, dimensions, and structures in this brochure are subject to change without notice.

Special Specification Examples



- 01** Customized Chuck
- 02** Dual Pneumatic Chuck
- 03** Automatic Tool Setter
- 04** Collect Chuck + Parts Catcher
- 05** Slide-in Gantry Loader

Optional High-accuracy Accessories

If there are any special requirements for machining accuracy with high-accuracy optional equipment to be installed. Please contact us for more details.

- 01** Linear Scale
- 02** Automatic & Manual Tool Setter
- 03** Coolant Chiller
- 04** High Pressure Coolant System
- 05** Hydraulic Oil Chiller



High Speed Gantry Loader System

Layout Variations

A B C

Peripheral Equipment

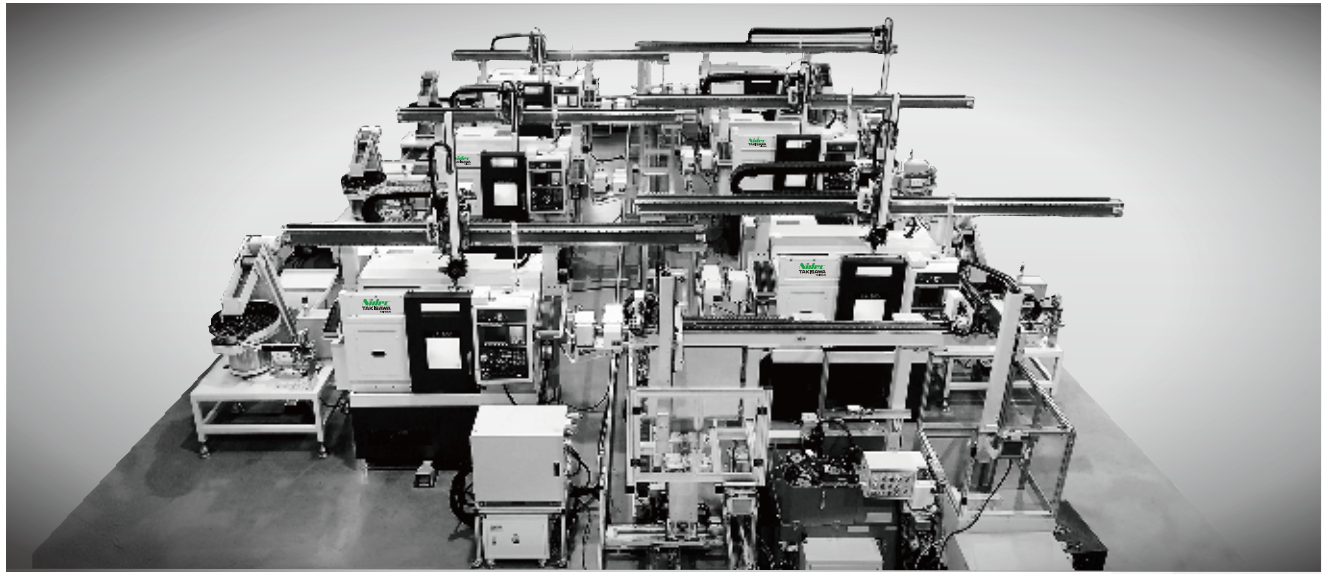
Gantry Loader Specifications

Feedrate		
X-axis	180	m / min
Z-axis	150	m / min
Working Range		
O.D.	160	mm
Length	100	mm
Weight	3 (x2)	kg

Workpiece Feeder Specifications

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

Turn-Key Solution



NC Unit Specifications

● Standard ◎ Optional ⊕ Special ▲ Parameter Setting is required — None

Specifications · Contents	NT-2000	NT-2500	NT-2000M	NT-2500M
Controller				
0i-TF Plus	●TYPE5	●TYPE5	●TYPE5	●TYPE5
NC Unit				
10.4" Color LCD	●	●	●	●
Safety Device				
Front Door Interlock	◎	◎	◎	◎
Front Door Locking Mechanism	◎	◎	◎	◎
Safety Relay	◎	◎	◎	◎
Control Panel Breaker with Tripper	◎	◎	◎	◎
Controlled Axes				
Least Input Increment	●	●	●	●
Maximum programmable Dimension (±999999.999)	●	●	●	●
Least Input Increment C	▲	▲	▲	▲
Inch/Metric Selection	●	●	●	●
Interlock	●	●	●	●
Machine Lock	◎	◎	◎	◎
Emergency Stop	●	●	●	●
Stored Stroke Check 1	●	●	●	●
Stored Stroke Check 2,3	●	●	●	●
Stroke Limit Check Before Movement	◎J749	◎J749	◎J749	◎J749
Chuck Tailstock Barrie	◎J720	◎J720	◎J720	◎J720
Mirror Image (Each Axis)	▲	▲	▲	▲
Chamfering ON/OFF	●	●	●	●
Overload Detection	●	●	●	●
Position Switch	●	●	●	●
Operation				
Auto Run (Memory)	●	●	●	●
MDI Run	●	●	●	●
DNC Run	●	●	●	●
DNC Run with Memory Card	●	●	●	●
Program Number Search	●	●	●	●
Sequence Number Search	●	●	●	●
Sequence Number Collation and Stop	●	●	●	●
Wrong Operation Preventive	▲	▲	▲	▲
Buffer Register	●	●	●	●
Dry Run	●	●	●	●
Single Block	●	●	●	●
Jog Feed	●	●	●	●
Manual Reference Point Return	●	●	●	●
Dogless Reference Point Setting	●	●	●	●
Manual handle feed 2/3-units	◎	◎	◎	◎
Interpolating Functions				
Poitioning (G00)	●	●	●	●
Exact Stop Mode (G61)	●	●	●	●
Tapping Mode (G63)	●	●	●	●
Cutting Mode (G64)	●	●	●	●
Exact Stop (G09)	●	●	●	●
Linear Interpolation (G01)	●	●	●	●
Circular Interpolation (G02/G03)	●	●	●	●
Dwell (G04)	●	●	●	●
Polar Coordinate Interpolation	—	—	●	●
Cylindrical Interpolation	—	—	●	●
Thread Cutting	●	●	●	●
Multiple Thread Cutting	●	●	●	●
Thread Cutting Cycle and Retraction	●	●	●	●
Continuous Thread Cutting	●	●	●	●
Variable Lead Thread Cutting	●	●	●	●
Polygon machining with two spindles	—	—	◎ J708	◎ J708
Reference Point Return (G28)	●	●	●	●

Specifications · Contents	NT-2000	NT-2500	NT-2000M	NT-2500M
Reference Point Return Check (G27)	●	●	●	●
2nd Reference Point Return (G30)	●	●	●	●
3rd, 4th Reference Point Return	●	●	●	●
Feed Function				
Rapid Traverse Override (F0,25%,50%,100%)	●	●	●	●
Feed Per Minute	●	●	●	●
Feed Per Revolution	●	●	●	●
Constant Tangential Speed Control	●	●	●	●
Cutting Feedrate Clamp	●	●	●	●
Automatic Acceleration/Deceleration	●	●	●	●
Rapid Traverse Bell-Shaped Accel/Decel	●	●	●	●
Linear Accel/Decel After Feedrate Interpolation	●	●	●	●
Feedrate Override (15 Steps)	●	●	●	●
Jog Override (15 Steps)	●	●	●	●
Override Cancel	●	●	●	●
Manual Feed Per Revolution	▲	▲	▲	▲
Program Input				
Tape Code (EIA/ISO Auto Recognition)	●	●	●	●
Label Skip	●	●	●	●
Parity Check	●	●	●	●
Control In/Out	●	●	●	●
Optional Block Skip, 1 Piece	●	●	●	●
Optional Block Skip (2 to 9 Pieces)	⊕J955	⊕J955	⊕J955	⊕J955
Program Number O4 Digits	●	●	●	●
Program File Name 32 Characters	●	●	●	●
Sequence Number N8 Digits	●	●	●	●
Absolute/Incremental Command	●	●	●	●
Decimal Point Input/ Pocket Calculator Type Decimal Point Input	●	●	●	●
Diameter /Radius Programming (X-Axis)	●	●	●	●
Coordinate System Setting (G50)	▲	▲	▲	▲
Auto coordinate System Setting	●	●	●	●
Drawing Dimension Direct Input	●	●	●	●
G-Code System A	●	●	●	●
G-Code System B/C	▲	▲	▲	▲
Chamfering/Corner R Programming	●	●	●	●
Programmable Data Input	●	●	●	●
Sub Program Call (10 Levels)	●	●	●	●
Custom Macro	●	●	●	●
Additional Custom Macro	●	●	●	●
Common Variables	●	●	●	●
Single Canned Cycle	●	●	●	●
Combined Canned Cycle	●	●	●	●
Combined Canned Cycle II	●	●	●	●
Drilling Canned Cycle	●	●	●	●
Circular interpolation by R programming	●	●	●	●
Macro Executor	●	●	●	●
Coordinate System Shift	●	●	●	●
Coordinate System Shift Direct Input	●	●	●	●
Miscellaneous Function/Spindle Functions				
M Function (M3 Digits)	●	●	●	●
Second Miscellaneous Function (B Function)	◎J920	◎J920	◎J920	◎J920
Spindle Functions (S4 Digits)	●	●	●	●
Constant Surface Speed Control	●	●	●	●
Spindle Orientation	●	●	●	●
Rigid Tap (Spindle Center)	●	●	●	●
Rigid Tap (Rotary Tool)	—	—	●	●

Specifications · Contents	NT-2000	NT-2500	NT-2000M	NT-2500M
Data I/O				
RS-232C Interface for 1 ch	●	●	●	●
Fast Data Server	⊕	⊕	⊕	⊕
External Message	●	●	●	●
External Workpiece Number Search	◎	◎	◎	◎
Memory Card I/O	●	●	●	●
Tool Functions/Tool Offset Functions				
T Function (T2+2 Digits)	●	●	●	●
Tool Offsets, 128 Pieces	●	●	●	●
Tool Geometry Size Data, 128 Pieces	●	●	●	●
Tool Position Offset	●	●	●	●
Tool Diameter /Nose R Compensation	●	●	●	●
Tool Geometry /Wear Compensation	●	●	●	●
Tool Offset Counter Input	●	●	●	●
Tool Offset Measured Value	●	●	●	●
Direct Input	●	●	●	●
Tool Offset Measured Value	◎J933	◎J933	◎J933	◎J933
Direct Input B	◎J933	◎J933	◎J933	◎J933
Tool Life Management	●	●	●	●
Accuracy Offset Functions				
Backlash Compensation	●	●	●	●
Backlash Compensation by Rapid Traverse/Feedrate	●	●	●	●
Editing				
Part Program Memory Capacity 2Mbyte	●	●	●	●
Registrable Programs, 1000 Programs	●	●	●	●
Program Editing	●	●	●	●
Program Protection	●	●	●	●
Extended Program Editing	●	●	●	●
Background Editing	●	●	●	●
Setting/Display				
Status Display	●	●	●	●

Specifications · Contents	NT-2000	NT-2500	NT-2000M	NT-2500M
Clock Function	●	●	●	●
Current Position Display	●	●	●	●
Program Comment Display (31 Characters)	●	●	●	●
Parameter Setting and Display	●	●	●	●
Alarm Display	●	●	●	●
Alarm Log Display	●	●	●	●
Operator Message Log Display	●	●	●	●
Operation Message Log Display	●	●	●	●
Run Hours and Parts Count Display	●	●	●	●
Actual Speed Display	●	●	●	●
Actual Spindle Speed and T Code Display	●	●	●	●
Floppy Cassette Directory Display	●	●	●	●
Optional path name display	●	●	●	●
Servo Adjustment Screen	●	●	●	●
Maintenance Information Screen	●	●	●	●
Data Protection Key, 1 Kind	●	●	●	●
Help Function	●	●	●	●
Self Diagnostic Function	●	●	●	●
Scheduled Maintenance Screen	●	●	●	●
Hardware & Software System Configuration Display	●	●	●	●
Graphic Display	●	●	●	●
Dynamic Graphic Display	◎J760	◎J760	◎J760	◎J760
Display Languages				
English	●	●	●	●
Japanese (Kanji)	◎J965	◎J965	◎J965	◎J965
Other Language	▲	▲	▲	▲
Display Language Dynamic Switching	●	●	●	●
MANUAL GUIDE 0i				
MANUAL GUIDE 0i	◎S772	◎S772	◎S772	◎S772

TYPE5:
Dynamic language switching: Vietnamese, Indonesian, Turkish, Russian, Chinese, English, Portuguese, Spanish, Hindi, and Tamil are standard options, while others are optional.

Smart Work Management (option)

01



Simple and convenient operations are available.

01 Tool Life Management

It can set tool life and tool wear compensation up by this function to keep manufacturing quality.

02 Load Monitor

Detecting the max. loading to check each tool status.

03 Parts and Machine Management

For operating functions such as parts counter, program history, and machine utilization.

03

