

# B0325B-II & B0326-II

# **CNC Precision Automatic Lathe**

Speed, Accuracy, Rigidity



- 32 mm Capacity Swissturn
- Designed For Superior Flexibility
- Electronic Integral Motor Guide Bushing
- Easy Access Tool Zone
- Sub Side Cross Drilling
- Chucker Convertible in Minutes

## THE RIGHT INGREDIENTS FOR SUCCESS





Chucker Convertible - in Minutes

Deep Hole Drilling

#### Flexibility

In today's competitive global environment, your business can change daily. Your Tsugami can be reconfigured in minutes to meet new requirements. Adding a "Chucker Kit" allows you to convert your B0325B-II/B0326-II from a Swissturn to a lathe. Available functions such as thread whirling, polygon machining and angled milling ensure that your B0325B-II/B0326-II is ready to tackle whatever job comes in the door.

#### Changeover

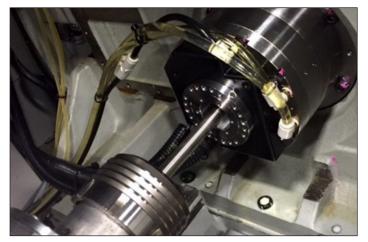
At Tsugami, we realize that having the most capable machine available is only part of the requirement. The B0325B-II/B0326-II is quick and easy to change over. The machine features a wide opening door for easy access, right hand configuration, long headstock stroke for convenient access to the headstock collet and bushing, easy access to sub spindle tooling, and horizontal tools for ease of setting. The "Program Check Function", which allows new programs to be quickly and safely proven out, is included as standard.

#### **Overlap – Cycle Time Reduction**

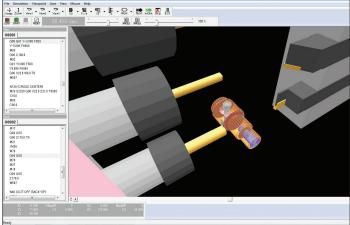
Better overlap capabilities mean more work is done internal to the cycle time. With the B0326-II Y2 axis and its driven tools, reduction in cycle time can be dramatic.



Modular tooling allows you to quickly change over work zone configurations in minutes, optimizing productivity.



Electronic Integral Motor Guide Bushing



Abile Part Programming Software Included

#### Speed

Your B0325B-II/B0326-II features a state of the art Fanuc control for low idle times and high speed cutting. The horizontally opposed gang tool layout offers the shortest path tool to tool and therefore the quickest possible chip to chip time. The B0326-II has Y-axis and live tooling on the sub spindle tool post allowing milling operations traditionally performed on the main spindle to be carried out on the sub spindle, internal to the cycle time. Other features include integral spindle motors and an integral motor driven bushing for the fastest possible acc/dec times and quick C-axis positioning.



BO325B-II Tool Zone

#### Precision

Tsugami has the most rigid gang tool post in the industry due to opposing rail slides. The B0325B-II/B0326-II is built on a heavy duty cast iron base, has thermally symmetrical construction and features 0.1 micron resolution. A more rigid platform allows higher speeds and feeds.

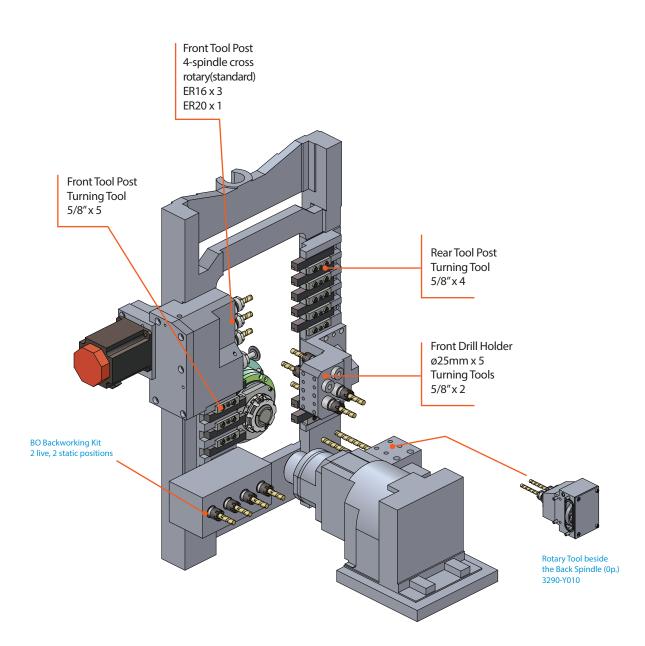
#### Reliability

The B0325B-II/B0326-II are built for the long haul. They feature rugged construction, belt free spindles, live tools, and integral motor driven bushings. For extra peace of mind, the machines, motors, and controls are covered by an industry leading two-year parts and service warranty.



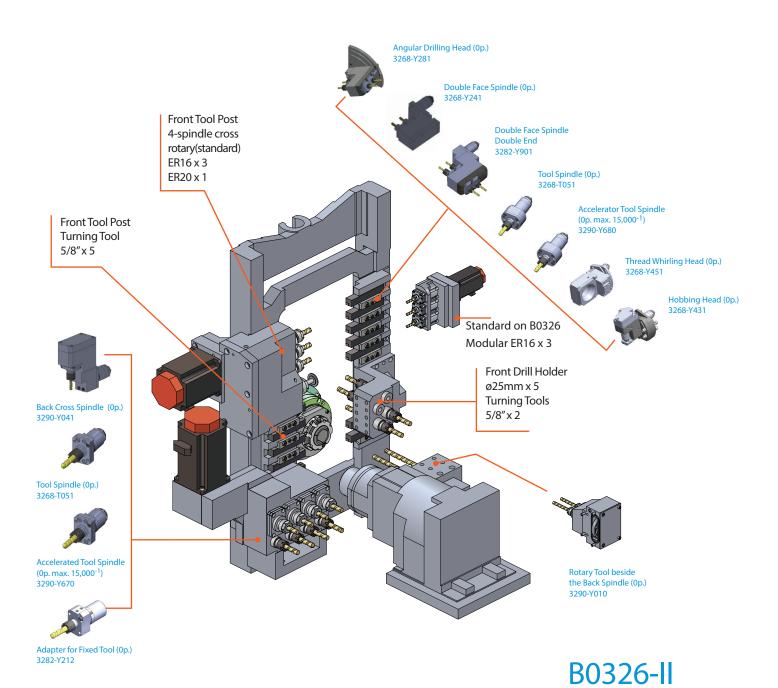
BO326-II Tool Zone

## WORK ZONES / MODULAR TOOLING



## B0325B-II

## CAPABILITY, FLEXIBILITY, RELIABILITY



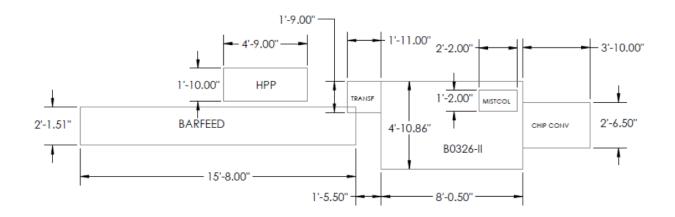
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## MACHINE STANDARD SPECIFICATIONS

|                    | ITEMS  | B0325B-II  | B0326-II      |
|--------------------|--|--|---------------|
| Machining<br>Range | Max. Chucking Barstock Diameter              | ø32 mm (1.26 in.)  |               |
|                    | Max. Machining Length                        | 320 mm (12.6 in.) (Direct-Drive Guide Bush)<br>70 mm (2.76 in.) (Guide Bushless) |               |
|                    | Max. Drilling Diameter                       | ø10 mm (.39 in.)   |               |
|                    | Max. Tapping Diameter                        | M10  |               |
|                    | Max. Back Spindle Chucking Barstock Diameter | ø32 mm (1.26 in.)  |               |
|                    | Max. Back Spindle Drilling Diameter          | ø10 mm (.39 in.)   |               |
|                    | Max. Back Spindle Tapping Diameter           | M8   |               |
|                    | Max. Tool Spindle Drilling Diameter          | ø10 mm (.39 in.)   |               |
|                    | Max. Tool Spindle Tapping Diameter           | M8   |               |
|                    | Max. Tool Spindle Slotting Cutter Diameter   | ø45 mm (1.77 in.)  |               |
| Machine            | Main Spindle Speed                           | 200 to 8,000 min <sup>-1</sup>   |               |
|                    | Back Spindle Speed                           | 200 to 10,000 min <sup>-1</sup>  |               |
|                    | Tool Spindle Speed                           | 200 to 6,000 min <sup>-1</sup>   |               |
| Capability         | Total Tool Number (Standard Spec.)           | 31   | 34            |
| cupuonity          | Tool Size                                    | .625 in. x 3.94 in. (square) /   | 25 mm (round) |
|                    | Rapid Traverse Rate                          | 32 m/min (105 ft/min) [(X1, Y1, Y2: 24 m/min (78.74 ft/min)]                     |               |
|                    | Spindle Index                                | C1 Axis and C2 Axis  |               |
|                    | Main Spindle                                 | 3.7/5.5 kW   |               |
|                    | Back Spindle                                 | 2.2/3.7 kW   |               |
|                    | Cross Drill of Front Tool Post               | 1.0 kW   |               |
|                    | Cross Drill of Rear Tool Post Drive          | 1.0 kW (Option)  |               |
| Motors             | Rotary Tool of Back Tool Post                | 1.0 kW (B0325B-II Option)  |               |
| Motors             | Rotary Guide Bushing                         | 1.5/3.0 kW   |               |
|                    | Z1, Y1, X2, Z2                               | .75 kW   |               |
|                    | X1, Y2                                       | .5 kW  |               |
|                    | Coolant Pump                                 | .4 kW  |               |
|                    | Lubricating Pump                             | 3 W  |               |
| Others             | Compressed air requirement                   | .4 MPa or more   |               |
|                    | Air discharge rate                           | 40 NL/min  |               |
|                    | Power Source Requirements                    | 21.4 KVA   |               |
|                    | Coolant Tank Capacity                        | 180 L  |               |
|                    | Width x depth x height                       | 2,150 mm x 1,280 mm x 1,930 mm (84.65 in. x 50.39 in. x 75.98 in.                |               |
|                    | Weight                                       | 3,500 kg (7716 lbs.)   |               |

## NC SPECIFICATIONS

| ITEMS                      | B0325B-II   | B0326-II  |  |
|----------------------------|---|---|--|
| NC Unit                    | FANUC 32-iB   |   |  |
| Axis Name                  | X1, Z1, Y1, X2, Z2, C1, C2                            | X1, Z1, Y1, X2, Y2, Z2, C1, C2                          |  |
| Least Input Increment      | 0.001 (X1/X2 axis in diameter)                        |   |  |
| Least Command Increment    | X1/X2 axis: 0.0005 mm, other: 0.001 mm                |   |  |
| Maximum Programmable Value | ± 8 digits  |   |  |
| Interpolation Method       | Linear/Circular/Polar/Helical                         |   |  |
| Rapid Traverse Function    | 32 m/min (105 ft/min) (X1/Y1 24 m/min (78.74 ft/min)  | 32 m/min (105 ft/min) (X1/Y1/Y2 24 m/min (78.74 ft/min) |  |
| Feedrate Function          | 1 to 6,000 mm/min                                     |   |  |
| Feedrate Override          | 0 to 150%, 10% step                                   |   |  |
| Dwell                      | G04 0 to 99999.999                                    |   |  |
| ABS/INC Command            | X, Z, Y, C: Absolute U, W, V, H: Incremental          |   |  |
| Tool Offset Value          | ± 6 digits  |   |  |
| Tool Offset Pairs          | 99  |   |  |
| LCD/MDI                    | 10.4" color LCD                                       |   |  |
| Display Language           | English   |   |  |
| Part Program Storage Size  | 64 kbyte<br>(equivalent to 80 m for each path system) |   |  |
| Registerable Programs      | 63  |   |  |
| Auxiliary Function         | Main: M 5 digits                                      |   |  |
| Spindle Function           | S 5 digits  |   |  |
| Tool Function              | T 4 digits  |   |  |



"We've seen greatly increased productivity and accuracy of our components. Our B0326-II is presently operating at full capacity 24/7 producing a highly complex part. We love the fact that we save material on the bar ends since the machine operates as a chucker and there is no need to use ground stock. Plus, the controls are easy to operate and we are able to run the machine on an unattended extended shift."

#### PATRICIA HIRSCH

Owner, Honor Med Maskiner Corp. | Elgin, IL

"We replaced three conventional turning centers and four operators with one Tsugami B0326-II. Our daily production is up almost 300%, and the machine accuracy has attributed to a scrap rate reduction by about half."

BRIAN NIX President, Nix Manufacturing | Sutherlin, OR

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