

# REDEFINING HIGH COST-EFFECTIVENESS

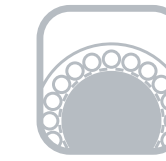
Digital structural analysis and design.  
Outstanding operational performance with user-friendly and convenient maintenance design.



NV-8

## SPECIFICATIONS

Item / Model		NV-8	NV-10
Travel	Max. Travel Range of X/N/Z	850 x 530 x 600 mm	1020 x 530 x 600 mm
	Spindle Nose to Table Surface	100~700 mm	
Work Table	Table Size	950 x 530 mm	1120 x 530 mm
	T-Slot (Wx No.XP)	18 x 5 x 100 mm	
	Max. Loading Capacity	600 kgs	800kgs
Spindle	Spindle Taper	BT-40	
	Spindle Speed	10000 rpm (12000 / 15000 rpm)	
	Spindle Motor	7.5/11kW	
	Spindle Driven Type	ARM TYPE	
Feed Rated	Rapid Traverse Speed of X/Y/Z	36/ 36 / 30 m/min.	
	Max. Cutting Feed Rate of X/Y/Z	1~12 m/min.	
Automatic Tool Changer	ATC Type	ARM TYPE	
	Tool Capacity	24T pcs	
	Max. Tool Diameter	Ø80 mm	
	Max. Tool Length	300 mm	
	Max. Tool Weight	7 kg	
	Max. Tool Diameter without Adjacent Tool	Ø150 mm	
	Tool Change Time (T to T)	2.0 sec	
Other	Machine Dimension (L x W)	2580 x 2200 mm	2780 x 2200 mm
	Machine Height	2850 mm	
	Net Weight	5200	5500
	Total Required Power	20 kVA	



SHINZAWA

Vertical Machining Center

NV Series +

NV-8 / NV-10

NV  
SERIES

- The series employs high precision roller type linear guideway.
- The motor mounts on 3 axes are precisely scraped before mounting and carefully pre-tensioned after assembly, enabling the transmission system to achieve lifetime stability.
- The X-axis is equipped with 6 blocks.
- Saddle and table are a box-type construction with an increased height on structural parts, featuring light weight and high rigidity.
- A perfect combination for speed and structural stability.
- Over sized base and column, reinforced column bottom and solid Z-axis structure assure vibration-free cutting.
- Rigid ball screw with double nuts is driven with powerful servo motor.
- Extra wide span between linear guideways effectively upgrades dynamic accuracy.



**ERGONOMICS**  
Thoughtful ergonomic design for easy use and maintenance



**HIGH-RIGIDITY**  
High-rigidity structural design for stability beyond imagination



**ECO-FRIENDLY**  
Environmentally friendly design energy-efficient

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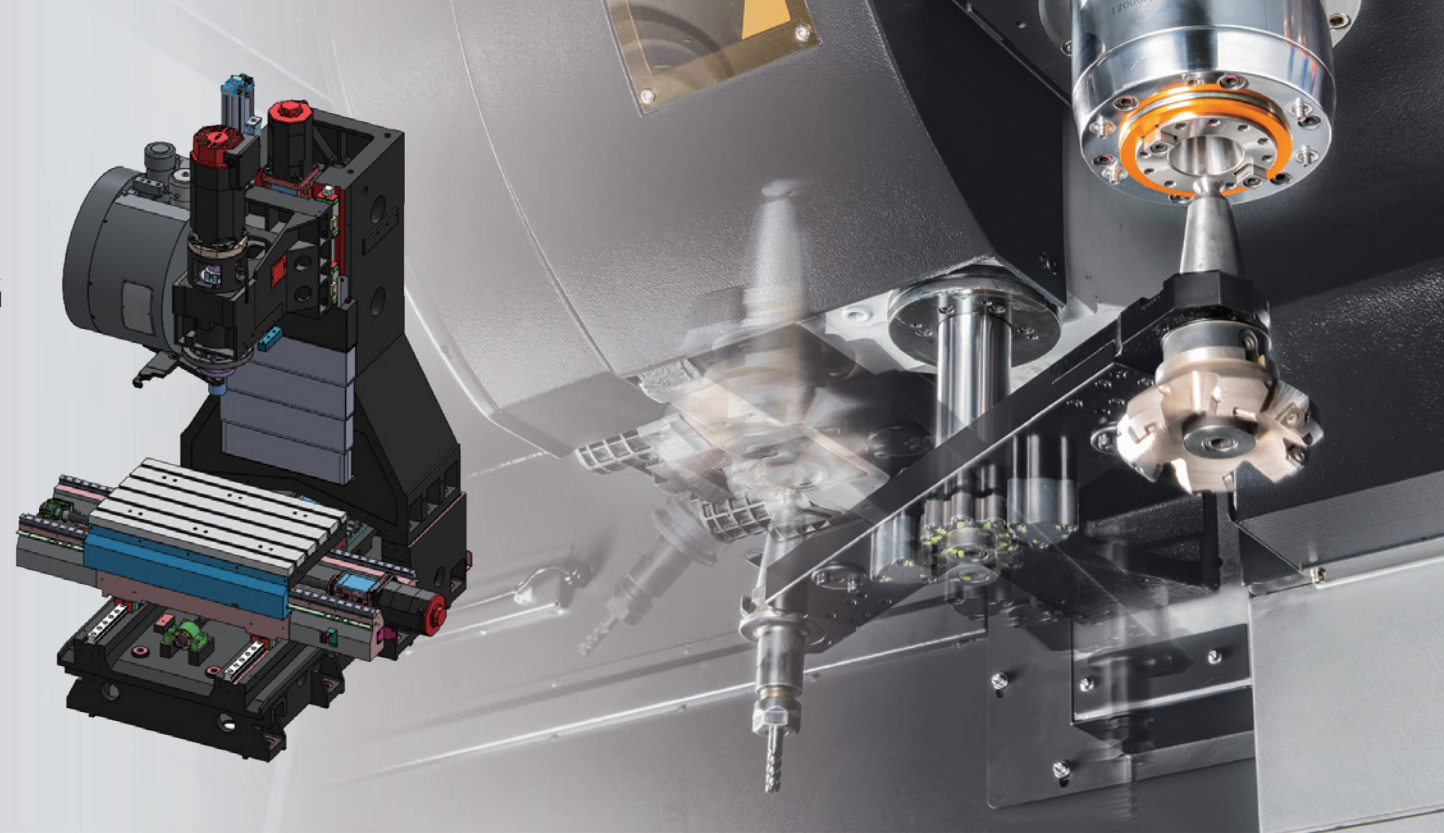


MORE INFO

**HIGH RIGIDITY STRUCTURAL DESIGN**  
**HIGH-EFFICIENCY PRECISION MACHINING**

Cost-Effective. High-Performance. Compact.

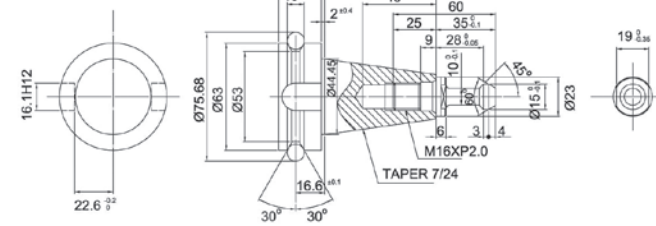
NV  
SERIES



**ARM TPYE ATC**

Fast, simple, dependable and durable ATC provides stable and dependable tool change motions. The automatic tool changer is subject to a running test of one million times to guarantee maximum dependability.

**BT-40 TOOL SHANK**



**STANDARD & OPTIONAL ACCESSORIES CHART**

Spindle	Spindle Speed: 10000 RPM ●	Measure System	Infrared Detector of Tool Breakage ○	Controller	Mitsubishi M80 ●
	Spindle Speed: 12000 RPM ○		Tool length Measurement ○		Fanuc 0i-MF ○
	Spindle Speed: 15000 RPM ○		Workpiece Measurement ○		Siemens 828D ○
	Spindle Speed: 20000 RPM (Built-In) ○		Charge Coupled Device Measurement ●		Heidenhain TNC 620 ○
	Spindle Oil Cooler ●	Oil Skimmer	Disk Type Oil Skimmer ○	Electrical Unit	Work Lamp ●
	Spindle Air Sealing ●		Oil Mist Collector ○		3-Color Alarm Lamp ●
Cooling System	The Flushing Nozzles Near the Spindle (Controlled by NC Program) ●	ATC System	Automatic Tool Changer (ATC) ●		M30 Function-for Cutting Off the Electricity Automatically (No need to wait & switch off the power when NC program is completed.) ●
	Spindle Coolant Ring (Arm Type Tool Magazine Only) ●		Spindle Taper : BBT-40 ○		Heat Exchanger ●
	Coolant Flush System ○		Armless/Geneva Drive Type Tool Magazine 20T ○		Air Conditioner for Electrical Cabinet ○
Chip Removal System	Screw Type Chip Conveyor ●	Transmission System	Arm Type Tool Magazine 24T ●	Other	Rigid Tapping ●
	Link/Chain Type Chip Conveyor ○		Coolant Through Ballscrew (CTB) ●		4th Axis Rotary Table (Rotary Axis) ○
	Chip Cart ●		Roller Type Linear Guideways on 3-Axes ●		CE Conformity ○
	Water Gun ●		Linear Scales on 3-Axes ○		Transformer ○
	Air Gun ●		Z-Axis Motor with Brake ●		
	Chip Flushing Device ○		Automatic Lubrication System ●		
	Fully Enclosed Splash Guard ●				

○ Standard ● Optional ● Need to Inquire

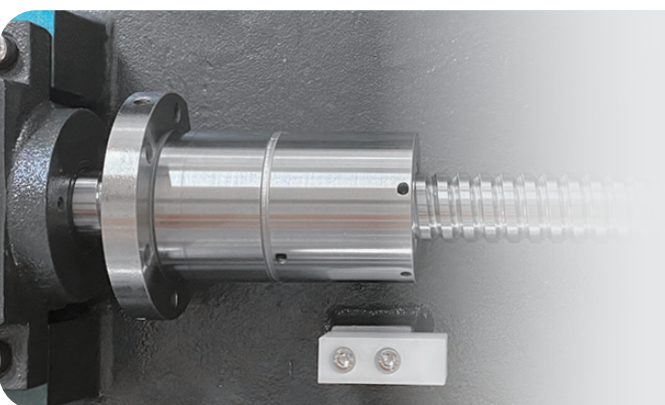
FEATURES



Belt-In  
Direct-Drive

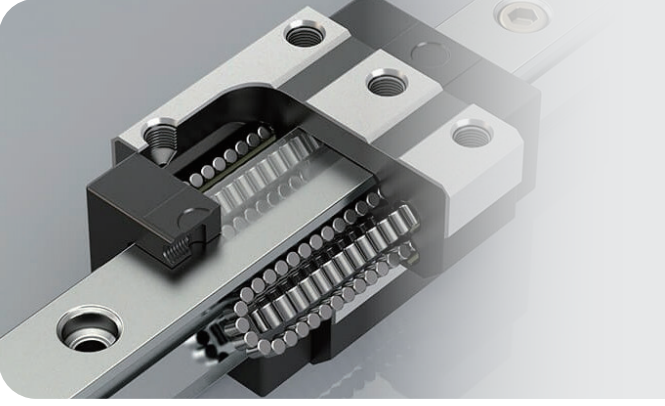
**01 High-Rigidity Structure with High-Performance Spindle**

The NV series provides a choice of various built-in and direct-drive spindles, as well as various motors. Each spindle is carefully machined, inspected and precision scraped prior to being attached to the spindle headstock. This assures superior accuracy, stability and speed.



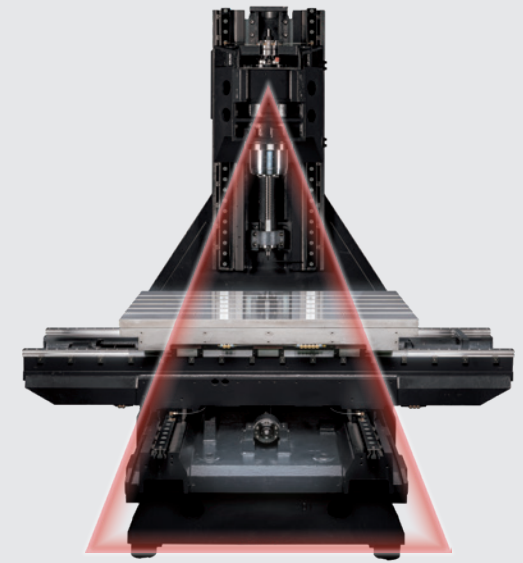
**02 Stable Machining Accuracy**

Both ends of ball screws are anchored on the machine by angular contact ball bearings, that features higher rigidity and stability. Pretensioned ball screws remove backlash and increase positioning accuracy.



**03 Cutting Performance Best Choice**

Extra wide, rugged, low gravity base combined with optimal ratio of spindle headstock results in excellent cutting capacity. The length-to-height ratio is (L/H) 1:1.



**04 High-Efficiency and High-Rigidity Structure Design**

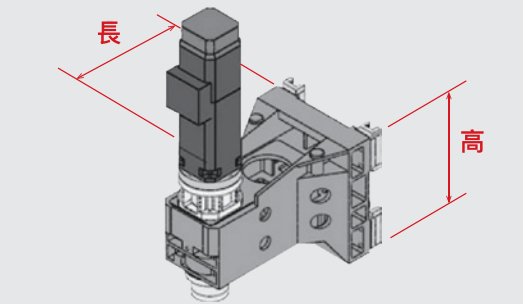
The Delta-shane structure desian of the column with 1075 mm wide column span. with a honeycomb-stvle internal rib structure inside the column. and the enlarged anale slone of both lateral structures ensures the machine rigidity, which makes the axial/radial force from spindle, and the weight of ATC can be conducted adequately.

COLUMN'S WIDTH 1075mm



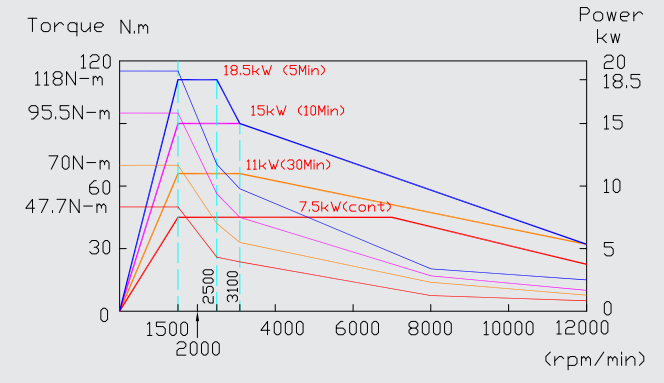

**05 Servo Drive**

Increases overall performance to achieve outstanding result of high speed high precision cutting.



**06 Linear Guide Equipment**

The series employs high precision roller type linear-guides.



**ERGONOMICS**

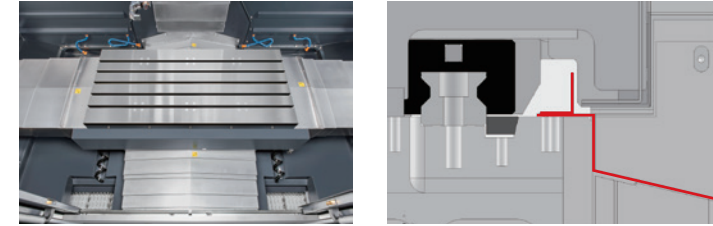
**ERGONOMIC DESIGN & COMPACT ALLOCATION**

The height of the control panel is ergonomically designed and the control panel could be swiveled from 0°-85°, which makes the operation more smoothly. Pneumatic/hydraulic units and their cables are allocated on side panels and covered into modular shape, which is not only an aesthetic design but more convenient for visual management and maintenance. The water tank is multi-filter designed which could filter out chips more effienctly and easy for washing as well.

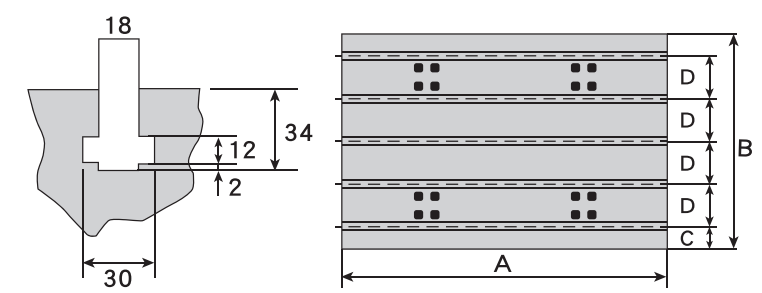


**TILTED GUARD DESIGN & LABYRINTH STRUCTURE**

The X/Y axes are specially designed with a labyrinth structure for dust and leak prevention. This design effectively prevents dust and return flow for coolant. The spacious working space combined with tilted guard design and powerful chip flushing system permits fast removal of chips to reduce thermal growth.



**TABLE DIMENSIONS**



Model	A	B	C	D	No. of T-Slot
NV-8	950	530	65	100	5
NV-10	1120	530	65	100	5