

WT-100

NAKAMURA-TOME
PRECISION INDUSTRY CO.,LTD.

Compact, yet
Capable to Cut

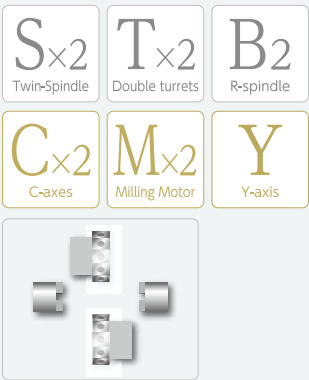
Innovative
Technology

~ Creating new values ~

WT-100

This is a space-saving multitasking machine equipped with Upper/Lower turrets and two opposed spindles. The smallest machine in its class packs all the features of a multitasking machine, achieving both space-saving and machining capacity. Automated systems with bar feeders and gantry loaders are also supported. Simultaneous L/R machining and simultaneous top and bottom machining to reduce cycle time and support your machining.

- Y-axis on Upper turret as standard
Y-axis slide travel $\pm 31\text{mm}$
- Milling motor 7.1/2.2kW
Milling spindle speed $6,000\text{min}^{-1}$
- Capacity for up to 48 tools.
- Cycle times are faster thanks to simultaneous machining with the L/R spindles and upper/lower turrets.
- The spindle centers are closer thanks to the 60 degrees slanted bed.
- NT SmartX as standard equipment with a large variety of software.





Cycle times are faster thanks to simultaneous machining with the L/R spindles and upper/lower turrets.

The WT-100 has two-opposed spindles, milling on both turrets and a Y-axis on the upper side, ensuring that flexible machining can be performed simultaneously on either spindle with the upper and lower turrets. Those features enable providing the most suitable machining to several parts and shortening cycle time easily. Despite having 2 spindles, 2 turrets, and a Y-axis, the WT-100 has a very compact floor space of 3.73m² (2,300 × 1,620mm). 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.

Achieve High Productivity from Small Space

This very compact machine features 11/7.5KW motors on the left and right spindles with max. 75Nm torque. It is capable of reducing two to three workpieces of Dia. 48mm x Length 110mm into cutting chips in one minute.

Part size	φ48mm × 110mm
Metal volume	199ml/Part
Material	S45C
Cutting depth	4.0mm
Feed rate	0.6mm/rev
Cutting Speed	25m/min



Upper turret on L-spindle / Lower turret on R-spindle



Transfer



Upper turret on R-spindle / Lower turret on L-spindle



L-simultaneous Upper and Lower Machining



R-simultaneous Upper and Lower Machining



Milling

All the Features of a Multitasking Machine
in This Small Space

■ L-spindle

Bar capacity	$\phi 42\text{mm}$
L-spindle motor	11/7.5kW 6,000min ⁻¹

■ Upper Turret

Type of turret head	Dodecagonal
Number of milling stations / Number of indexing positions	12/24
Milling motor	7.1/2.2kW 6,000min ⁻¹
Y-axis slide travel	±31mm

Y-axis and Milling are
standard on the Upper
turret

Slant Bed

Its 60-degree slant
achieves a closer
distance to the spindle
center and produces a
space-saving machine.

Lower turret

■ Lower Turret

Type of turret head	Dodecagonal
Number of milling stations / Number of indexing positions	12/24
Milling motor	7.1/2.2kW 6,000min ⁻¹

■ R-spindle

Bar capacity	$\phi 42\text{mm}$
R-spindle motor	11/7.5kW 6,000min ⁻¹

Reliable Covers

All moving units including the
upper slide, lower slide, and
R-spindle, come equipped with
top-class stainless-steel covers
and protective wipers, preventing
cutting chip accumulation, and
providing cover against cutting
chips and coolant. The entire
machining area is leakage-proof
thanks to its completely protective
covering.



GR-203 High-Speed(op.)

The whole process from loading a blank
material to unloading a finished part can be
automated.
It improves productivity.
* The image is of NTY3-100.



Machine Dimensions(Machine only)

*The sizes of a chip conveyor and a
parts catcher are not included.

Standard

W2,630mm × D1,923mm × H1,940mm

■ Capacity

Max. turning diameter	190mm
Standard turning diameter	170mm
Distance between spindles	max.735mm / min.210mm
Max. turning length	503mm
Bar capacity	42mm
Chuck size	6"

■ Axis travel / Rapid feed

X1/X2 axis slide travel	135mm / 135mm
Z1/Z2 axis slide travel	503mm / 503mm
Y1-axis slide travel	±31mm
B2-axis slide travel	525mm
X1/X2 axis rapid feed rate	16m/min
Z1/Z2 axis rapid feed rate	40m/min
Y1-axis rapid feed rate	6m/min
B2-axis rapid feed rate	40m/min

■ L/R-spindle

Spindle speed	6,000min ⁻¹
Spindle speed range	Stepless
Spindle nose	A2-5
Hole through spindle	56mm
I.D. of front bearing	80mm
Hole through draw tube	43mm

■ C-axis

Least input increment	0.001°
Least command increment	0.001°
Rapid speed	600min ⁻¹
Cutting feed rate	1 - 4800° /min
C-axis clamp	Disk clamp
C-axis connecting time	1.5sec.

■ Upper/Lower turret

Type of turret head	Dodecagonal drum turret
Number of tool stations	12 (Max. 24)
Number of indexing positions	24
Tool size (square shank)	□20mm / □16mm(24st.)
Tool size (round shank)	φ25mm

■ Milling

Rotary system	Individual rotation	
Milling spindle speed	6,000min ⁻¹	
Spindle speed range	Stepless	
Number of milling stations	12×2	
Holder type and Tool size	Straight holder	φ1mm ~ φ13mm
	Cross holder	φ1mm ~ φ13mm

■ Drive motor

L-spindle	11/7.5kW
R-spindle	11/7.5kW
Milling	7.1/2.2kW

■ General

Height	1,940mm
Floor space (W × D)	2,630mm × 1,923mm
Machine weight (incl. control)	5,700kg

■ Power supply

Power supply	32.7kVA
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● Safety quality specifications

Various interlocks, such safety fences, auto extinguisher devices, and other safety related equipment may be required. These have to be selected during the configuration of the machine.

① Safety devices include electromagnetic door lock, chuck interlock, hydraulic pressure switch, air pressure switch, short circuit breaker and quill interlock. (Door interlock and chuck interlock are standard equipment.)

② In case of automation, various safety fences may be required, such as work stocker safety fences, robot safety fences, ...etc.

During the configuration of machine specifications, please discuss these requirements with the Nakamura-Tome machine sales representative.

● Precautions on the use of cutting fluids and lubricating oils

◦ Some types of cutting fluids (coolant) are harmful to machine components, causing damages such as peeling of paint, cracking of resin, expanding of rubber, corrosion and rust build up on aluminum and copper. To avoid causing damage to the machine, never use synthetic coolants, or any coolants containing chlorine. In addition, never use coolants and lubricating oils which contain organic solvents such as butane, pentane, hexane and octane.

◦ Machine warranty terms are void for any claims or damage arising from the use of inappropriate cutting fluids or lubricating oils.



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