

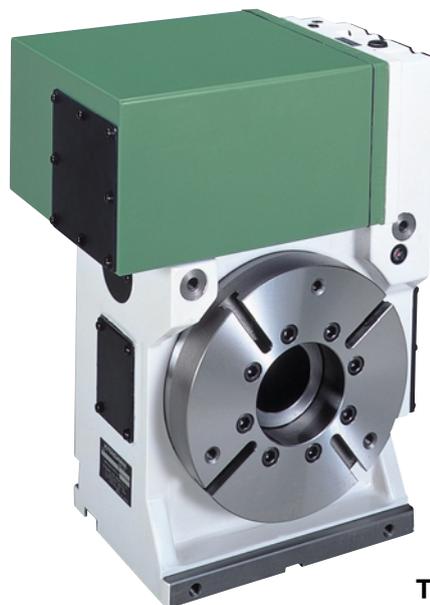
**NC ROTARY TABLE**

# High Performance NC Rotary Table – Top-motor – TU series

TUX200 · TUX250 · TUX320  
TU400 · TU500

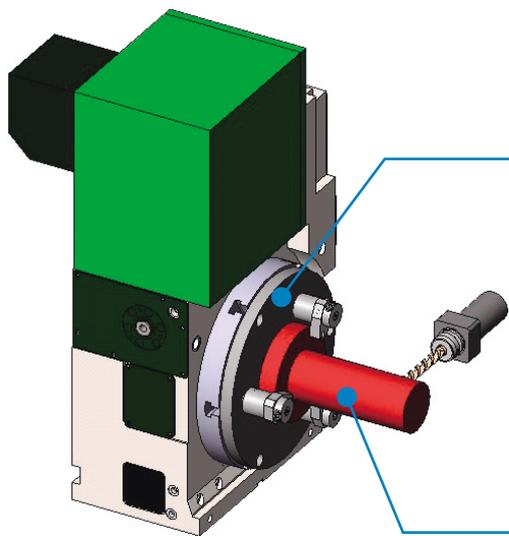
## High performance range suitable for 5th axis machining on horizontal machining centres

- High rigidity for heavy cutting
- High accuracy
- Top mounted motor position allows optimal machining area for vertical 5 axis machining
- Integrated air booster provides high clamping torque (comparable to hydraulic) from a standard air supply
- Rotary Joint built in as option



TUX200

### Machining time shortened by high rigidity



#### ● High rigidity

Original Kitagawa cross roller bearing provides high rigidity and allows for high cutting speeds.

#### ● Large through hole

Suitable for machining long work pieces.

| 4th axis specifications |      |                           | M signal specification   |                        |      |                           |   |
|-------------------------|------|---------------------------|--|------------------------|------|---------------------------|---|
| <b>TUX 200 B * * *</b>  | Type | Table Size<br>200·250·320 | Design No.   | <b>TUX 200 B 2 * *</b> | Type | Table Size<br>200·250·320 | Design No.  |
|                         |      |                           | Motor type   |                        |      |                           | Kitagawa own controller<br>2:MAC mini i<br>4:MAC mini iH      |
|                         |      |                           | Clamping method<br>B: Air-Hydraulic/Hydraulic<br>H: Hydraulic        |                        |      |                           | Clamping method<br>B: Air-Hydraulic/Hydraulic<br>H: Hydraulic |
| <b>TU 400 H 4 * * *</b> | Type | Table Size<br>400·500     | Design No.   |                        |      |                           |   |
|                         |      |                           | Motor type   |                        |      |                           |   |
|                         |      |                           | Gear Ratio<br>2: 1/180<br>3: 1/120<br>4: 1/90                        |                        |      |                           |   |
|                         |      |                           | Clamping method<br>B: External Air-Hydraulic Booster<br>H: Hydraulic |                        |      |                           |   |

**■ specifications**

| Model  |  | TUX200                    | TUX250                    | TUX320                    | TU400            | TU500            |
|--|--|---------------------------|---------------------------|---------------------------|------------------|------------------|
| Table dia (mm)   |  | φ 200                     | φ 250                     | φ 320                     | φ 400            | φ 500            |
| Register diameter on Face Plate (mm)                           |  | φ 75 H7                   | φ 105 H7                  | φ 135 H7                  | φ 180 H7         | φ 210 H7         |
| Spindle through hole diameter (mm)                             |  | φ 52                      | φ 78                      | φ 110                     | φ 154            | φ 182            |
| Centre Height (mm)   |  | 140                       | 180                       | 225                       | 255              | 310              |
| Clamping method  |  | Air-Hydraulic/Hydraulic   | Air-Hydraulic/Hydraulic   | Air-Hydraulic/Hydraulic   | Hydraulic        | Hydraulic        |
| Clamping torque (N·m) (In pneumatic 0.5MPa / Hydraulic 3.5MPa) |  | 600                       | 1100                      | 2600                      | 2500             | 3200             |
| Motor axis reduced inertia (kg·m <sup>2</sup> )                |  | 0.00055                   | 0.00068                   | 0.00085                   | 0.00293          | 0.00320          |
| Servomotor (for FANUC specification)                           |  | α iF 4/4000               | α iF 4/4000               | α iF 8/3000               | α iF 12/3000     | α iF 12/3000     |
| Gear ratio (Decel. Ratio in M signal)                          |  | 1/90                      | 1/90(1/120)               | 1/120(1/180)              | 1/90             | 1/120            |
| Max. spindle speed   | FANUC specification (for min <sup>-1</sup> /motor 3000min <sup>-1</sup> )  | 33.3                      | 33.3                      | 25                        | 22.2             | 16.6             |
|  | M signal specification (for min <sup>-1</sup> /motor 3000min <sup>-1</sup> )                                       | 33.3                      | 25                        | 16.6                      | —                | —                |
| Allowable work inertia (kg·m <sup>2</sup> )                    |  | 0.50                      | 0.98                      | 2.24                      | 5.00             | 9.38             |
| Indexing accuracy (sec)  |  | 20                        | 20                        | 20                        | 20               | 20               |
| Repeatability (sec)  |  | 4                         | 4                         | 4                         | 4                | 4                |
| Mass of product (kg)   |  | 80                        | 142                       | 200                       | 350              | 550              |
| Manual Tailstock (Option · P69 reference)                      |  | TS200RN                   | TS250RN                   | TS320RN                   | TS400RN          | TS500RN          |
| Tail Spindle (Option · P71 reference)                          |  | TSR142A                   | TS180A                    | TSR180A-45                | Order production | Order production |
| Rotary Joint (Option · P75 reference)                          |  | RJ40H20V02                | RJ70H25V01                | RJ70H32V01                |                  |                  |
|  |  | Hydraulic/Pneumatic4-port | Hydraulic/Pneumatic6-port | Hydraulic/Pneumatic6-port | Order production | Order production |
| Allowable Load   | Horizontal (kg)                 | —                         | —                         | —                         | —                | —                |
|  | Vertical (kg)                   | 100                       | 125                       | 180                       | 250              | 300              |
| Allowable load   | F (kN)                          | 17                        | 21                        | 26                        | 32               | 50               |
|  | F <sub>XL</sub> (N·m)           | 1100                      | 1600                      | 2500                      | 5000             | 8000             |
|  | F <sub>XL</sub> (N·m) (Note 5)  | 600                       | 1100                      | 2600                      | 2500             | 3200             |
| Allowable cutting torque                                       | T (N·m)                         | 310                       | 730                       | 1000                      | 1700             | 2600             |

Note) 1. The switch for pressure checking is incorporated to all series except TC/DM of NC tables. 2. In case of air pressure clamp specification, the solenoid valve for table clamp is incorporated. 3. Solenoid valve(s) is (are) not incorporated in case of hydraulic clamp method. Consequently, customer shall prepare it. 4. Neither cable nor hose is fitted between NC rotary table and machine tool... 5. In the port part on the table surface jig side of a rotary joint, each TUX200, 250 or 320 is fixed to the rotary table side. 6. Because a mounting pitch varies with the machines, refer to the pitch of the table spindle size drawing on P71. 7. Contact to Kitagawa about rotary joint and tail spindle of 400-size or more. 8. Each product mass is determined by a Kitagawa M signal spec.

## ■Dimensions [4th axis specifications]

