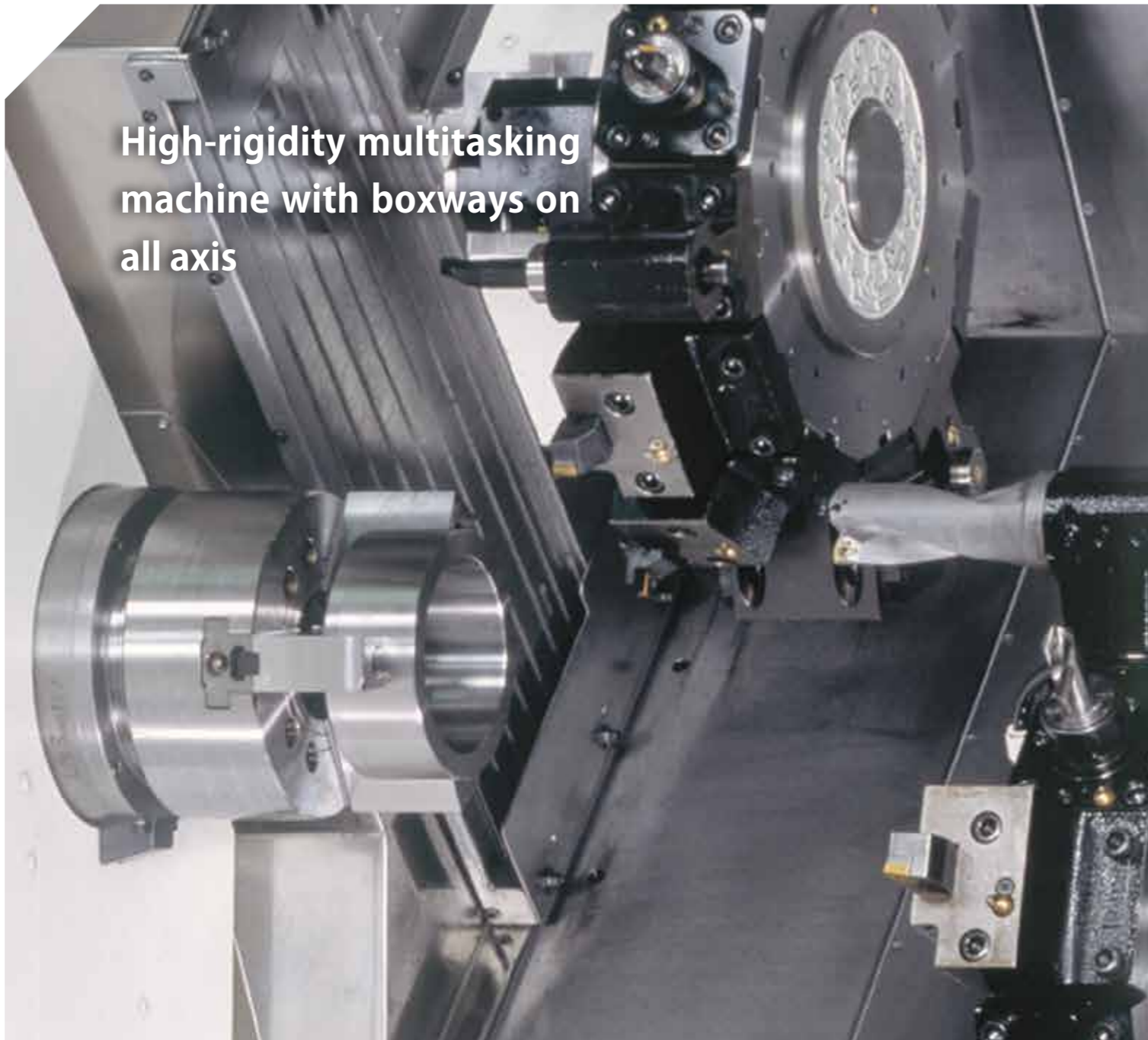


# WT-300

NAKAMURA-TOME  
PRECISION INDUSTRY CO.,LTD.

High-rigidity multitasking machine with boxways on all axis



All axis with boxways

WT-300 is designed to be stable by lowering the center of gravity. This machine is equipped with all boxways, traditionally handscraped. The hardening and grinding process are applied to all slide-ways.



Upper-L/Lower-R Turning operation



Upper-L/Lower-R Boring operation



L-Simultaneous Upper and Lower Milling operation



Upper-R/Lower-L Machining operation



Transfer



R-Simultaneous Upper and Lower Milling operation

WT-300 has two-opposed spindles, milling on both turrets, and a Y-axis on the upper side as an option, ensuring that flexible machining is performed simultaneously on either spindle with the upper and lower turrets. A wide range of parts can be machined faster from bar, shaft, or flange work. In addition, all axis with boxways, which enable highly rigid and stable machining.

A full range of software is also available, such as programming support, tool-management, and setup support. This machine supports customers' production in terms of both hardware and software.

## Mechanical structure for stable accuracy



### R-spindle

#### Bar capacity φ 65

Standard	option
Spindle motor 15/11kW 4,500min <sup>-1</sup>	Spindle motor 18.5/15kW 4,500min <sup>-1</sup>

#### Bar capacity φ 102

Option	Option
Spindle motor 15/11kW 2,500min <sup>-1</sup>	Spindle motor 18.5/15kW 2,500min <sup>-1</sup>

### L-spindle

#### Bar capacity φ 65

Standard	Option	Option
Spindle motor 15/11kW 4,500min <sup>-1</sup>	Spindle motor 18.5/15kW 4,500min <sup>-1</sup>	Spindle motor 22/18.5kW 4,500min <sup>-1</sup>

#### Bar capacity φ 80

Option	Option	Option
Spindle motor 15/11kW 3,500min <sup>-1</sup>	Spindle motor 18.5/15kW 3,500min <sup>-1</sup>	Spindle motor 22/18.5kW 3,500min <sup>-1</sup>

#### Bar capacity φ 71

Option	Option	Option
Spindle motor 15/11kW 4,000min <sup>-1</sup>	Spindle motor 18.5/15kW 4,000min <sup>-1</sup>	Spindle motor 22/18.5kW 4,000min <sup>-1</sup>

#### Bar capacity φ 102

Option	Option	Option
Spindle motor 15/11kW 2,500min <sup>-1</sup>	Spindle motor 18.5/15kW 2,500min <sup>-1</sup>	Spindle motor 22/18.5kW 2,500min <sup>-1</sup>

### Upper turret

Standard	
Type of turret head	Dodecagonal
Number of tool stations	12
Number of indexing positions	24

Option	
Milling motor	5.5/3.7kW 3,600min <sup>-1</sup>

Option φ 65, φ 71 (op.)	
Y-axis slide travel	± 60mm

Option φ 80 (op.), φ 102 (op.)	
Y-axis slide travel	± 40mm

### Lower turret

Standard	
Type of turret head	Dodecagonal
Number of tool stations	12
Number of indexing positions	24

Option	
Milling motor	5.5/3.7kW 3,600min <sup>-1</sup>



Ease of use and reliability for an outstanding operator support  
Powered by AI as standard features

- NT Thermo Navigator AI
- 3D Smart Pro AI

### NT SmartX



### Parts catcher type G

		φ 65	φ 71	φ 80	φ 102	
Workpiece size	Method	Swing/Hand				
	Diameter	mm	φ 65	φ 71	φ 80	φ 102
	Length	mm	150			
	Weight	kg	3.0		5.0	
	Cycle time (sec.)	6.0				
	Ejecting method	Belt conveyor & Chute				

# WT-300

## Machine Specification

Capacity		φ65	φ71(op.)	φ80(op.)	φ102(op.)
Max. turning diameter	Upper turret	270mm	270mm	199mm	199mm
	Lower turret			270mm (L: φ102/R: φ65) 229mm (L: φ102/R: φ102)	
Max. turning length		780mm			
Bar capacity	L	φ65mm	φ71mm	φ80mm	φ102mm
	R		-	-	
Chuck size		8"	12"	12"	

### Axis travel/Rapid feed

X1-axis slide travel	195mm	188mm	152.5mm	152.5mm
X2-axis slide travel	195mm	195mm	195mm	195mm (L: φ102/R: φ65) 135mm (L: φ102/R: φ102)
Z1-axis slide travel	780mm			
Z2-axis slide travel	780mm			
Y-axis slide travel (op.)	±60mm		±40mm	
B2-axis slide travel	850mm			
X1/X2 axis rapid feed rate	16m/min			
Z1/Z2 axis rapid feed rate	27m/min			18m/min (R: φ102)
Y-axis rapid feed rate (op.)	6m/min			
B2-axis rapid feed rate	27m/min			18m/min (R: φ102)

### L-spindle

Spindle speed	4,500min <sup>-1</sup>	4,000min <sup>-1</sup>	3,500min <sup>-1</sup>	2,500min <sup>-1</sup>
Spindle speed range	Stepless	Stepless	Stepless	Stepless
Spindle nose	A2-6	A1-8	A1-8	A2-8
Hole through spindle	80mm	85mm	90mm	120mm
I. D. of front bearing	110mm	120mm	120mm	160mm
Hole through draw tube	66mm	72mm	81mm	103mm

### R-spindle

Spindle speed	4,500min <sup>-1</sup>	-	-	2,500min <sup>-1</sup>
Spindle speed range	Stepless	-	-	Stepless
Spindle nose	A2-6	-	-	A2-8
Hole through spindle	80mm	-	-	120mm
I. D. of front bearing	110mm	-	-	160mm
Hole through draw tube	66mm	-	-	103mm

C-axis (op.)	φ65	φ71(op.)	φ80(op.)	φ102(op.)
Least input increment	0.001°			
Least command increment	0.001°			
Rapid speed	600min <sup>-1</sup>			
Cutting feed rate	1-4,800° /min			
C-axis clamp	Disk clamp			
C-axis connecting time	1.5sec.			

### Upper and Lower turrets

Type of turret head	Dodecagonal drum turret
Number of tool stations	12
Number of indexing positions	24
Tool size (square shank)	□20mm/ □25mm
Tool size (round shank)	φ25mm/ φ32mm

### Milling (op.)

Rotary system	Individual rotation		
Spindle speed	3,600min <sup>-1</sup>		
Spindle speed range	Stepless		
Number of milling stations	12		
Tool shank	Straight	φ2mm- φ20mm	
	Cross	φ2mm- φ20mm	

### Drive motor power

Left spindle	15/11kW [Wide range], 18.5/15kW [Wide range] (op.), 22/18.5kW [Wide range] (op.)
Right spindle	15/11kW [Wide range], 18.5/15kW [Wide range] (op.)
Milling spindle (op.)	5.5/3.7kW

### General

Floor space	Height	2,276mm		
	Width	4,230mm	4,275mm	4,345mm
	Length	2,487mm		
Machine weight (Incl. control)	14,000kg			



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