NX Series

BOX in BOX®

NX 5000
NX 7000
NX 9000

HIGH PRODUCTION HORIZONTAL MACHINING CENTER

MADE BY NIIGATA JAPAN
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.
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
(AT.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: φ160 × 8T
• Cutting volume: 494 cm³/min (30.1 in³/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: φ63 × 4T
• Cutting volume: 403 cm³/min (24.6 in³/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: φ80 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.

SMART MACHINE TOOL
NX Series
NX GENERAL VIEW

MAIN SPECIFICATION

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<th>NX5000</th>
<th>NX7000</th>
<th>NX9000</th>
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<tbody>
<tr>
<td>TRAVEL</td>
<td></td>
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<tr>
<td>X axis travel</td>
<td>31.5&quot;</td>
<td>39.4&quot;</td>
<td>59.1&quot;</td>
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<tr>
<td>Y axis travel</td>
<td>29.5&quot;</td>
<td>37.4&quot;</td>
<td>51.2&quot;</td>
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<td>Z axis travel</td>
<td>32.7&quot;</td>
<td>41.3&quot;</td>
<td>45.3&quot;</td>
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<td>TABLE</td>
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<tr>
<td>Table working surface</td>
<td>19.7&quot; × 19.7&quot;</td>
<td>24.8&quot; × 24.8&quot;</td>
<td>31.5&quot; × 31.5&quot; (opt 39)</td>
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<tr>
<td>SPINDLE</td>
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<td>Maximum mass on pallet</td>
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<td>2640 lbs</td>
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<td>Spindle speed</td>
<td>12000 rpm</td>
<td>12000 rpm</td>
<td>8000 rpm</td>
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<td>AC40 HP</td>
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<td>AC50 HP</td>
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<td>Spindle max. torque</td>
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<td>FEEDRATE</td>
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<td>Spindle taper</td>
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<td>MAXIMUM WORKPIECE</td>
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<td>Rapid traverse XYZ axis</td>
<td>2362 ipm</td>
<td>2362 ipm</td>
<td>1969 ipm</td>
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<td>Swing diameter inside machine</td>
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<td>43.3&quot;</td>
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<td>Height</td>
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