

SMART
MACHINE TOOL

NX Series

BOX in BOX®

NX 5000

NX 7000

NX 9000

**HIGH PRODUCTION
HORIZONTAL MACHINING CENTER**



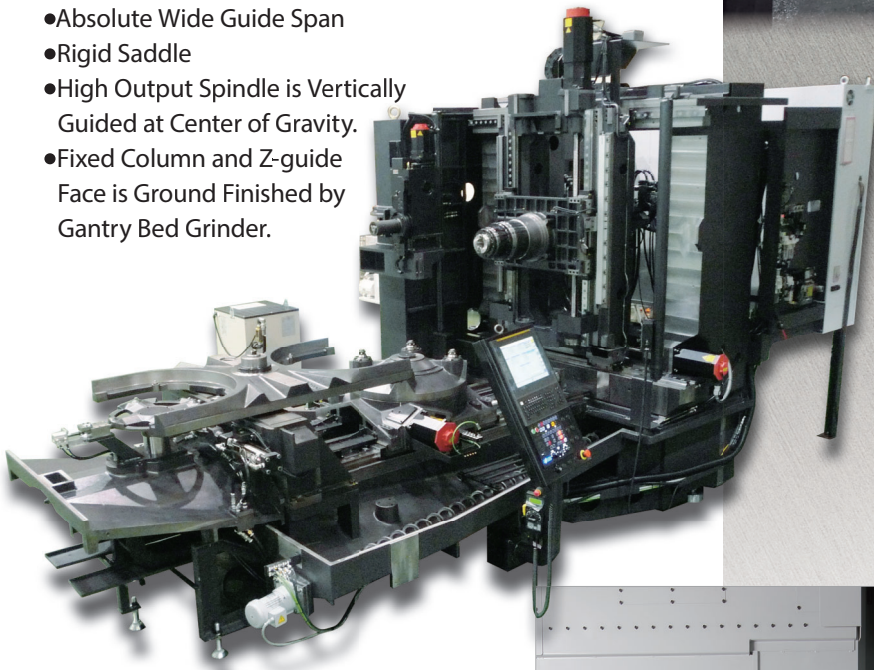
**MADE BY
NIIGATA JAPAN**

SMART MACHINE TOOL ORIGINATED THE "BOX in BOX[®]" MACHINE HIGH-SPEED, OPTIMUM CUTTING PERFORMANCE AND LONG LIFE —THE INNOVATION CONTINUES— NX Series

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.

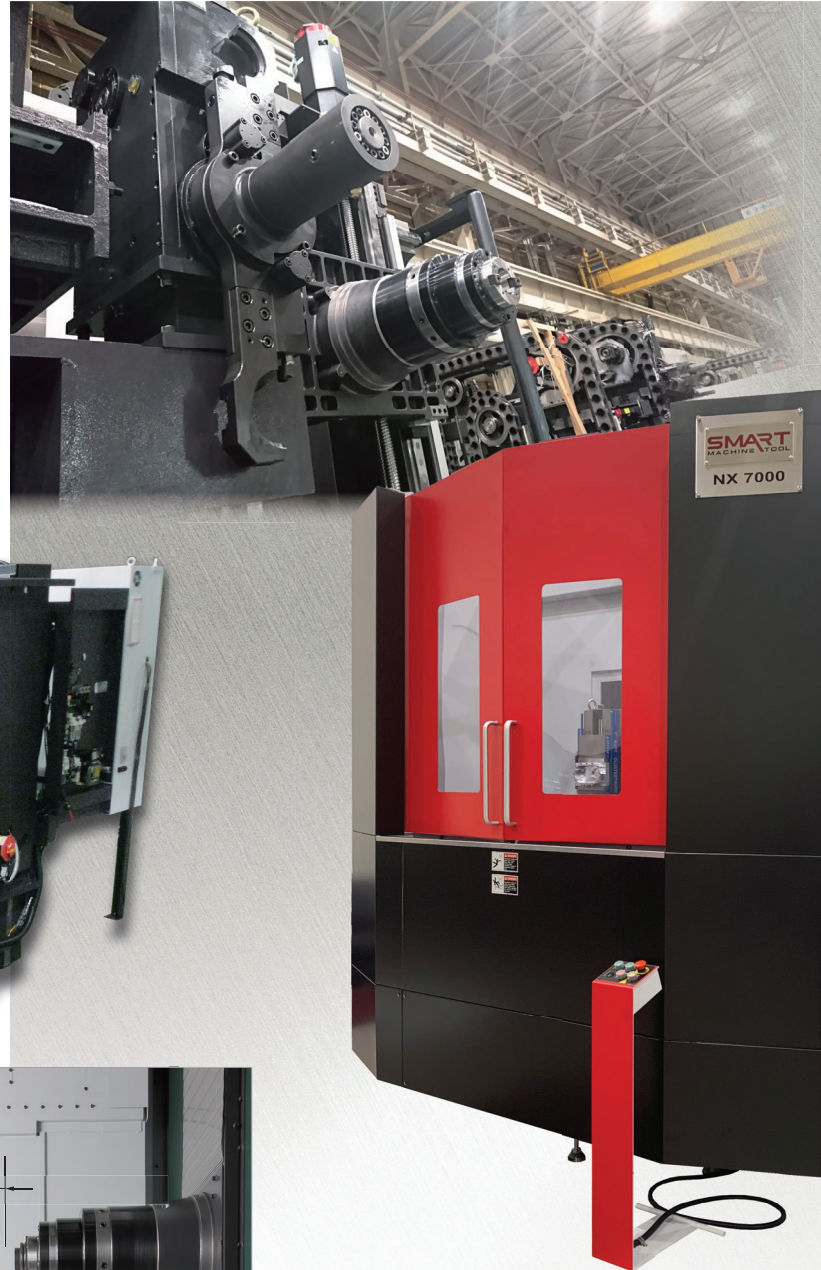
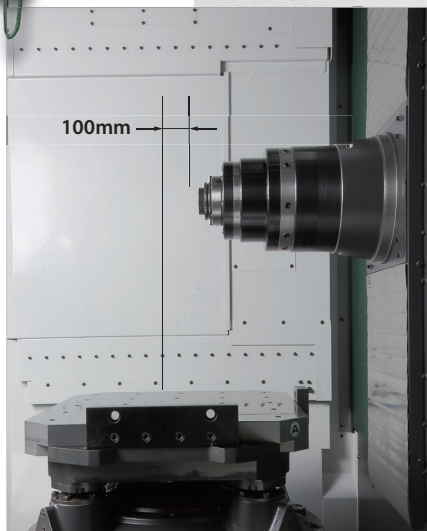


EXCELLENT SPINDLE ACCESSIBILITY

NX Series 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 GENERATION OPERATION PANEL WITH 15" COLOR LCD

NX Series 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.

MACHINE DESIGN TO PROVIDE LONG-TERM STABILITY.

NEW ENGINEERED ATC SYSTEM

Cam driven tool changer with adaptive 3 speed ATC.

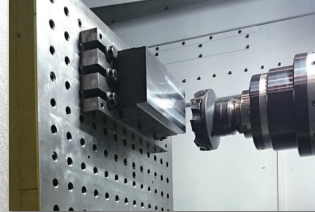
- Max tool weight 30 kg (66 lbs)
- Max tool length 630 mm (24.8")
- ATC time (Tool to Tool)
 - 1.9 s / 10 kg (22 lbs)
 - 2.5 s / 20 kg (44 lbs)
 - 3.1 s / 30kg (66 lbs)
- Tool preparation time (by 1 pot) 7.7 s / 60ATC

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.

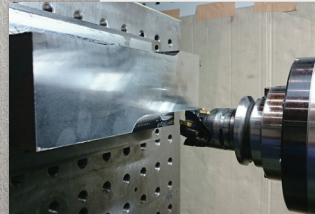
MACHINING PERFORMANCE

•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)

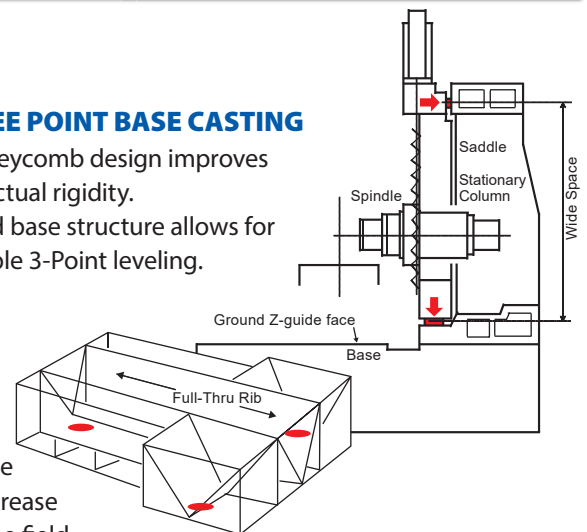
•Drilling



- 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)

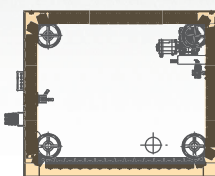
THREE POINT BASE CASTING

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

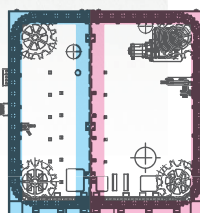


FIELD EXPANDABLE ATC MAGAZINE

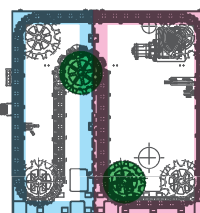
SMART Machine Tools's expandable ATC magazine was designed to comply with requirements to increase tool storage capacity on existing equipment at the field.



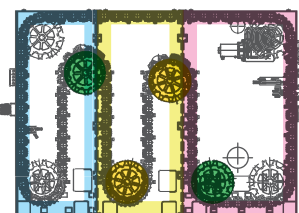
60 Tools *Standard*



64 Tools *Expandable*



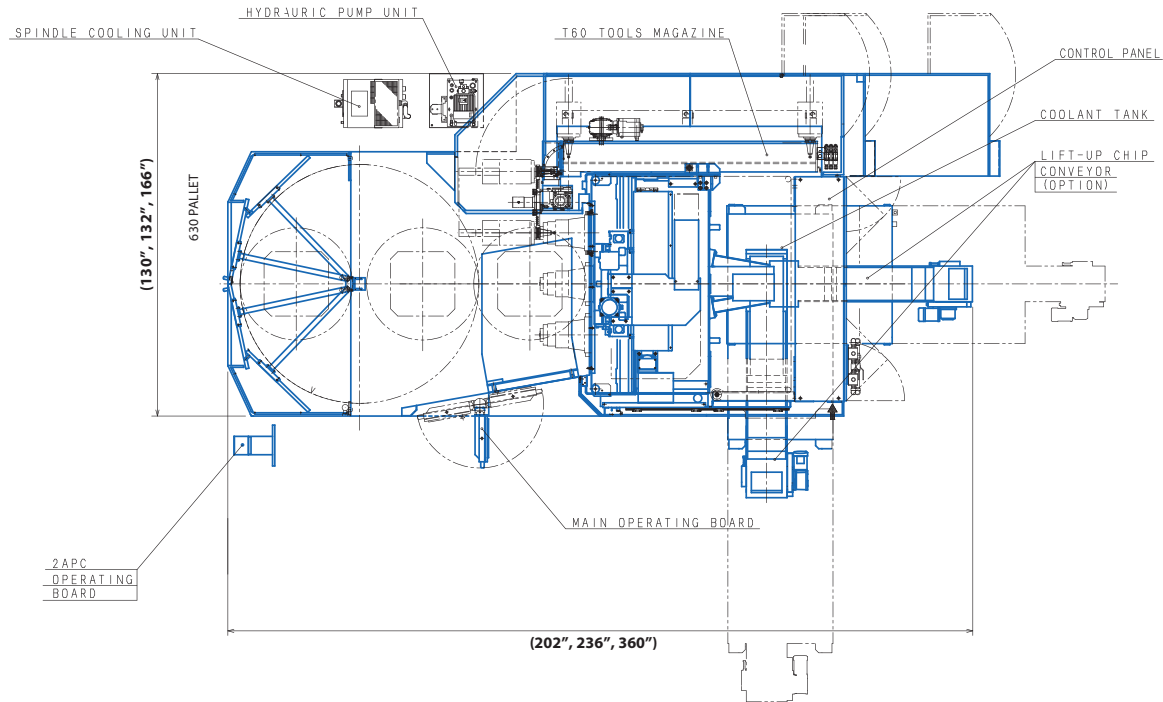
88 Tools *Expandable*



126 Tools *Expandable*



NX GENERAL VIEW



MAIN SPECIFICATION

		NX5000	NX7000	NX9000
TRAVEL	X axis travel	31.5"	39.4"	59.1"
	Y axis travel	29.5"	37.4"	51.2"
TABLE	Z axis travel	32.7"	41.3"	45.3"
	Table working surface	19.7" × 19.7"	24.8" × 24.8"	31.5" × 31.5" (opt 39)
SPINDLE	Maximum mass on pallet	1540 lbs	2640 lbs	5500 lbs
	Spindle speed	12000 rpm	12000 rpm	8000 rpm
	Spindle drive motor	AC40 HP	AC40 HP	AC50 HP
	Spindle max. torque	310 ft-lbs	310 ft-lbs	744 ft-lbs
FEEDRATE	Spindle taper	CT50	CT50	CT50
MAXIMUM WORKPIECE	Rapid traverse XYZ axis	2362 ipm	2362 ipm	1969 ipm
	Swing diameter inside machine	31.0"	43.3"	68.0"
	Height	39.0"	47.2"	55.0"

SMART
MACHINE TOOL

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Design and specifications subject to change without notice.

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