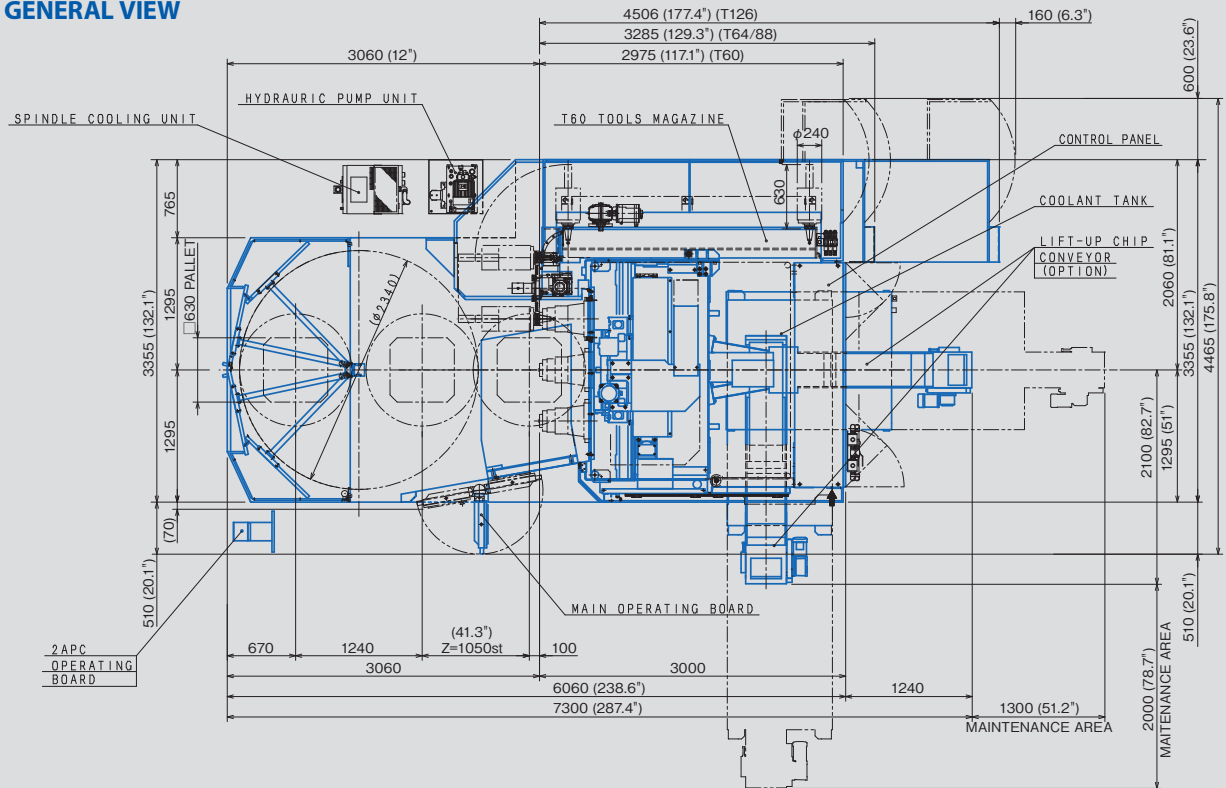


N7 GENERAL VIEW



MAIN SPECIFICATION

TRAVEL	X axis travel	1000 mm	39.4"
	Y axis travel	950 mm	37.4"
	Z axis travel	1050 mm	41.3"
TABLE	Table working surface	630 × 630 mm	24.8" × 24.8"
	maximum mass on pallet	1200 kg	2640 lbs
SPINDLE	Spindle speed	12000 min ⁻¹	12000 rpm
	Spindle drive motor	AC30 kW	AC40 HP
	Spindle max. torque	420 N·m	310 ft·lbs
	Spindle taper	BT50	CT50
FEEDRATE	Rapid traverse XYZ axis	60000 mm/min	2362 ipm
MAXIMUM WORKPIECE	Swing diameter inside machine	1100 mm	43.3"
	Height	1200 mm	47.2"



A World Leader of Horizontal Machining Centers



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NIIGATA

N7

BOX in BOX[®]
N7

HIGH PRODUCTION
HORIZONTAL MACHINING CENTER



NIIGATA MACHINE TECHNO CO., LTD.

Niigata, Japan

NIIGATA ORIGINATED THE "BOX in BOX" MACHINE DESIGN TO PROVIDE HIGH-SPEED, OPTIMUM CUTTING PERFORMANCE AND LONG-TERM STABILITY.

—THE INNOVATION CONTINUES— **N7 NEW MODEL**

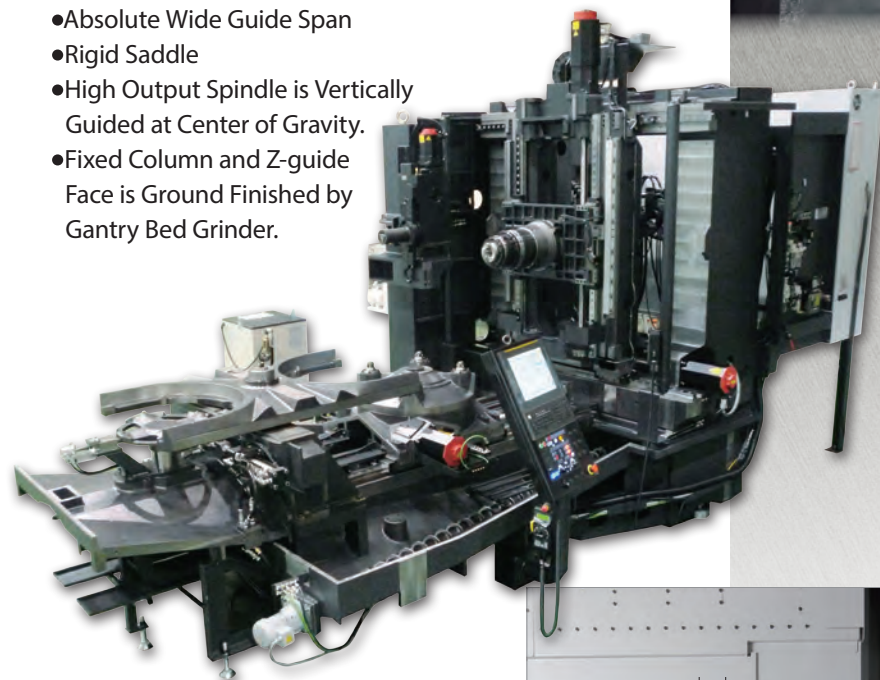
NIIGATA

N7

ULTRA RIGID CONSTRUCTION

BOX in BOX®

- Stationary column fixed directly to machine base yields increased cutting capability at top of Y-axis stroke.
- Lower rail mounted perpendicular to upper rail allows mass of spindle saddle to be supported fully thereby increasing rigidity and accuracy.
- Reduced mass of spindle headstock assembly contributes to lower maintenance and a longer service life.
- Mass of Moving Body (Spindle Saddle) is as Light as 1/3.
- Absolute Wide Guide Span
- Rigid Saddle
- High Output Spindle is Vertically Guided at Center of Gravity.
- Fixed Column and Z-guide Face is Ground Finished by Gantry Bed Grinder.

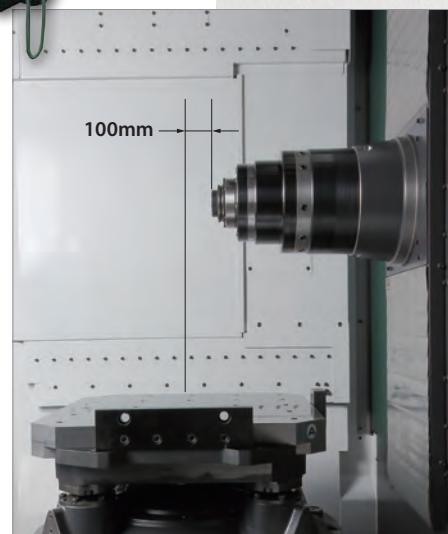


EXCELLENT SPINDLE ACCESSIBILITY

N7 is equipped with NEW slant design spindle snout. It makes better accessibility to workpiece & achieve more powerful cutting with shorter tools.

EXTENDED Z STROKE

Longer Z stroke 1050 mm and longer tool length 630 mm combination enables uni-direction boring to deep holes. It achieves better result in accuracy than bore-index-bore operation.



NEW ENGINEERED ATC SYSTEM

Cam driven tool changer with adaptive 3 speed ATC.

- Max tool weight 30 kg (66 lbs)
- Max tool length 630 mm (24.8")
- ATC time (Tool to Tool)
 - 1.9 s /10 kg (22 lbs)
 - 2.5 s /20 kg (44 lbs)
 - 3.1 s /30kg (66 lbs)
- Tool preparation time (by 1 pot) 7.7 s /60ATC

OPTIMUM ATC TOOL LENGTH CONTROL (PAT.P.)

ATC shutter open width control with Z axis movement according to tool length. It shorten ATC time for shorter cycle time.

EXAMPLE N7 MACHINING PERFORMANCE

•Milling



- Material: S48C
- Tool: $\phi 160 \times 8T$
- Cutting volume: $494 \text{ cm}^3/\text{min}$ ($30.1 \text{ in}^3/\text{min}$)
- Cutting depth: 6 mm (0.236")
- Cutting width: 120 mm (4.72")
- Feedrate: 686 mm/min (27 ipm)
- Spindle speed: 400 min^{-1} (400 rpm)
- Surface speed: 200 m/min (820 SFM)

•Endmilling



- Material: S48C
- Tool: $\phi 63 \times 4T$
- Cutting volume: $403 \text{ cm}^3/\text{min}$ ($24.6 \text{ in}^3/\text{min}$)
- Cutting depth: 15 mm (0.591")
- Cutting width: 40 mm (1.575")
- Feedrate: 672 mm/min (26.4 ipm)
- Spindle speed: 955 min^{-1} (955 rpm)
- Surface speed: 150 m/min (492 SFM)

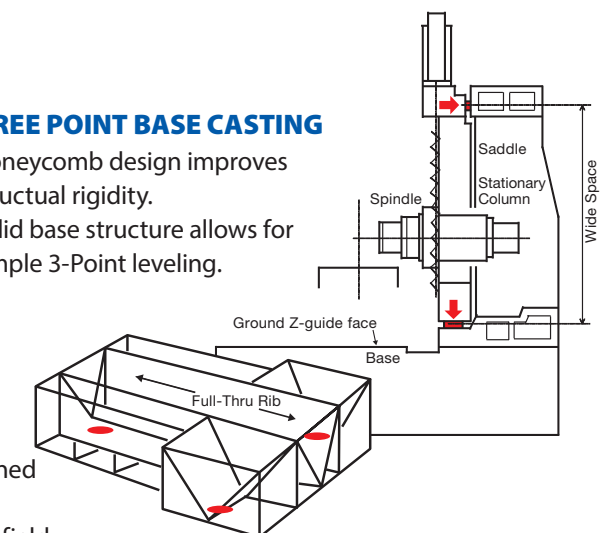
•Drilling



- Material: S48C
- Tool: $\phi 80 \text{ U.Drill}$
- Spindle load: 119 %
- Spindle speed: 916 min^{-1} (916 rpm)
- Feedrate: 101 mm/min (3.97 ipm)
- Surface speed: 230 m/min (754 SFM)

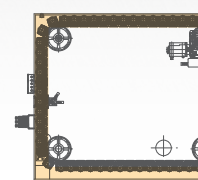
THREE POINT BASE CASTING

- Honeycomb design improves structural rigidity.
- Solid base structure allows for simple 3-Point leveling.

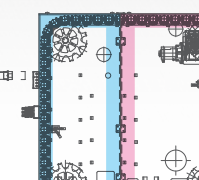


FIELD EXPANDABLE ATC MAGAZINE

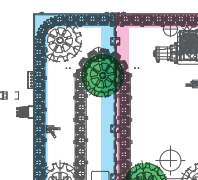
Niigata's expandable ATC magazine was designed to comply with requirements to increase tool storage capacity on existing equipment at the field.



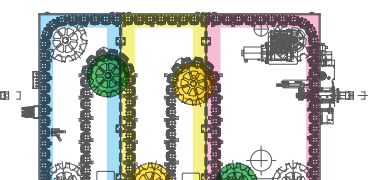
60 Tools Standard



64 Tools Expandable



88 Tools Expandable



126 Tools Expandable

NEW GENERATION OPERATION PANEL WITH 15" COLOR LCD

N7 is equipped with NEW generation operation panel with 15" color LCD as standard. The control panel is strategically located at the most convenient position and the operator can easily monitor the workpiece and machining operations, while utilizing the control functions.

