

WY-150V

NAKAMURA-TOME
PRECISION INDUSTRY CO.,LTD.

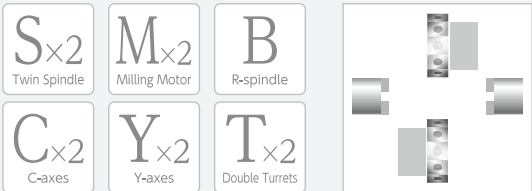
Faster than
the fastest

Innovative
Technology

~Creating new values~

WY-150V

The third of the "V series" multitasking machines, with speed as the design concept behind it. Y-axis on the upper/lower turret and opposed twin spindles are standard equipment. Enhanced processing capabilities and simultaneous left/right and upper/lower machining reinforce speedy production. Furthermore, we have made software improvements to reduce idle time. It strives to be faster than the fastest that customers have ever experienced.



30% Reduction in Cycle Time

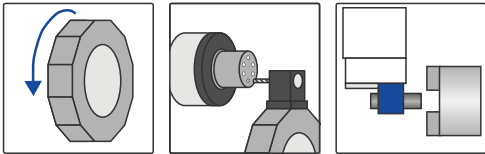
* Reduction time varies depending on the shape of the workpiece and cutting conditions.

Starting with the implementation of "ChronoCut" to reduce processing idle time, numerous new technologies have been incorporated to enhance production speed.

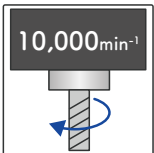


ChronoCut

A unique function by Nakamura-Tome designed to reduce idle time. This new software minimizes idle time during manufacturing without compromising accuracy, even without any changes to the cutting conditions.

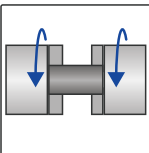


- High-speed indexing
- High-speed spindle synchronization
- Execution of multiple M-codes within the same block
- High-speed rigid tapping
- Reduction of PC-G unloading time, etc.



UP Machining conditions

By improving the machining capabilities of the milling speed, torque, and more, the machine achieves high performance under demanding conditions.



UP Acceleration / Deceleration

The acceleration and deceleration during starting and stopping have been improved, enabling quick attainment to the maximum speed.

Cycle Times are Faster Thanks to Simultaneous Machining with the L/R Spindles and Upper/Lower Turrets.

The combination of bar capacity and motor is available from following patterns.

Standard		Option	
L-spindle	R-spindle	L-spindle	R-spindle
Bar capacity $\phi 51\text{mm}$ (A2-5)	Bar capacity $\phi 51\text{mm}$ (A2-5)	Bar capacity $\phi 65\text{mm}$ (A2-6)	Bar capacity $\phi 51\text{mm}$ (A2-5)
Spindle speed $6,000\text{min}^{-1}$	Spindle speed $6,000\text{min}^{-1}$	Spindle speed $5,000\text{min}^{-1}$	Spindle speed $6,000\text{min}^{-1}$
Spindle motor 15/11kW	Spindle motor 15/11kW	Spindle motor 18.5/11kW	Spindle motor 15/11kW

Option		Option	
L-spindle	R-spindle	L-spindle	R-spindle
Bar capacity $\phi 65\text{mm}$ (A2-6)	Bar capacity $\phi 65\text{mm}$ (A2-6)	Bar capacity $\phi 80\text{mm}$ (A2-8)	Bar capacity $\phi 65\text{mm}$ (A2-6)
Spindle speed $5,000\text{min}^{-1}$	Spindle speed $5,000\text{min}^{-1}$	Spindle speed $4,000\text{min}^{-1}$	Spindle speed $5,000\text{min}^{-1}$
Spindle motor 18.5/11kW	Spindle motor 18.5/11kW	Spindle motor 28/15kW	Spindle motor 18.5/11kW



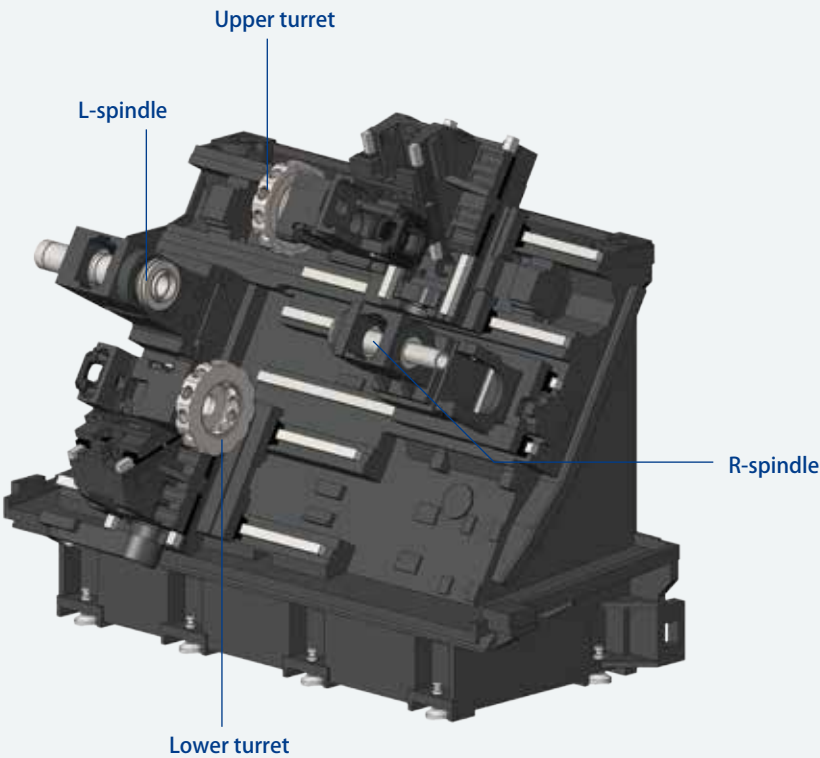
Y-axis and Milling are standard.



Upper/Lower turret

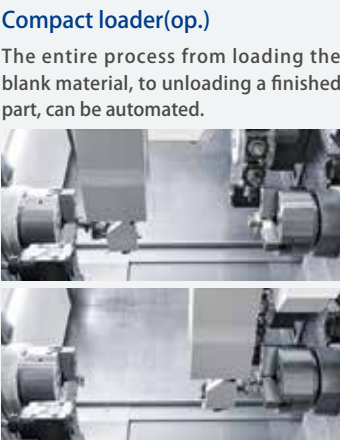
Y-axis slide travel	Upper : $\pm 45\text{mm}$ Lower : $\pm 35\text{mm}$
Number of milling stations / Number of indexing positions	12 / 24

Standard	
Milling speed	$10,000\text{min}^{-1}$
Milling motor	7.5/3.7kW



GR-203 High-Speed(op.)
The entire process from loading the blank material, to unloading a finished part, can be automated.
* The image is of NTY³-100.

Large window for easy viewing of the machining area
The door windows are equipped with wipers that keep the windows clean.



■ Capacity		φ51	φ65(op.)	φ80(op.)
Max. turning diameter		225mm		
Distance between spindles		max. 970mm / min. 200mm		
Max. turning length		685mm		
Bar capacity	L-spindle	φ51mm	φ65mm	φ80mm
	R-spindle	φ51mm	φ65mm	-
Chuck size		6", 8"		8"

■ Axis travel

X1-axis slide travel	160.5mm	
X2-axis slide travel	160.5mm	150.5mm
Z1 / Z2 axis slide travel	685mm	
Y1-axis slide travel	±45mm	
Y2-axis slide travel	±35mm	
B2-axis slide travel	770mm	

■ Rapid feed

X-axis rapid feed rate	20m/min
Z-axis rapid feed rate	40m/min
Y-axis rapid feed rate	8m/min
B2-axis rapid feed rate	40m/min

■ L-spindle

Spindle speed	6,000min ⁻¹	5,000min ⁻¹	4,000min ⁻¹
Spindle speed range	Stepless	Stepless	Stepless
Spindle nose	A2-5	A2-6	A2-8
Hole through spindle	63mm	80mm	90mm
I.D. of front bearing	90mm	110mm	120mm
Hole through draw tube	52mm	66mm	81mm

■ R-spindle

Spindle speed	6,000min ⁻¹	5,000min ⁻¹	-
Spindle speed range	Stepless	Stepless	-
Spindle nose	A2-5	A2-6	-
Hole through spindle	63mm	80mm	-
I.D. of front bearing	90mm	110mm	-
Hole through draw tube	52mm	66mm	-

■ C-axis

Least input increment	0.001°
Least command increment	0.001°
Rapid speed	600min ⁻¹
Cutting feed rate	1-4,800° /min
C-axis clamp	Disk clamp
C-axis connecting time	1.5s

■ Upper/Lower turret		φ51	φ65(op.)	φ80(op.)
Type of turret head		Dodecagonal drum turret		
Number of indexing positions		24		
Tool size (square shank)		□25mm		
Tool size (round shank)		φ32mm		

■ Milling

Rotary system	Individual rotation		
Milling spindle speed	10,000min ⁻¹		
Spindle speed range	Stepless		
Number of milling stations	12		
Holder type and Tool size	Straight holder φ1mm ~ φ20mm		
	Cross holder φ1mm ~ φ20mm		

■ Drive motor

L-spindle	15/11kW	18.5/11kW	28/15kW
R-spindle	15/11kW	18.5/11kW	-
Milling	7.5/3.7kW (40.0N·m)		

■ General

Height		2,010mm
Max. height of movable part		2,280mm
Floor space (W × D)	L-spindle φ51, φ65	4,245.2mm × 2,389.7mm
	L-spindle φ80	4,331.2mm × 2,389.7mm
Machine weight (incl. control)		11,000kg

■ Power supply

Power supply	47.8kVA (L-spindle 15/11kW, R-spindle 15/11kW)
	47.8kVA (L-spindle 18.5/11kW, R-spindle 15/11kW)
	47.8kVA (L-spindle 18.5/11kW, R-spindle 18.5/11kW)
	51.3kVA (L-spindle 28/15kW, R-spindle 18.5/11kW)

● Safety quality specifications

Various interlocks, such as 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 the 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, expansion 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.



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