

WY-100V

NAKAMURA-TOME
PRECISION INDUSTRY CO.,LTD.

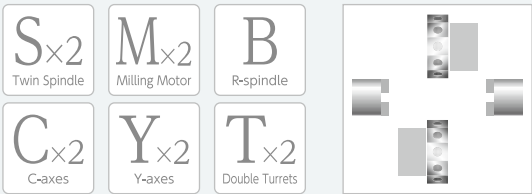
Faster than
the fastest

Innovative
Technology

~Creating new values~

WY-100V

The first 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

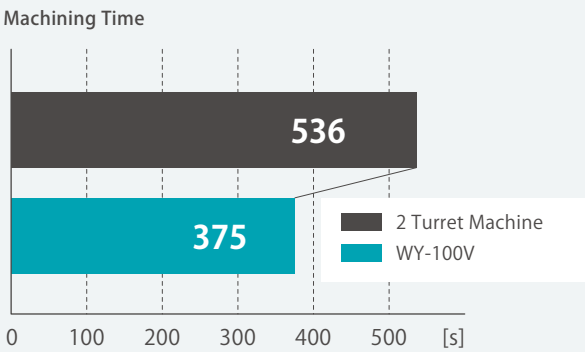
* Reduction time varies depending on the shape of the workpiece and cutting conditions.

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



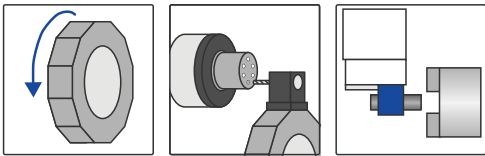
Hydraulic valve component (sample)

Material	S45C
Material Size	φ50mm×L96mm

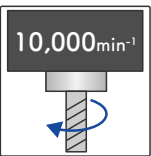


ChronoCut

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.

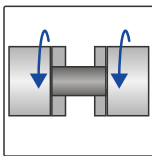


- High-speed indexing
- High-speed spindle synchronization
- Execution of multiple M-codes within the same block
- High-speed rigid tapping
- Reduction of PC-G unloading time, etc.



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.

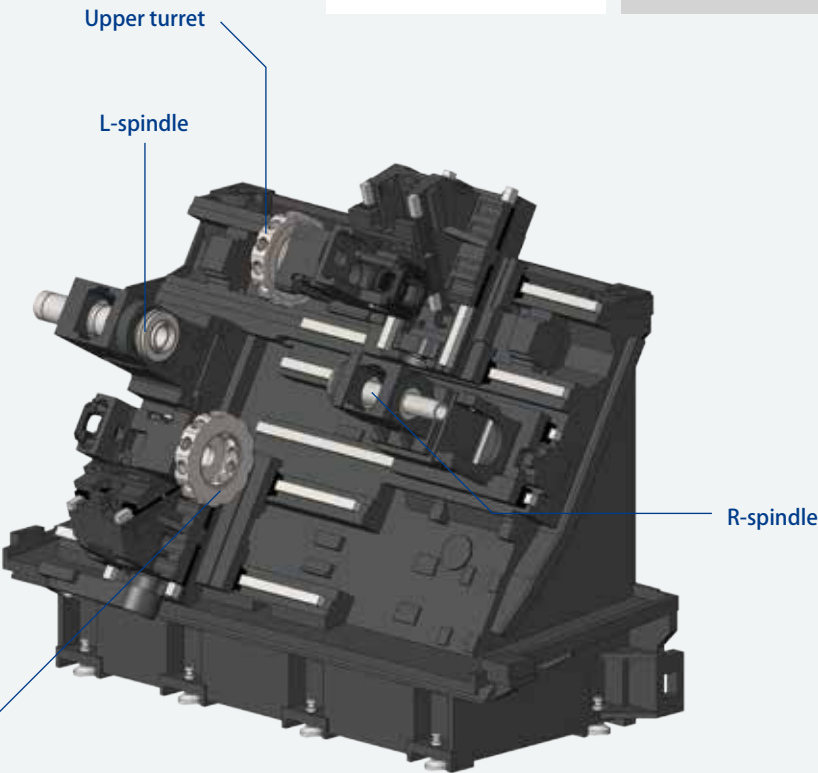
Cycle Times are Faster Thanks to Simultaneous Machining with the L/R Spindles and Upper/Lower Turrets.

L-spindle

Standard	
Bar capacity	φ42mm
Spindle speed	6,000min ⁻¹
Spindle motor	11/7.5kW
Option	
Bar capacity	φ51mm
Spindle speed	6,000min ⁻¹
Option	
Option	Option
Spindle motor	Spindle motor
11/7.5kW	15/11kW
Option	
Bar capacity	φ65mm
Spindle speed	5,000min ⁻¹
Option	
Option	Option
Spindle motor	Spindle motor
11/7.5kW	15/11kW

Upper turret

Standard		Option	
Milling speed	6,000min ⁻¹	Milling speed	10,000min ⁻¹
Milling motor	7.1/2.2kW	Milling motor	7.5/2.2kW
Dodecagonal drum turret		15-station turret	
Y-axis slide travel	±42mm	Y-axis slide travel	±31mm
Number of milling stations / Number of indexing positions	12 / 24	Number of milling stations / Number of indexing positions	15 / 15



Lower turret

Standard		Option	
Milling speed	6,000min ⁻¹	Milling speed	10,000min ⁻¹
Milling motor	7.1/2.2kW	Milling motor	7.5/2.2kW
Dodecagonal drum turret		15-station turret	
Y-axis slide travel	±32.5mm	Y-axis slide travel	±31mm
Number of milling stations / Number of indexing positions	12 / 24	Number of milling stations / Number of indexing positions	15 / 15

Y-axis and Milling are standard.



R-spindle

Standard		Option	
Bar capacity	φ42mm	Bar capacity	φ51mm
Spindle speed	6,000min ⁻¹	Spindle speed	6,000min ⁻¹
Spindle motor	11/7.5kW	Spindle motor	15/11kW
Option		Option	
Spindle motor	11/7.5kW	Spindle motor	15/11kW

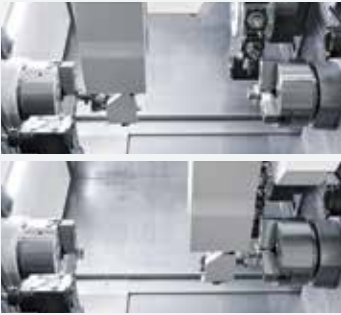
GR-203 High-Speed(op.)

The entire process from loading the blank material, to unloading a finished part, can be automated.
* The image is of NTY³-100.



Compact loader(op.)

The entire process from loading the blank material, to unloading a finished part, can be automated.



Parts catcher type G(op.)

Unloading a finished part can be automated.



Large window for easy viewing of the machining area

The door windows are equipped with wipers that keep the windows clean.



Chip conveyor(op.)

The discharge position can be selected from the following three options.
• Side
• Right side & Rear
• Left side & Rear

Tool setter(op.)



Bar remnant parts catcher(op.)

The bar remnants can be collected from the chute in the lower right corner of the machine.



NT SmartX 19 inch touch screen

With a movable operation panel, the angle can now be adjusted by the operator.



■ Capacity		φ42	φ51(op.)	φ65(op.)
Max. turning diameter	12st	200mm		
	15st(op.)	190mm		
Distance between spindles		max.820mm / min.200mm		
Max. turning length		588mm		
Bar capacity		φ42mm	φ51mm	φ65mm
Chuck size		6"		

■ Axis travel

X1/X2 axis slide travel	12st	150mm / 141mm		
	15st(op.)	145mm / 130mm		
Z1/Z2 axis slide travel	12st	588mm / 578mm		
	15st(op.)	588mm / 560mm		
Y1/Y2 axis slide travel	12st	±42mm / ±32.5mm		
	15st(op.)	±31mm / ±31mm		
B2-axis slide travel		620mm		

■ 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	6,000min ⁻¹	5,000min ⁻¹
Spindle speed range	Stepless	Stepless	Stepless
Spindle nose	A2-5	A2-5	A2-6
Hole through spindle	56mm	63mm	80mm
I.D. of front bearing	80mm	90mm	110mm
Hole through draw tube	43mm	52mm	66mm

■ R-spindle

Spindle speed	6,000min ⁻¹	6,000min ⁻¹	-
Spindle speed range	Stepless	Stepless	-
Spindle nose	A2-5	A2-5	-
Hole through spindle	56mm	63mm	-
I.D. of front bearing	80mm	90mm	-
Hole through draw tube	43mm	52mm	-

■ 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

*1 The maximum gripping diameter varies depending on the collet manufacturer.

■ Upper/Lower turret		φ42	φ51(op.)	φ65(op.)
Type of turret head	12st	Dodecagonal drum turret		
	15st(op.)	15-station turret		
Number of indexing positions	12st	24		
	15st(op.)	15		
Tool size (square shank)		□20mm		
Tool size (round shank)		φ25mm		

■ Milling

Rotary system		Individual rotation	
Milling spindle speed	12st	6,000min ⁻¹ / 10,000min ⁻¹ (op.)	
	15st(op.)	6,000min ⁻¹	
Spindle speed range		Stepless	
Number of milling stations	12st	12	
	15st(op.)	15	
Holder type and Tool size		Straight holder φ1mm - φ14mm *1	
		Crossholder φ1mm - φ14mm *1	

■ Drive motor

L-spindle	11/7.5kW	11/7.5kW / 15/11kW(op.)
R-spindle	11/7.5kW	11/7.5kW / 15/11kW(op.)
Milling	6,000min ⁻¹	7.1/2.2kW
	10,000min ⁻¹ (op.)	7.5/2.2kW

■ General

Height	2,255.3mm
Max. height of movable part	2,119.4mm
Floor space (W × D)	3,849.1mm × 2,245.7mm
Machine weight (incl. control)	9,500kg (Standard)

■ Power supply

Power supply	35.6kVA (L-spindle 11/7.5kW, R-spindle 11/7.5kW)
	38.7kVA (L-spindle 15/11kW, R-spindle 11/7.5kW)
	41.1kVA (L-spindle 15/11kW, R-spindle 15/11kW)

● 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.

* This catalog was published in August 2023. Specifications, illustrations and data given herein are subject to change without notice.

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