SC-300Ⅱ L

NAKAMURA-TOME
PRECISION INDUSTRY CO.,LTD.

SC-300ⅡL

Enhanced User Friendli

15"color LCD display is standard

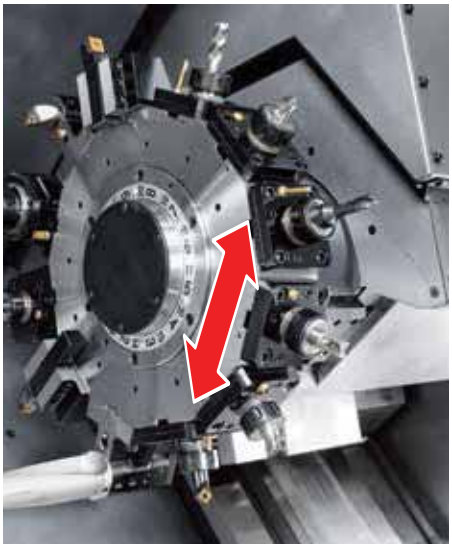
■ Swiveling operation panel
Swiveling function reduce the operator's burden and enhanced user friendly.

NT nurse

Luck-bei II

Air back

NT work navigator



Y-axis (Standard)/ Milling function

■ Y-axis stroke
120mm (±60mm)

■ Milling speed
6,000min^{-1}

Milling speed of Y-axis is improved.
Y-axis stroke is longer than the former model and enable various operation.

■ Maximum cutting depth
9mm

Enhanced machine rigidity and stability improved turning performance.
Overwhelming heavy cutting performance is possible with 9mm maximum cutting depth and 4.95mm^2 cutting area.

Traditional fitting slide-way

Scraping work from the period of automatic hydraulic lathe is important technique for high-quality slide guide unit.

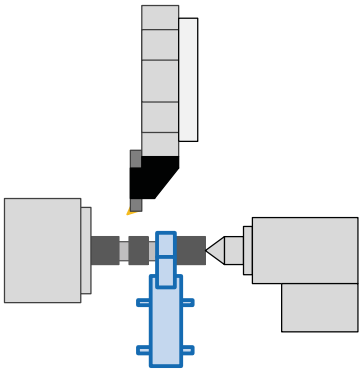
All Nakamura-tome machine with box-way slide are equipped with the fitting slide-way.

Traditional fitting slide-way and high rigidity box-way slide structure enables heavy cutting performance and stable cutting accuracy.

iness·Rigidity·Accuracy

Maximum Cutting length 1,135mm

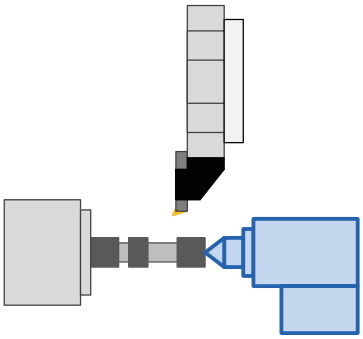
Rich package lineups



■ NC steady rest + Automatic Tailstock

NC steady rest is specified its position by program. Flexure deformation is minimized by supporting works near the machining point.

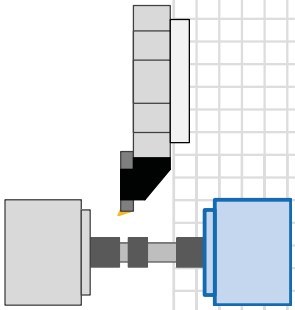
※NC tailstock is not available.



■ NC tailstock

NC tailstock is specified its position by program according to work length. The thrust is also set by NT soft quill pusher. Automatic type(Quill type) is available.

※NC steady rest is not available.

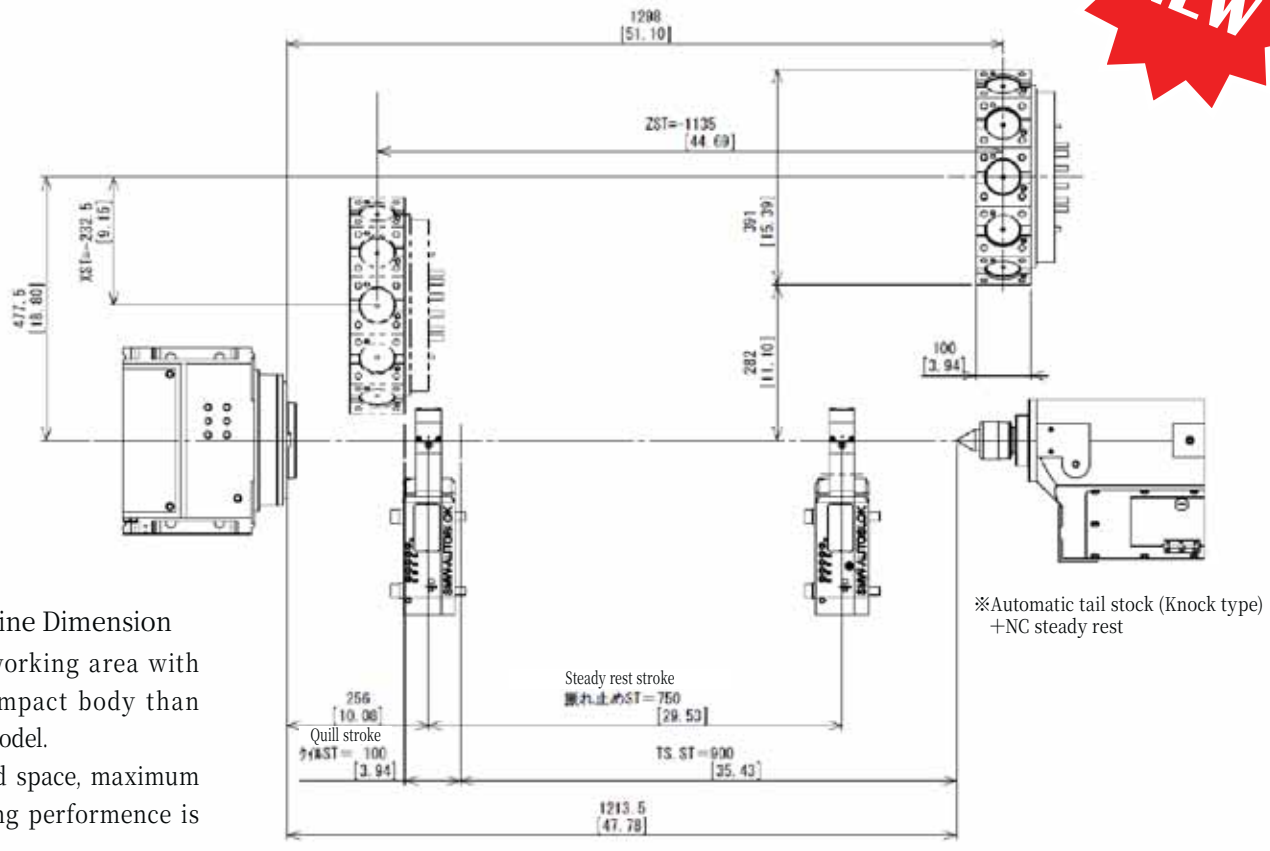


■ NC Mata-Bei(R side sub spindle)

NC Mata-Bei can be used for various operation as Transfer, Supporting long shaft machining, O.D. Turning with tension, and so on.Machining is completed from raw material to finished parts in one machine.

Axis travel range

NEW



※Automatic tail stock (Knock type)
+NC steady rest

■ Machine Dimension

Larger working area with more compact body than former model.

In limited space, maximum machining performence is possible.

Machine Specification

■ Capacity		
Max. turning diameter	360mm	
Standard turning diameter	280mm	
Distance between spidle nose (R-side sub-spindle)	1,310mm	
Distance between centers (Tailstock)	1,213.5mm	
Max. turning length (R-side sub-spindle)	1,135mm	
Max. turning length (Tailstock)	1,100mm	
Bar capacity	71mm / (89mm)	
Chuck size (L/R)	10″(12″) / 6″ (12″)	
■ Axis travel		
Slide travel X	232.5mm	
Slide travel Z	1,135mm	
Slide travel Y	± 60mm	
Slide travel B	1,000mm	
■ Main spindle		
Spindle speed	3,500min^{-1}	
Spindle speed range	Stepless	
Spindle nose	A2-8	
Hole through spindle	85mm (φ71)	100mm (φ89)
I.D. of front bearing	120mm (φ71)	140mm (φ89)
Hole through draw tube	72mm (φ71)	90mm (φ89)
■ Sub spindle (R)		
Spindle speed	5,000min^{-1}	
Spindle speed range	Stepless	
Spindle nose	A2-5	
Hole through spindle	63mm	
I.D. of front bearing	90mm	
Hole through draw tube	52mm	
■ Tailstock (OP.)		
Drive system	Automatic (Knock type)	NC
Stroke	900mm	1,000mm
Thurst adjustable range	1.3-7.0kN	2.5-6.5kN
Tailstock taper shank	MT-5 (Rotating center) MT-4 (Built-in center)	
Diameter (Automatic)	90mm	
Stroke (Automatic)	100mm	
■ C-axis (L,R)		
Least input increment	0.001°	
Least command increment	0.001°	
Rapid index speed	200min^{-1}	
Cutting feed rate	1-4,800° /min	
C-axis clamp	Disk clamp	
C-axis connecting time	1.5sec.	
■ Turret		
Number of turret	1	
Type of turret head	Dodecagonal	Hexadecagonal
Number of Tool stations	12	16
Number of index positions	24	16
■ Driven tools		
Spindle speed	6,000min^{-1}	
Spindle speed range	Stepless	
Number of driven-tool stations	12	16
■ Drive motor power		
Main spindle (L)	22/18.5kN	
Sub spindle (R)	15/11kN	
Driven-tool spindle	7.5/3.7kN (Dodecagonal) 5.5/3.7kN (Hexadecagonal)	
■ General		
Mahicne height	2,400mm	
Floor space	5,065mm × 2,130mm	
Machine weight	11,000kg	
■ Poser supply		
Poser supply (without Mata-Bei)	31.0 (33.9)kVA	
Poser supply (with Mata-Bei)	39.2 (42.1)kVA	

Control Specification

■ Items	
Control type	Nakamura-Tome FANUC (0i-TF)
■ Controlled axes	
Controlled axes	4 axes
Simultaneously controlled axes	4 axes
■ Input command	
Least input increment	0.001mm / 0.0001inch (X in diameter) / 0.001°
Least command increment	X : 0.0005mm / Z,Y : 0.001mm / C : 0.001°
Max. programmable dimension	± 999999.999mm / ± 39370.00787inch ,999999.999°
Absolute/incremental programming	X, Z, C, Y / U, W, H, V
Decimal input	Standard
Inch/Metric conversion	G20 / G21
Programmable data input	G10
■ Feed function	
Cutting feed	Feed mm/min X : 1-8,000mm/min, 0.01-314inch/min (1-4,800mm/min, 0.01-188inch/min) Z : 1-8,000mm/min, 0.01-314inch/min (1-4,800mm/min, 0.01-188inch/min) Y : 1-8,000mm/min, 0.01-314inch/min (1-4,800mm/min, 0.01-188inch/min) C : 1-4,800° /min Feed mm/rev : 0.0001-500.0000mm/rev 0.000001-9.999999inch/rev
Dwell	G04
Feed per minute/Feed per revolution	G98 / G99
Thread cutting	G32F designation
Thread cutting retract	Standard
Continuous thread cutting	G34
Handle feed	Manual pulse generator 0.001/0.01/0.1mm,° (per pulse)
Automatic acceleration/decelaration	Standard
Linear accel. Decel. After cutting feed interpolation	Standard
Rapidfeed over ride	F0/25/100% (Changeable to every 10% by switch)
Cutiing feedrate override	0 - 150% (each 10%)
■ Program memory	
Part program storage length	512Kbyte (Total 1,280m)
Part program editing	delete, insert, change
Program number search	Standard
Sequence number search	Standard
Address search	Standard
Number of registerable programs	400 programs
Program storage memory	Backed up by battery
DNC operation through memory card	Standard (not including memory card)
Multiple program simultaneous editing	Standard
■ Operation and display	
Operation panel: Display	15inch color LCD
: keyboard	QWERTY keyboard
■ Program support	
Circular interpolation R programming	Standard
Direct drawing dimension programming or Chamfering/Corner R	Standard (switched by setting parameter)
Canned cycle	G90, G92, G94
Multiple repetitive canned cycle	G70-G76
Multiple repetitive canned cycle II	G71, G72
Canned cycle for drilling	G80-G89
Sub program	Standard
Custom macro	Standard (common variable, #100 - #149, #500 - #599)
Addition to custom macro common variables	Standard (After addition, #100 - #199, #500 - #999)
FS10 tape format	Standard
Luck-Bei II	Standard
Abnormal load detection function	Standard
NT work navigator	Standard (not including contact bar)
NT Nurse	Standard
■ Mechanical support	
Rigid type	Standard
Spindle orientation	Standard (Any angle is available within 360° ,Control unit: 0.088°)

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