

TAKISAWA TWIN CHUCKER

# TT-Series

Parallel Twin-Spindle CNC Lathe

10in/8in

# TT-2600

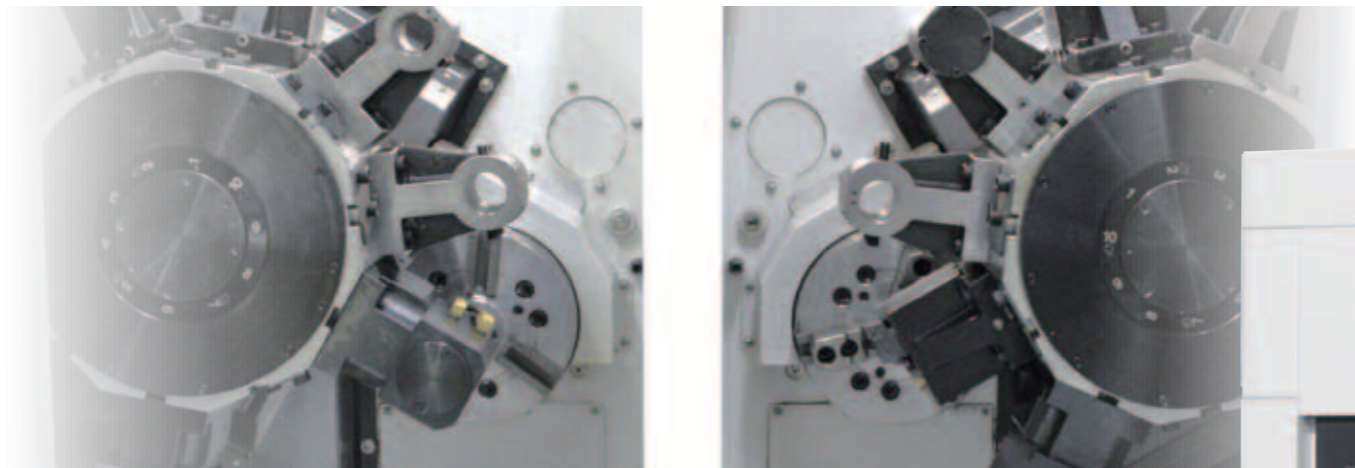


**TT-2600G**    **TT-2600CMG**  
**T-2600G**    **T-2600CMG**

**TAKISAWA®**

# TT-2600

## High-Accuracy Mass Production Machine for Various Workpieces!



Takisawa twin-chucker **TT-2600** is a parallel 2-spindle CNC lathe for high-accuracy mass production machine for various 10"/8" chuck workpieces, which has the best machine rigidity in this class.



### ENERGY SAVING SYSTEM

- Reduction of power consumption.
  - Regenerative energy system – the energy generated when the motor decelerates returns to the power supply – is applied.
  - Internal lighting shutoff function reduces standby power.
  - Control panel cooling design takes natural radiation amount into account to reduce electric power.
  - Coolant pump runs only when coolant is being used, reducing electric power.
- Use of oil-water separator extends the coolant life.
- 40% reduction of lubricant consumption amount compared with those of conventional machines.
- The powder coating machine for environmental concern.

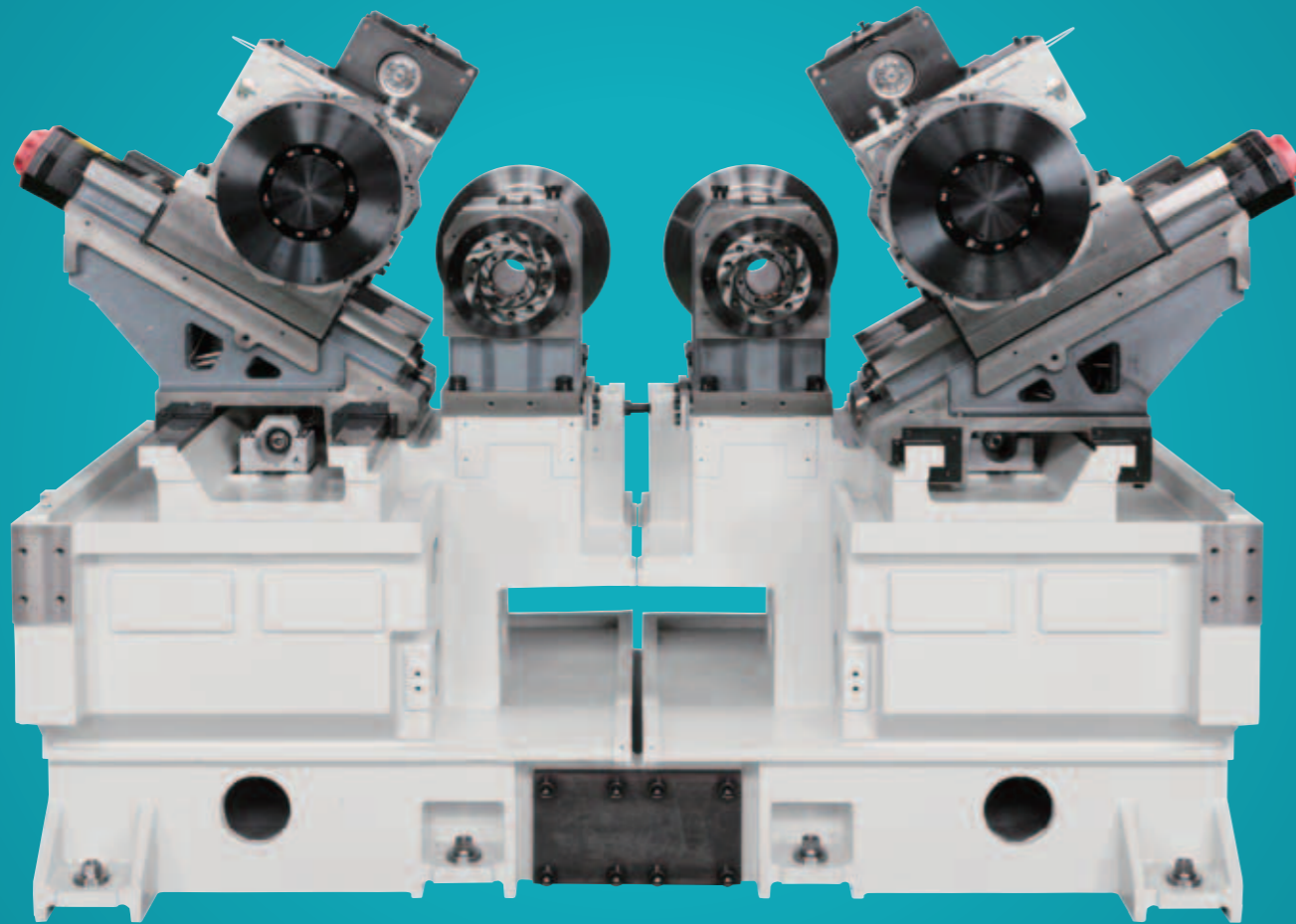
### Environment Friendly

\*Photo includes options.



# High-Rigidity & Reliability

## Twin Chuckers



### Securing Machine Rigidity

Different from conventional parallel 2-spindle machines, sufficient rigidity as same as standard 2-axis NC lathe is secured by holding down the amount of turret overhang. Hardened and ground square slideways excellent for high-durability are employed.

### "High Accuracy" and "Heavy Cutting Capability"

Structure of the slideway disposed right under the turret realizes high-accuracy heavy-cutting capability.

### "Powerful Turret"

The turret for turning and milling is arranged near the machining point of the slideway, capable of heavy cutting without a problem. Turning type and Turning/Milling type are available.

### "Spindle"

Structure of spindle deals with heavy duty cutting and thermal deformation. 8" or 10" chuck is available.

### "High-Speed Gantry Loader"

The standard high-speed 3-axis gantry loader ensures high-speed transportation of various heavy workpieces.

### Shortening "Non-Operating Time"

The software aimed for convenience and operability slashes non-cutting time like a setup time.

### Expansions and Automations

Capable of automation through the turn-key system, inserting pre/post operations such as phasing or measuring and building multi-machine connecting.



|                           | Standard Type | CM Type           |                         | 10" Chuck Type        | 8" Chuck Type         |
|---------------------------|---------------|-------------------|-------------------------|-----------------------|-----------------------|
| Processing Classification | Turning       | Turning & Milling | Chuck Size              | 10"+10"               | 8"+8"                 |
| Turret                    | T10           | T10M              | Bearing Inside Diameter | φ110                  | φ100                  |
|                           |               |                   | Spindle Speed (Std.)    | 3200min <sup>-1</sup> | 4000min <sup>-1</sup> |

## Spindle Stock

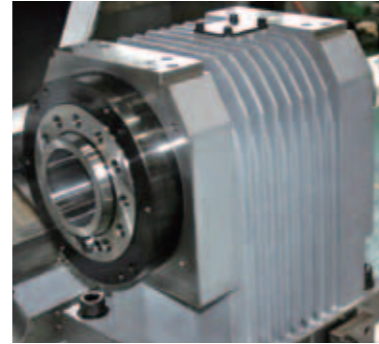
In order to cope with heavy cutting and thermal displacement, a low center of gravity structure is applied. Spindle core is placed at a low position from the floor and mounting base.

### 10" Chuck Type

- Bearing Inside Diameter :  $\phi 110$
- Spindle Nose (Nominal Code) : JIS A2-6

### 8" Chuck Type

- Bearing Inside Diameter :  $\phi 100$
- Spindle Nose (Nominal Code) : JIS A2-6



## Spindle Motor

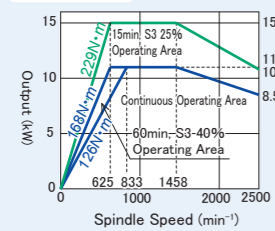
High-performance spindle motor is employed for powerful cutting for 10"/8" chuck workpieces.

### 10" Chuck Type

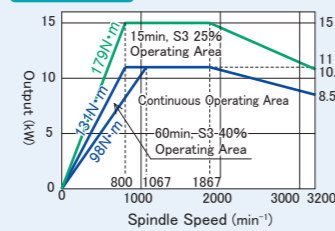
#### 15/11kW

FANUC :  $\beta$  i12

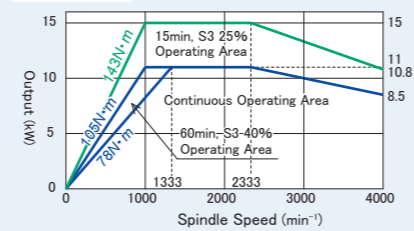
##### 2500min<sup>-1</sup>



##### 3200min<sup>-1</sup> Standard



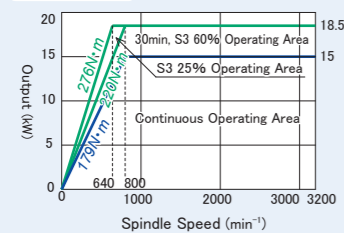
##### 4000min<sup>-1</sup>



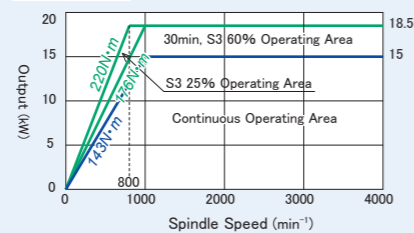
#### 18.5/15kW

FANUC :  $\alpha$  i15

##### 3200min<sup>-1</sup>



##### 4000min<sup>-1</sup>

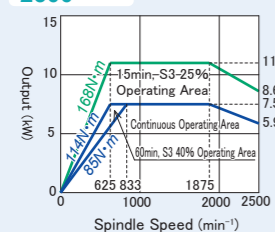


### 8" Chuck Type

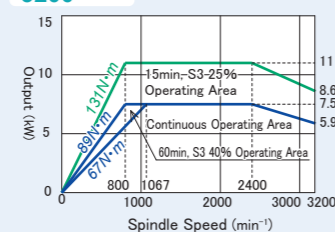
#### 11/7.5kW

FANUC :  $\beta$  i8

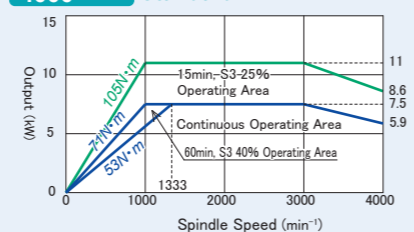
##### 2500min<sup>-1</sup>



##### 3200min<sup>-1</sup>



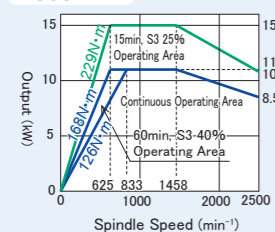
##### 4000min<sup>-1</sup> Standard



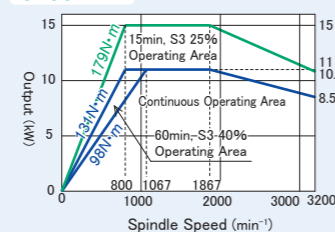
#### 15/11kW

FANUC :  $\beta$  i12

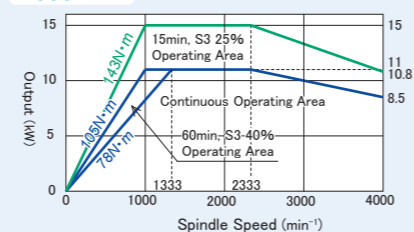
##### 2500min<sup>-1</sup>



##### 3200min<sup>-1</sup>



##### 4000min<sup>-1</sup>



## Turret

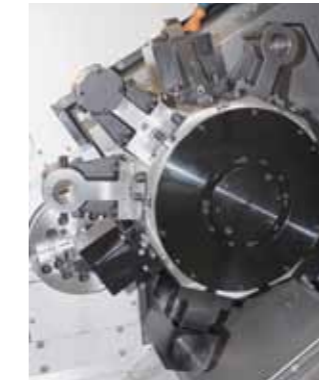
The stable structure of the turret whose center of gravity is fixed in the X-axis slideway ensures high-accuracy heavy cutting. The decagonal turning (T10) and milling (T10M) turrets ensure optimal machining. Bolt-clamping type tool holder ensures powerful tool holding.

### 10-Station Turret : T10 (Standard)

- Turning Tool :  $\square 25\text{mm}$
- Boring Bar :  $\phi 40\text{mm}$

### Rotary Tool Type 10-Station Turret : T10M (Optional, CM Type)

The 10-station milling turret equips a 4000-min<sup>-1</sup> rotary tool spindle motor of 5.5-kW short-time rating output, optimal for mass production including a milling process.

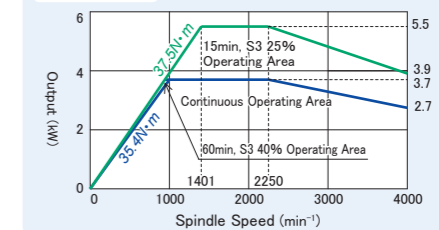


### Milling Type

#### 5.5/3.7kW

FANUC :  $\beta$  i13

##### 4000min<sup>-1</sup>



## Central Partition Cover

The removable chip cover can turn left/right when working around the chuck or turret.



## Oil Pan

The standard rotary storage gutter ensures safe replenishment of cutting oil during automatic operation.



Status of the gutter stored and the maintenance door closed

Status of the maintenance door is open and the gutter has been taken out

## Gantry Loader System

The machine's center of gravity is thoroughly lowered and the loader axis is improved to move faster and quieter to realize optimum cycle time. By adopting a acrylic window for the work feeder, visibility is improved.

### Loader Specifications (A Type)

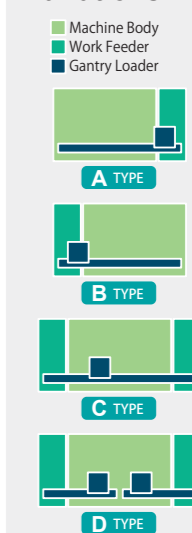
| Items                  |                       | 10" Chuck Type      | 8" Chuck Type       |
|------------------------|-----------------------|---------------------|---------------------|
| Target Workpiece       | Outside Diameter      | $\phi 200\text{mm}$ | $\phi 160\text{mm}$ |
|                        | Length                | 120mm               | 100mm               |
|                        | Weight                | 8kg ( $\times 2$ )  | 4kg ( $\times 2$ )  |
| Travel (Running Speed) | X-Axis (longitudinal) | 110m/min            | 150m/min            |
|                        | Y-Axis (vertical)     | 125m/min            | 170m/min            |

### Work Feeder Specifications

| Items                         | 10" Chuck Type | 8" Chuck Type |
|-------------------------------|----------------|---------------|
| Number of Pallets             | 14             | 16            |
| Loading Capacity (Per Pallet) | 70kg           | 40kg          |
| Maximum Height                | 400mm          | 450mm         |



### Loader Variations



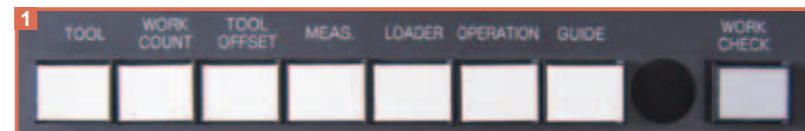


## Pursuing Operability



### • Dedicated Switch

A dedicated switch to call a desired function to the operation panel with one push is provided for smooth work.



### 2 Program Reset Function

Left/right/loader programs can be reset and rewind.

### 3 Zero Point Return Function

It allows left/right X- and Z-axes zero point return and loader X-, Y-, and Z-axes zero point return.\*

\*) Subject to some conditions. For details, contact us.

### Function to minimize inputting error on right and left.

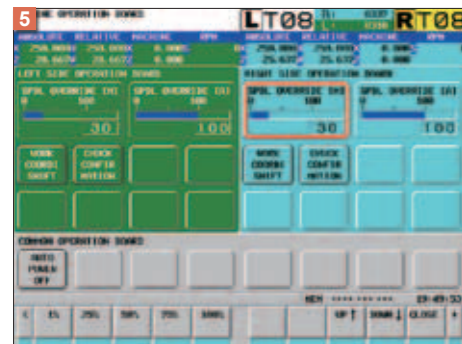
#### 4 Right/Left Selection Button

Operate the machine after selecting right or left with the button. Operation is possible only on the side with the indication lamp turned on. When both of the lamps are turned off, the machine cannot be operated.



#### Operation on Right Side ▶

The information on the right side is displayed on the screen and you can operate the right side.



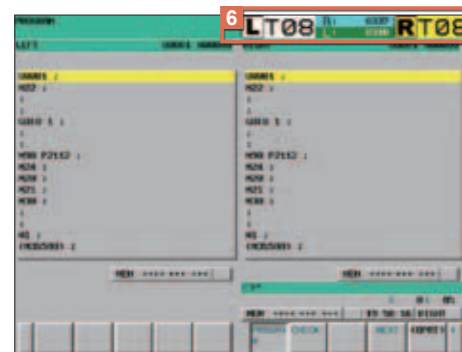
#### Link of Panel Light ▶

The light on the operation side is turned on.



### 5 Machine Operation Panel Screen

The machine operation panel is displayed on the screen. Buttons can be added and displayed/undisplayed easily.



### 6 Information Display Window

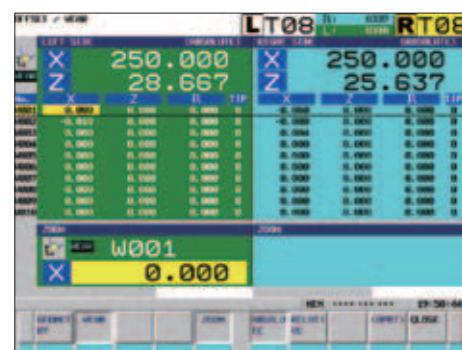
"Right/left selection, indexed turret number of right/left machine, and number of workpieces on right/left" can be checked on the upper right of the screen.

### • Information on Right and Left is Displayed Simultaneously (Specific Screen)

On the tool offset screen and the workpiece shift screens, inputting errors are avoided by the color coding of right/left, the zoom function and simultaneous display.

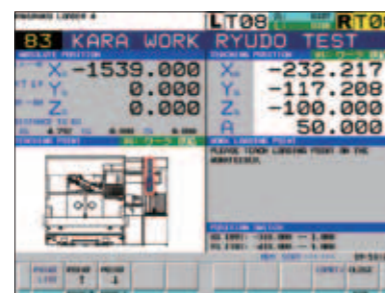
### Software

\* The software specifications are subject to change for improvement without notice.

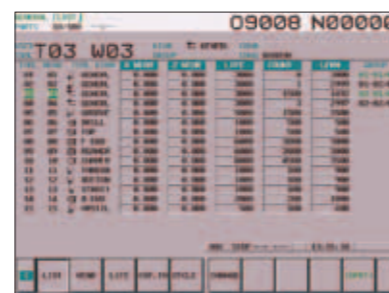


▲ Program Display

▲ Tool Offset Display



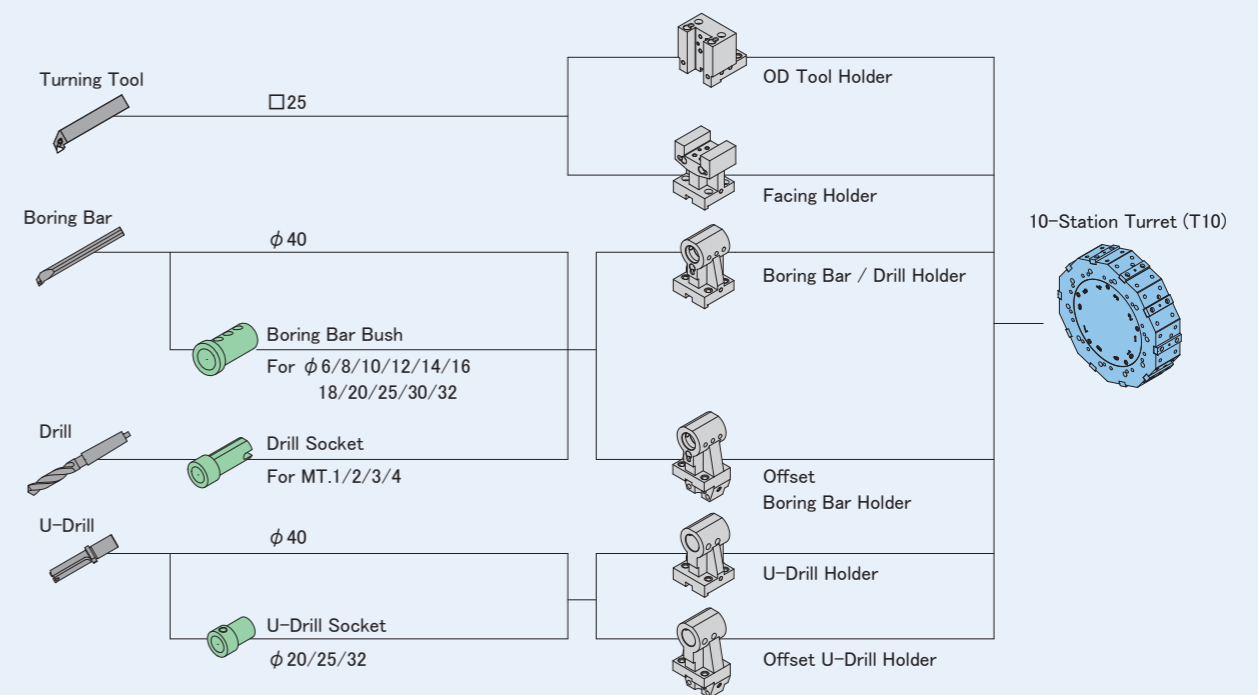
▲ RAKU-RAKU Loader 4



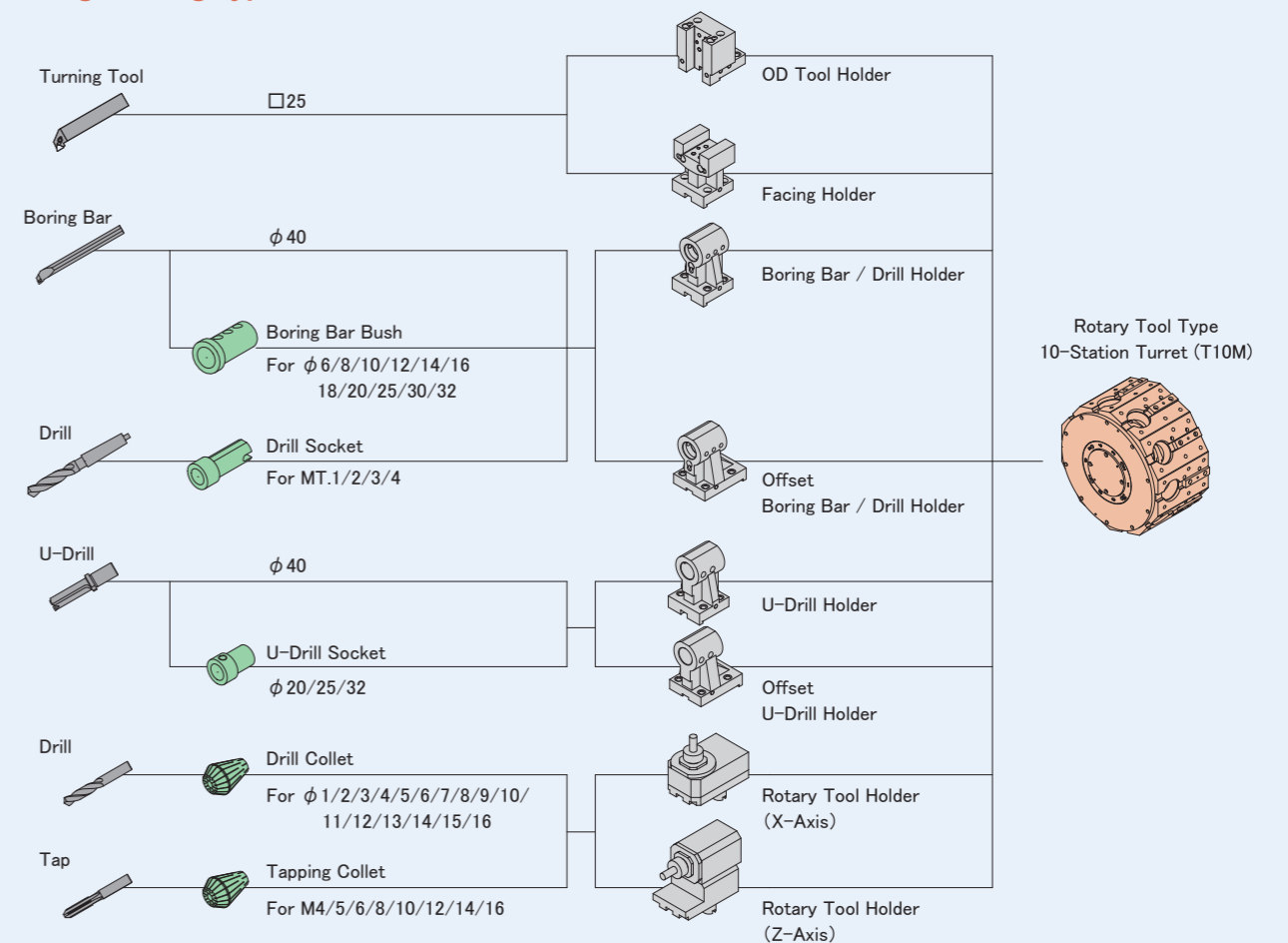
▲ RAKU-RAKU Monitor 3

## Tooling System

### Turning Type TT-2600G/T-2600G



### Turning / Milling Type TT-2600CMG/T-2600CMG

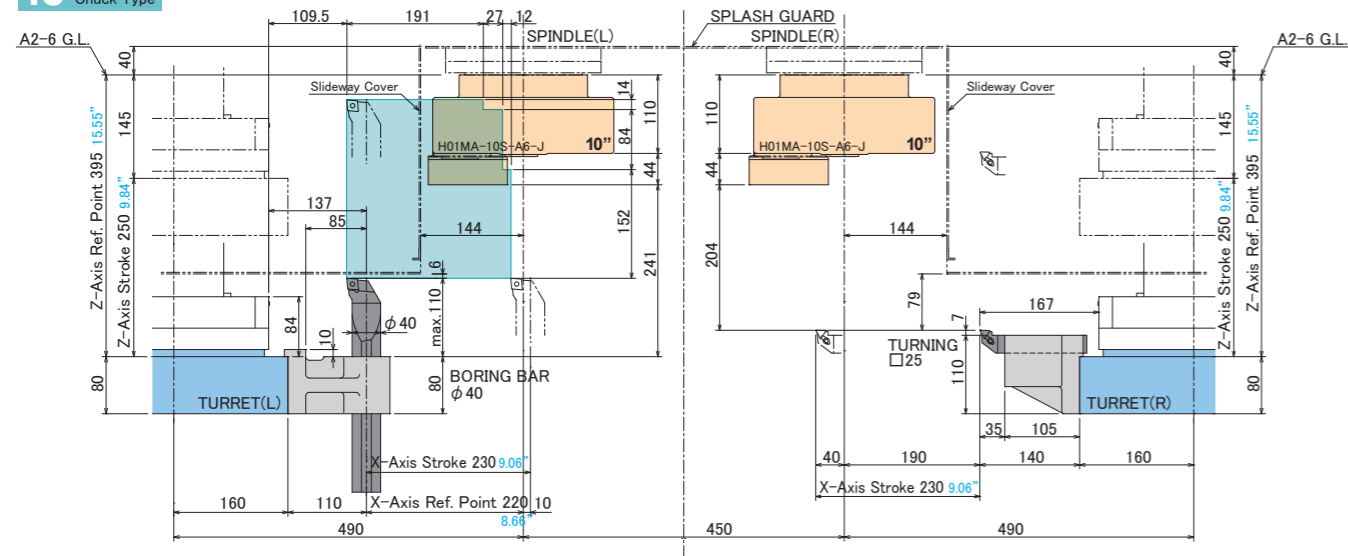


# Travel Range and Interference

Unit : mm inch

## Turning Type TT-2600G

### 10" Chuck Type



### 8" Chuck Type

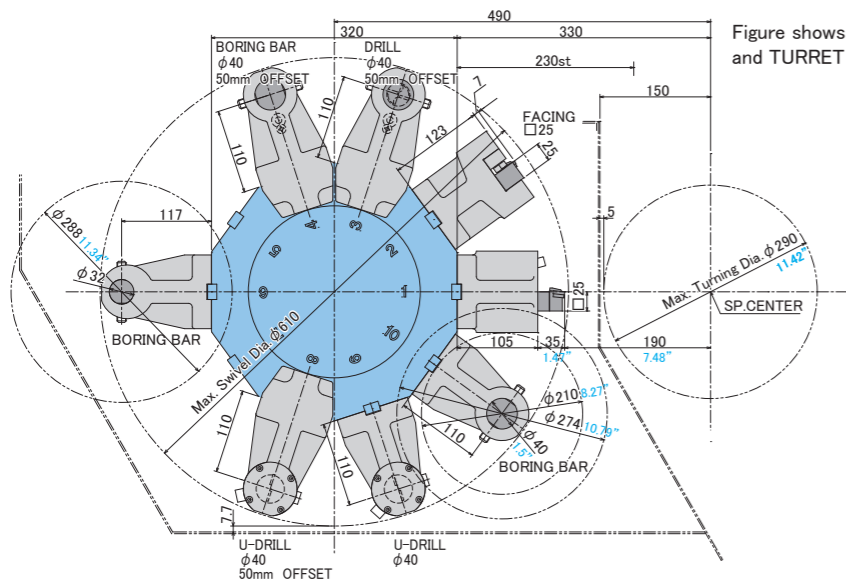
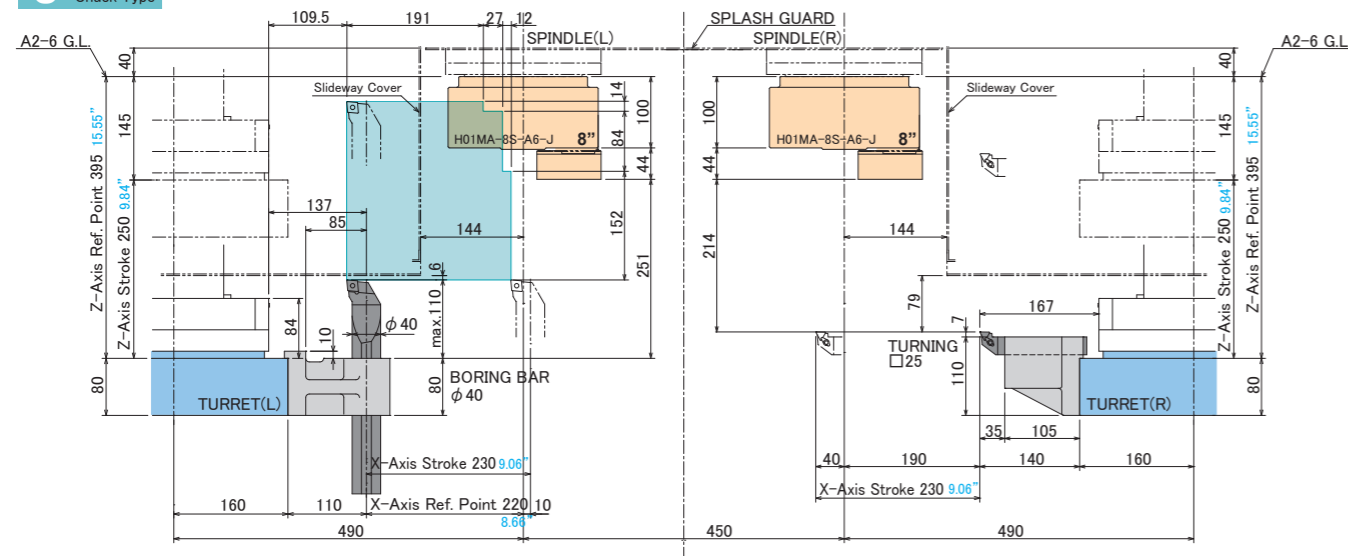
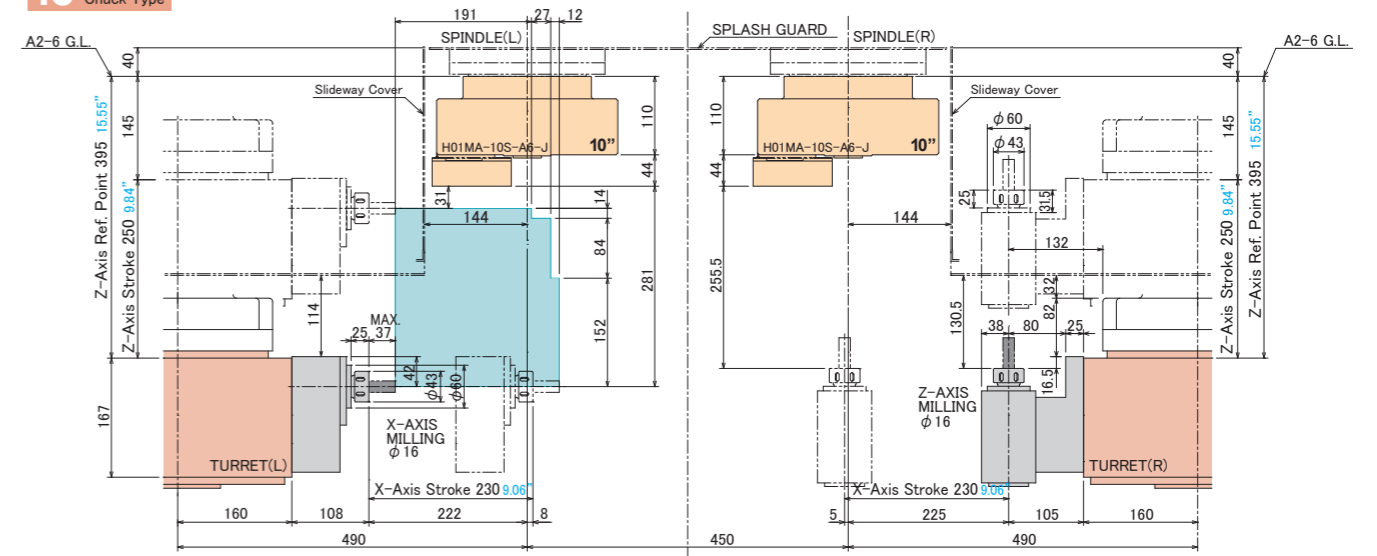


Figure shows TURRET (L), and TURRET (R) is mirror-image component.

## Turning / Milling Type TT-2600CMG

### 10" Chuck Type



### 8" Chuck Type

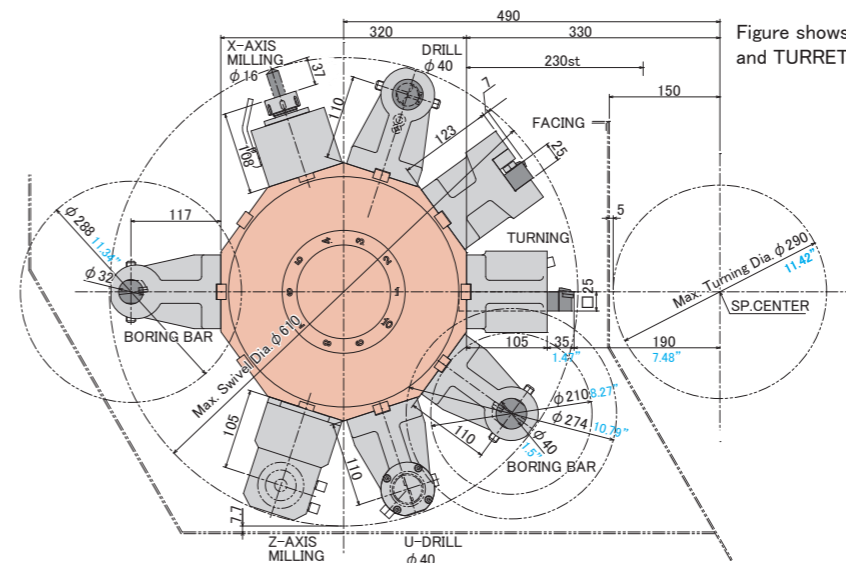
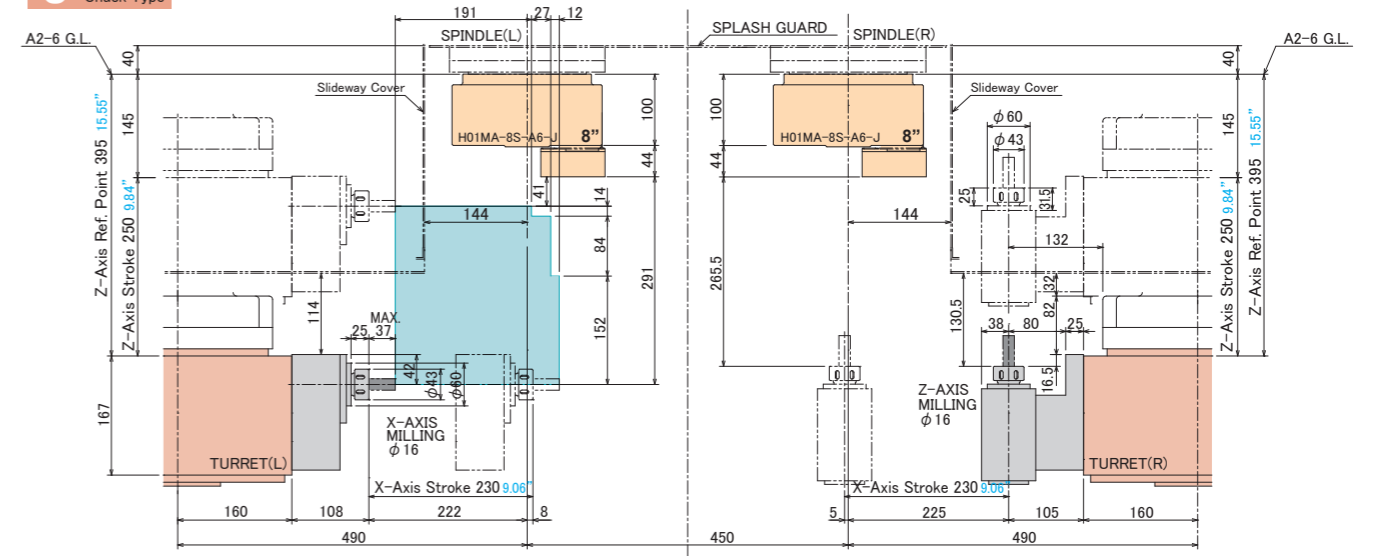


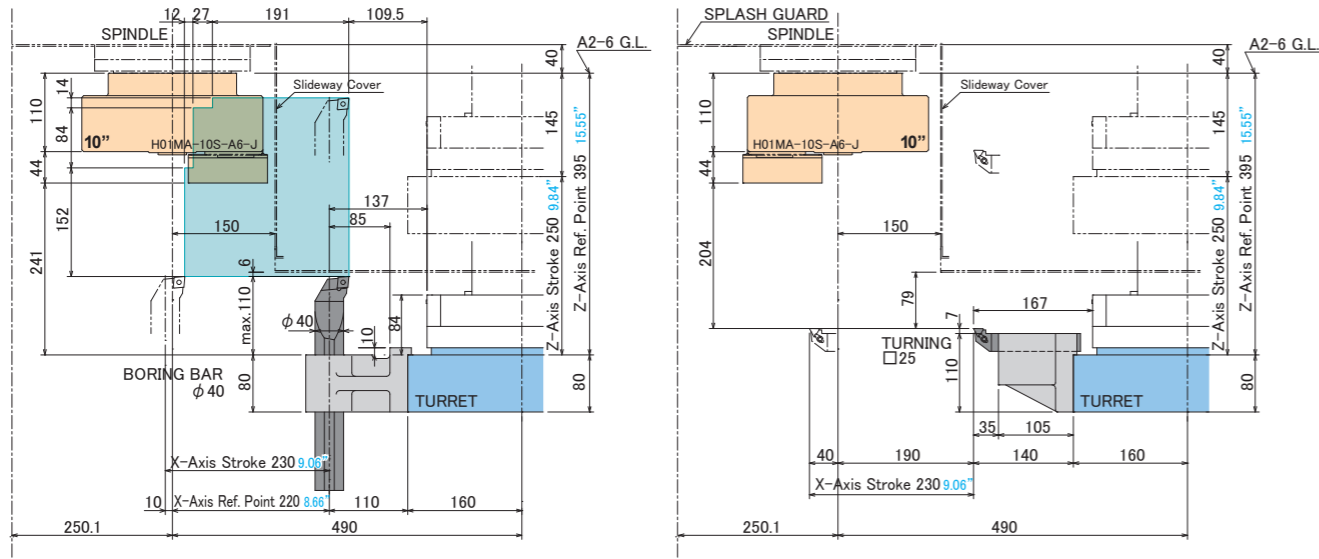
Figure shows TURRET (L), and TURRET (R) is mirror-image component.

# Travel Range and Interference

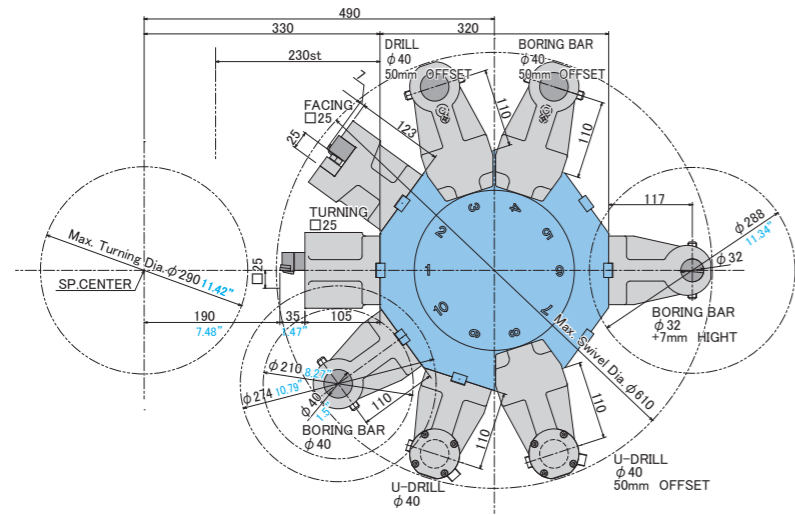
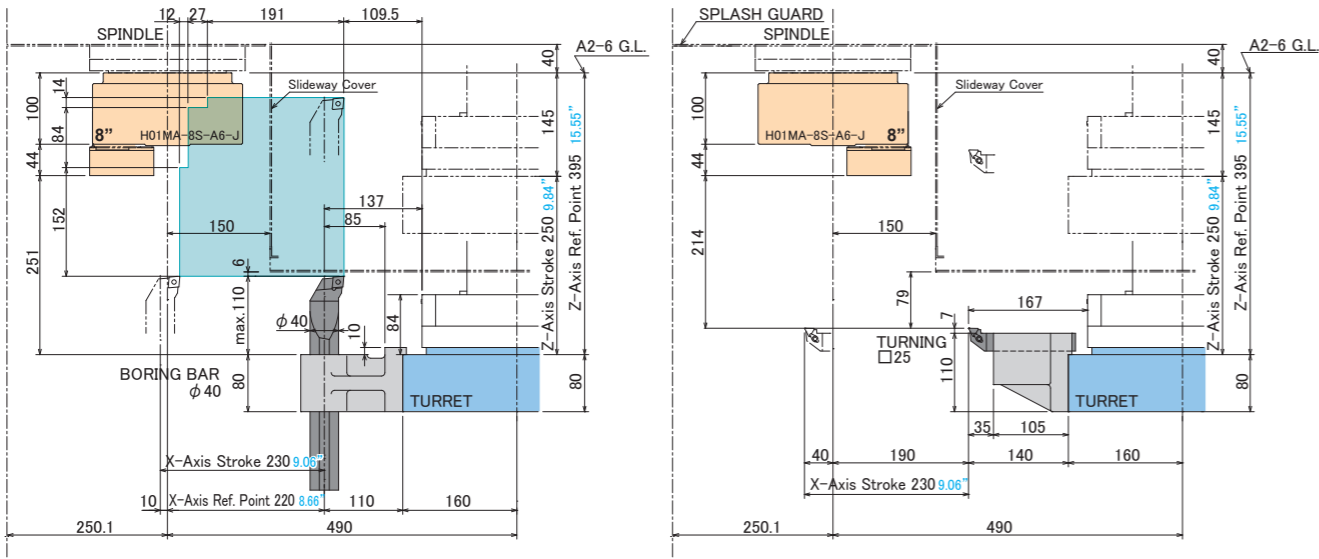
Unit : mm inch

## Turning Type T-2600G

### 10" Chuck Type

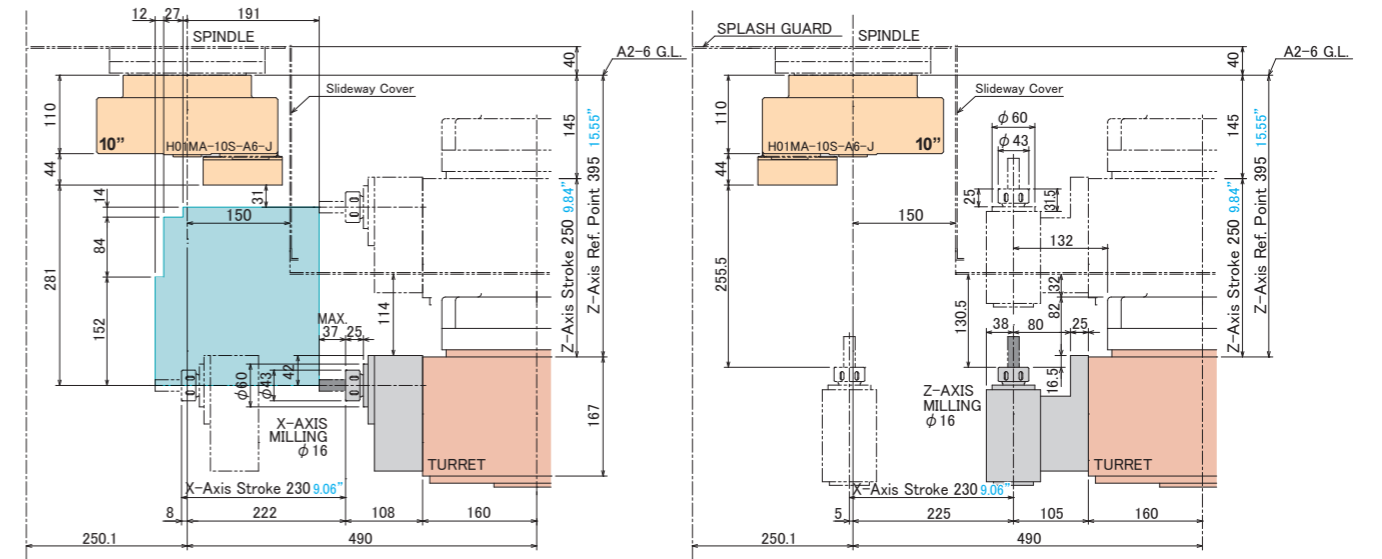


### 8" Chuck Type

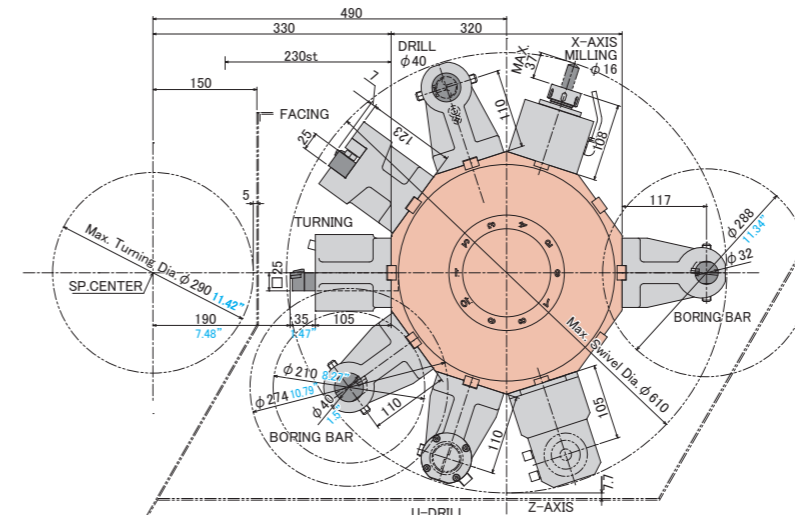
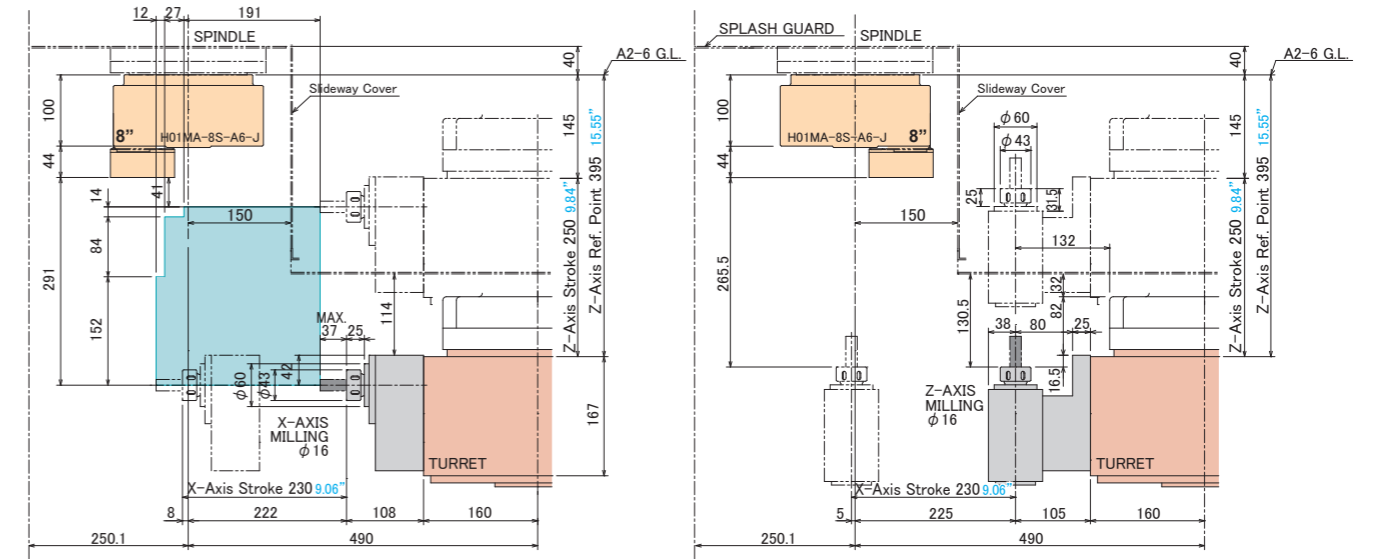


## Turning / Milling Type T-2600CMG

### 10" Chuck Type



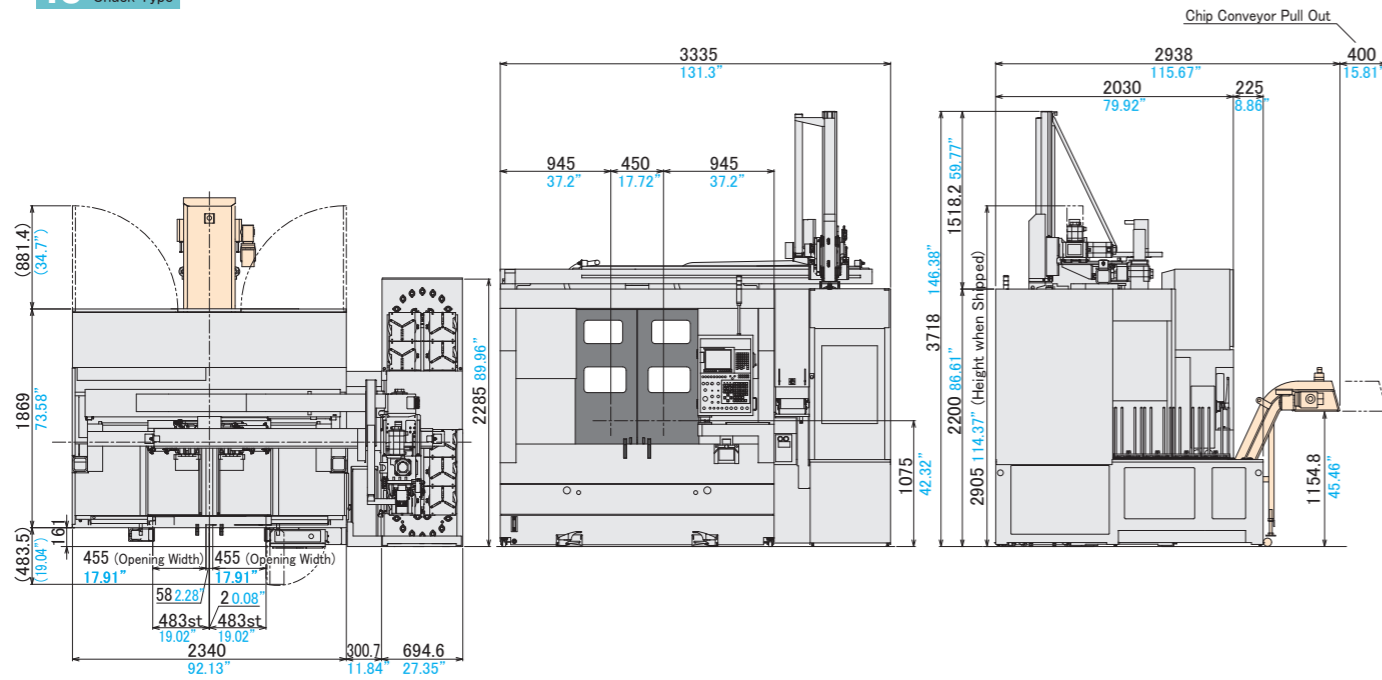
### 8" Chuck Type





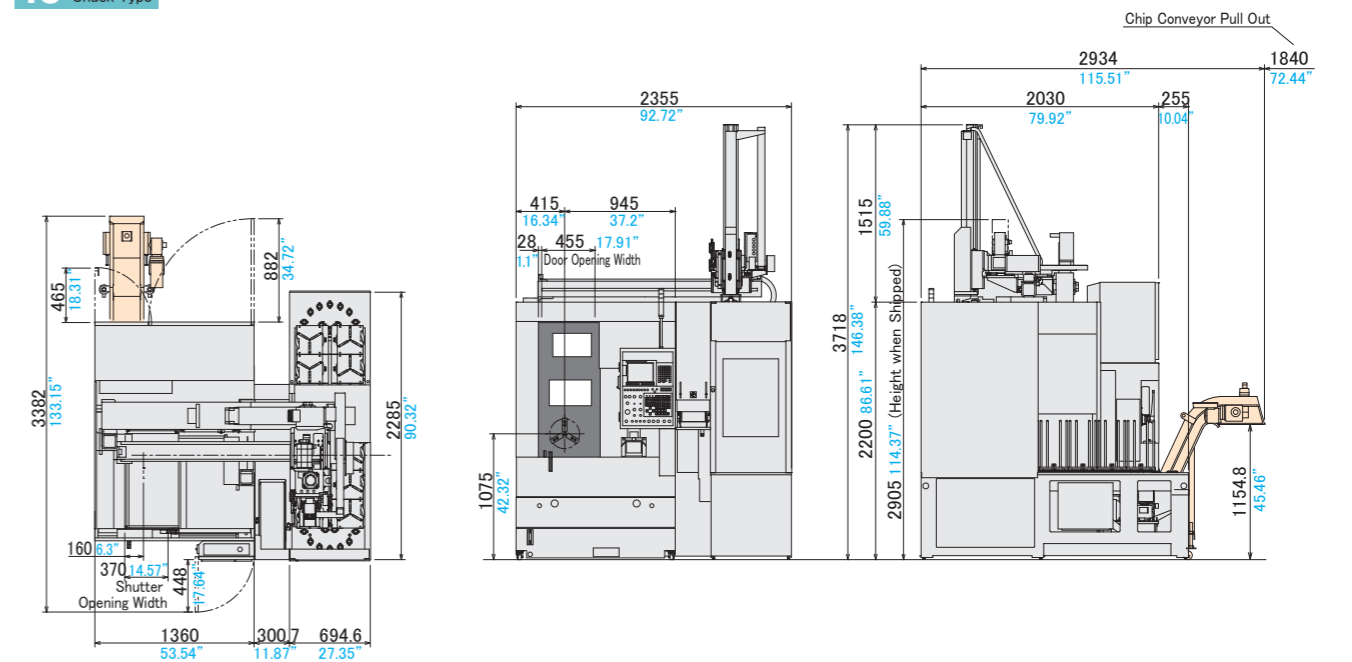
TT-2600G / TT-2600CMG

10" Chuck Type

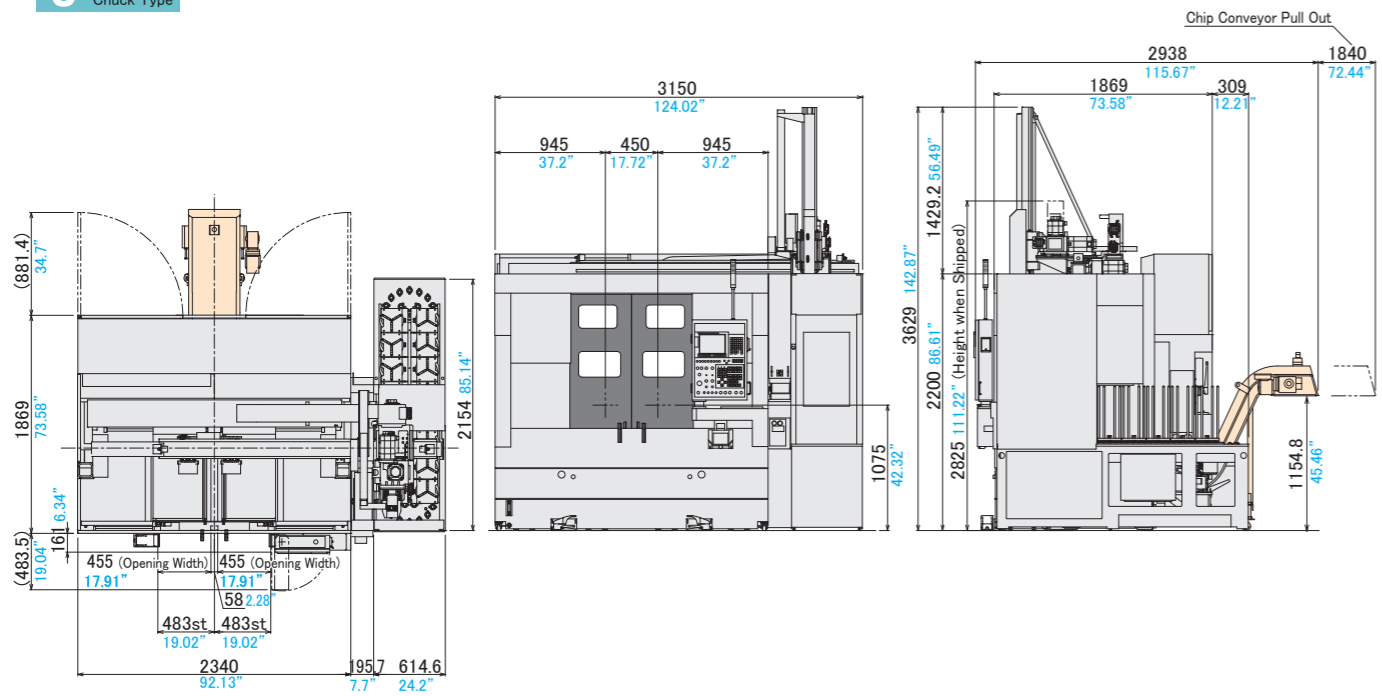


T-2600G / T-2600CMG

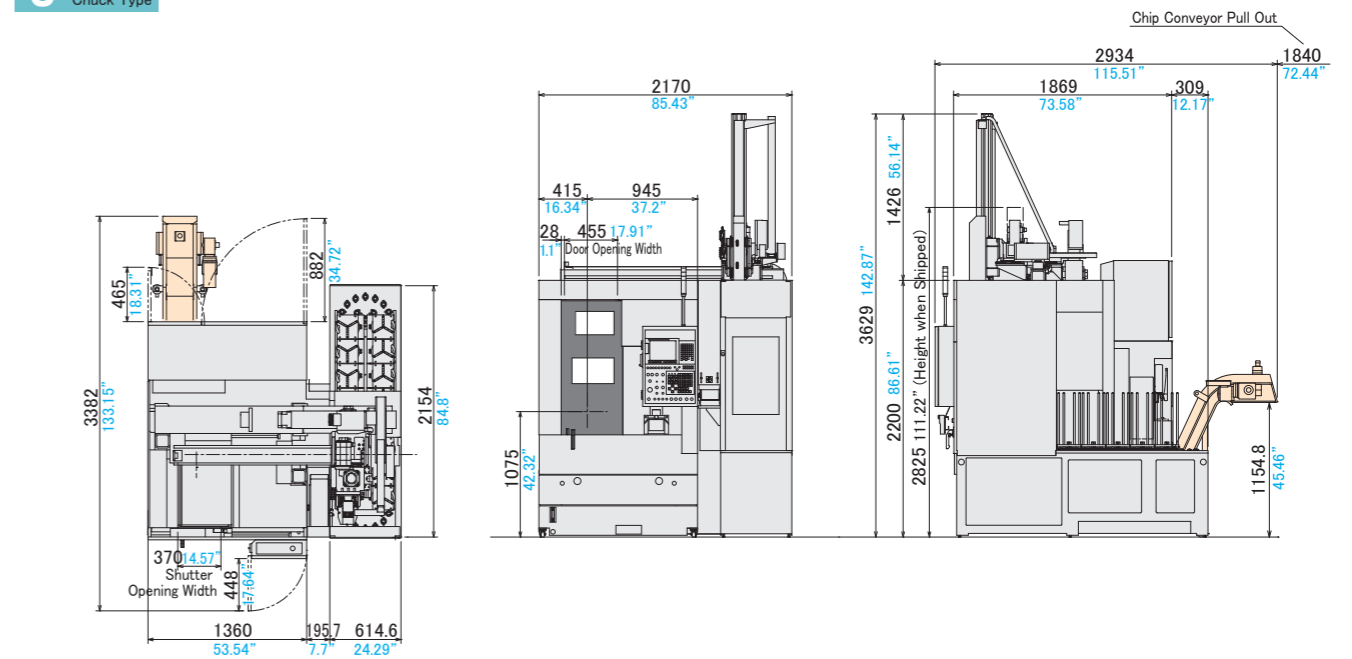
10" Chuck Type



8" Chuck Type



8" Chuck Type





## Machine Specifications (with A or B Type Loader)

| Items                        | 2-Turrets, 2-Spindles Type                    |                        |   |  | 1-Turret, 1-Spindle Type                                      |  |         |                            |
|------------------------------|---|------------------------|---|--|---|--|---------|----------------------------|
|                              | 8"×8"   |                        | 10"×10"   |  | 8"  |  | 10"     |                            |
|                              | TT-2600G                                      | TT-2600CMG             | TT-2600G  | TT-2600CMG   | T-2600G   | T-2600CMG  | T-2600G | T-2600CMG                  |
| Capability                   | Distance Between Spindles                     | mm inch                | 450 17.72"  |  | -   |  |         |                            |
|                              | Maximum Turning Diameter                      | mm inch                | 290 11.42"  |  | 290 11.42"  |  |         |                            |
|                              | Maximum Turning Length                        | mm inch                | 214 8.43"   | 204 8.03"  | 214 8.43"   | 204 8.03"  |         |                            |
| Travel                       | X-Axis Travel                                 | mm inch                | 230 9.06"   |  | 230 9.06"   |  |         |                            |
|                              | Z-Axis Travel                                 | mm inch                | 250 9.84"   |  | 250 9.84"   |  |         |                            |
| Spindle                      | Number of Spindles                            |                        | 2   |  | 1   |  |         |                            |
|                              | Spindle Speed                                 | min <sup>-1</sup>      | 4000 3200 2500  | 3200 4000 2500   | 4000 3200 2500  | 3200 4000 2500   |         |                            |
|                              | Minimum Index Angle (Cs-Axis)                 | deg                    | -   | 0.001  | -   | 0.001  |         | 0.001                      |
|                              | Spindle Nose (Nominal Code)                   |                        | JIS A2-6  |  | JIS A2-6  |  |         |                            |
|                              | Through-Hole Diameter                         | mm inch                | 63 2.48"  | 73 2.87"   | 63 2.48"  | 73 2.87"   |         |                            |
|                              | Bearing Inside Diameter                       | mm inch                | 100 3.94"   | 110 4.33"  | 100 3.94"   | 110 4.33"  |         |                            |
|                              | Turret  | Number of Turrets      |   | 2  |   | 1  |         |                            |
| Type of Turret               |   |                        | 10-Station All-Holder Type                                    |  | 10-Station All-Holder Type                                    |  |         |                            |
| Number of Attachable Tools   |   |                        | 10+10   |  | 10  |  |         |                            |
| Height of Square Tool Shank  |   | mm inch                | 25 1"   |  | 25 1"   |  |         |                            |
| Diameter of Boring Bar Shank |   | mm inch                | 40 1.5"   |  | 40 1.5"   |  |         |                            |
| Rotary Tool                  | Number of Rotary Tools                        |                        | -   | 10 5   | -   | 10 5   | -       | 10 5                       |
|                              | Spindle Speed                                 | min <sup>-1</sup>      | -   | 4000   | -   | 4000   | -       | 4000                       |
|                              | Maximum Tool Shank Diameter                   | mm inch                | -   | 16 0.63"   | -   | 16 0.63"   | -       | 16 0.63"                   |
|                              | Tool Spindle Taper Hole (Type, Nominal Code)  |                        | -   | AR25   | -   | AR25   | -       | AR25                       |
|                              | Tool Spindle Bearing ID                       | mm inch                | -   | 35 1.38"   | -   | 35 1.38"   | -       | 35 1.38"                   |
| Feedrate                     | Rapid Traverse Rate                           | m/min ipm              | X:24 / Z:24 X:944.88" / Z:944.88"                             |  | X:24 / Z:24 X:944.88" / Z:944.88"                             |  |         |                            |
|                              | Jog Feedrate                                  | mm/min ipm             | X, Z:0 ~ 1260 X, Z:0 ~ 49.61"                                 |  | X, Z:0 ~ 1260 X, Z:0 ~ 49.61"                                 |  |         |                            |
| Motor                        | Main Spindle Motor                            | kW HP                  | 11/7.5 14.7/10 (15 min/cont.)<br>15/11 20/14.7 (15 min/cont.) | 15/11 20/14.7 (15 min/cont.)<br>18.5/15 24.7/20 (30 min/cont.) | 11/7.5 14.7/10 (15 min/cont.)<br>15/11 20/14.7 (15 min/cont.) | 15/11 20/14.7 (15 min/cont.)<br>18.5/15 24.7/20 (30 min/cont.) |         |                            |
|                              | Rotary Tool Spindle Motor (10 min/continuous) | kW HP                  | -   | 5.5/5.5/3.7<br>7.3/7.3/4.9                                     | -   | 5.5/5.5/3.7<br>7.3/7.3/4.9                                     | -       | 5.5/5.5/3.7<br>7.3/7.3/4.9 |
|                              | Feed Axis Motor                               | kW HP                  | X:1.4 / Z:2.5 X:1.9 / Z:1.9                                   |  | X:1.4 / Z:2.5 X:1.9 / Z:1.9                                   |  |         |                            |
|                              | Hydraulic Pump Motor                          | kW HP                  | 1.5 × 2 Motors 2 × 2 Motors                                   |  | 1.5 2   |  |         |                            |
|                              | Coolant Pump Motor                            | kW HP                  | 0.25 × 2 Motors 0.3 × 2 Motors                                |  | 0.25 0.3  |  |         |                            |
| Required Power               | Electric Power                                | kVA                    | 39 42, 47, 50   | 47 50, 58, 61  | 22 26   | 26 31  |         |                            |
|                              | Air Pressure Source                           | Mpa, NL                | 0.4   |  | 0.4   |  |         |                            |
| Tank Capacity                | Hydraulic Unit Tank                           | L gal                  | 20 (×2) 5.28 (×2)   |  | 20 5.28   |  |         |                            |
|                              | Lubricant Tank                                | L gal                  | 4 1.06  |  | 4 1.06  |  |         |                            |
|                              | Coolant Tank                                  | L gal                  | 240 63.36   |  | 120 31.68   |  |         |                            |
| Machine Size                 | Machine Height                                | mm inch                | 3629 142.87"<br>2983 117.44" *1                               | 3718 146.38"<br>3180 125.20" *1                                | 3629 142.87"<br>2983 117.44" *1                               | 3718 146.38"<br>3180 125.20" *1                                |         |                            |
|                              | Floor to Spindle Center Height                | mm inch                | 1075 42.32"   |  | 1075 42.32"   |  |         |                            |
|                              | Required Floor Space                          | mm × mm<br>inch × inch | 3150 × 2938<br>124.02" × 115.67"                              | 3337 × 2938<br>131.38" × 115.67"                               | 2170 × 2934<br>85.43" × 115.51"                               | 2355 × 2934<br>92.72" × 115.51"                                |         |                            |
|                              | Machine Weight                                | kg lbs.                | 6300 13860  | 6400 14080   | 3450 5790   | 3500 7700  |         |                            |

Red is Optional.

### Loader Specifications (A or B Type)

| Target Workpiece       |                       | 8"×8"                  |                               | 10"×10"                       |                               | 8"                            |           | 10"     |           |
|------------------------|-----------------------|------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------|---------|-----------|
|                        |                       | TT-2600G               | TT-2600CMG                    | TT-2600G                      | TT-2600CMG                    | T-2600G                       | T-2600CMG | T-2600G | T-2600CMG |
| Target Workpiece       | Outside Diameter      | mm inch                | 160 6.30"                     | 200 7.87"                     | 160 6.30"                     | 200 7.87"                     |           |         |           |
|                        | Length                | mm inch                | 100 3.94"                     | 120 4.72"                     | 100 3.94"                     | 120 4.72"                     |           |         |           |
|                        | Weight                | kg lbs.                | 4 (×2) 8.8 (×2)               | 8 (×2) 17.8 (×2)              | 4 8.8                         | 8 17.8                        |           |         |           |
| Travel (Running Speed) | X-Axis (longitudinal) | mm inch<br>(m/min ipm) | 1755 69.09"<br>(150 5905.51") | 1880 74.02"<br>(110 4330.01") | 1310 51.57"<br>(150 5905.51") | 1435 56.50"<br>(110 4330.01") |           |         |           |
|                        | Y-Axis (vertical)     | mm inch<br>(m/min ipm) | 975 38.39"<br>(170 6692.91")  | 1055 41.54"<br>(125 4921.26") | 975 38.39"<br>(170 6692.91")  | 1055 41.54"<br>(125 4921.26") |           |         |           |
|                        | Z-Axis (cross)        | mm inch<br>(m/min ipm) | 212 8.35"<br>(50 1968.50")    | 260 10.24"<br>(35 1377.95")   | 212 8.35"<br>(50 1968.50")    | 260 10.24"<br>(35 1377.95")   |           |         |           |
| Hand                   | Type                  |                        | 3-Jaws                        |                               | 3-Jaws                        |                               |           |         |           |
|                        | Stroke                | mm inch                | φ32 1.26"                     | φ48 1.98"                     | φ32 1.26"                     | φ48 1.98"                     |           |         |           |

### Work Feeder Specifications

|   |         |            |            |            |            |
|---|---------|------------|------------|------------|------------|
| Number of Pallets (3 Guide Bars/Pallet) |         | 16         | 14         | 16         | 14         |
| Loading Capacity (Per Pallet)           | kg lbs. | 40 88      | 70 154     | 40 88      | 70 154     |
| Maximum Height                          | mm inch | 450 17.72" | 400 15.75" | 450 17.72" | 400 15.75" |

## Machine Standard Accessories (with A or B Type Loader)

|   | TT-2600G       | T-2600G |
|---|----------------|---------|
| Solid Chuck and Cylinder                        | ● (L/R Each 1) | ●       |
| Chuck Auto Open/Close M-Function                | ● (L/R Each 1) | ●       |
| Chuck Airblow (Outside Spindle)                 | ● (L/R Each 1) | ●       |
| Signal Tower Light (3-Color)                    | ●              | ●       |
| Chip Conveyor (Caterpillar Type/Rear Discharge) | ●              | ●       |
| Tool Holder *2                                  | ● (L/R Each 5) | ● (5)   |
| Auto Power-Off System                           | ●              | ●       |
| Total Counter (Display)                         | ●              | ●       |
| Gantry Loader                                   | ●              | ●       |
| Work Feeder                                     | ●              | ●       |
| Turnover Unit                                   | ●              | -       |
| Quality Chute                                   | ●              | ●       |
| Splashguard                                     | ●              | ●       |
| Hydraulic Unit (1.5kW)                          | ● (L/R Each 1) | ●       |
| Footswitch for Hydraulic Unit                   | ● (L/R Each 1) | ●       |
| Coolant Pump (250W)                             | ● (L/R Each 1) | ●       |
| Lighting Apparatus                              | ●              | ●       |
| Adjustment Tool Set                             | ●              | ●       |
| Instruction Manual                              | ●              | ●       |

( ) is the number.

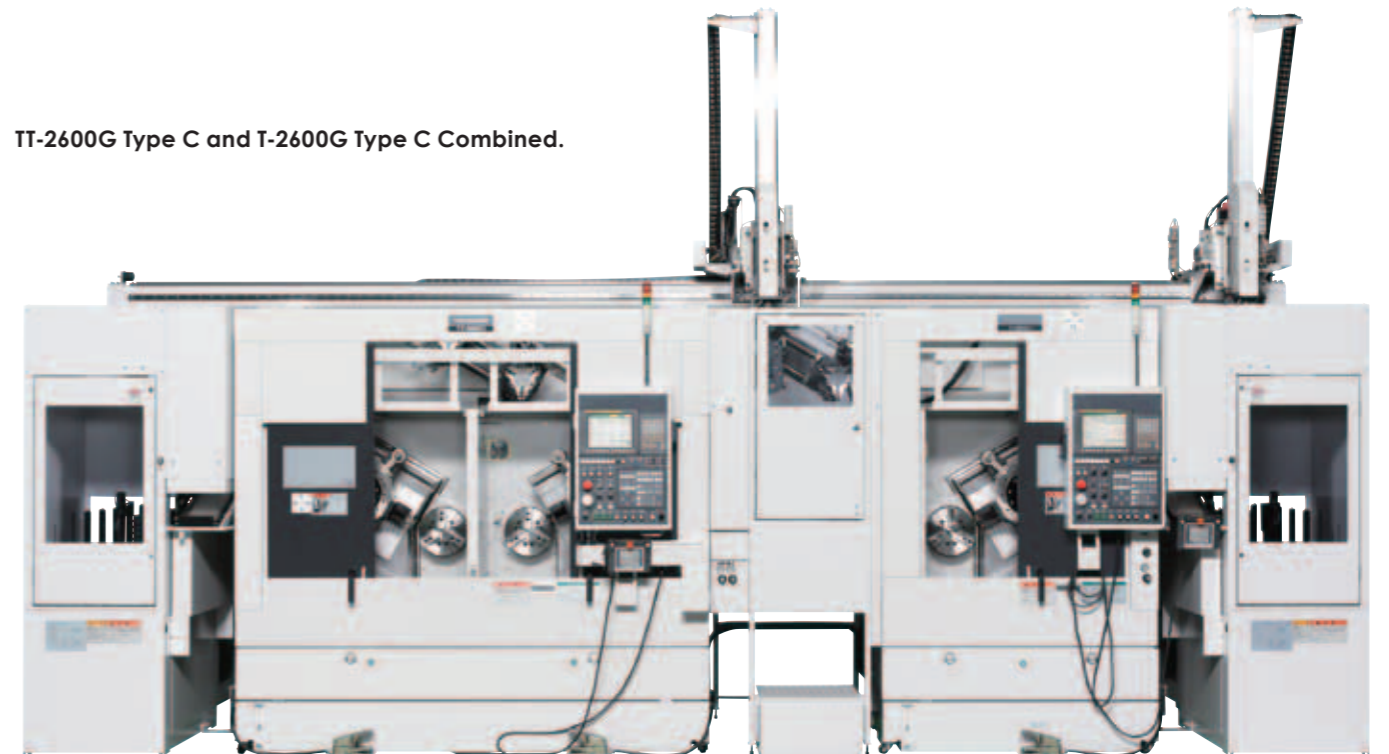
## Machine Optional Accessories

- Rotary Tool Holder (for X-Axis) \*2
- Rotary Tool Holder (for Z-Axis) \*2
- Collet (for Rotary Tool) \*2
- OD Turning and Facing Tool Holder
- Boring Bar / Drill Holder
- Offset Boring Bar / Drill Holder
- U-Drill Holder
- Offset U-Drill Holder
- Boring Bar Bush
- Drill and U-Drill Socket
- Special Chuck
- Spindle Motor
  - [For 10" Type] [For 8" Type]
  - 15/11kW : 2500min<sup>-1</sup> 11/7.5kW : 2500min<sup>-1</sup>
  - 15/11kW : 4000min<sup>-1</sup> 11/7.5kW : 3200min<sup>-1</sup>
  - 18.5/15kW : 3200min<sup>-1</sup> 15/11kW : 2500min<sup>-1</sup>
  - 18.5/15kW : 4000min<sup>-1</sup> 15/11kW : 3200min<sup>-1</sup>
  - 15/11kW : 4000min<sup>-1</sup>
- Spindle Orientation \*3
- Coolant Unit (400W, 520W)
- Chip Bucket
- Tool Setter

※ For other optional accessories, please contact us.

- \*1) 2 Steps Loader Type
- \*2) Selectable for OD Turning & Facing, or Boring Bar/Drill
- \*3) Applied to TT-2600CMG, T-2600CMG
- \*4) Electrical Brake Type (Max. 360 Point) with M-Function

TT-2600G Type C and T-2600G Type C Combined.



# TT-2600G / T-2600G

## NC Unit Specifications

FANUC : 0i-TD, 31i-B, 32i-B  
 ※ Please contact our sales persons  
 for further information.



### Software

\* The software specifications are subject to change for improvement without notice.

#### RAKU-RAKU Loader 4

##### [Standard Accessory]

The loader operation settings can be changed simply by the operation from the dedicated screen without modifying the program.

#### RAKU-RAKU Monitor 3

##### [Standard Accessory]

Easy and convenient multi-functional softwares which can perform tool life management, cutting load monitoring, group control, and also run information collection, Cp (process capability) calculation, and periodic offset addition.

#### Measurement Monitor 3

##### [Optional Accessory]

This function loads the measured data from a measuring unit and sets automatically the offset value. Also, various convenient functions such as graphical display, Cp (process capability) calculation, and data input/output are included.

### Composition

| Specifications · Contents                             | TT-2600G | TT-2600CMG | T-2600G | T-2600CMG |
|---|----------|------------|---------|-----------|
| <b>[NC Unit]</b>                                      |          |            |         |           |
| Loader A, B, C Type                                   | 0i-TD(2) | 31i-B(2)   | 0i-TD   | 32i-B     |
| Loader D Type   | 31i-B(4) |            | -       |           |
| Screen (10.4" Color LCD/MDI (Horizontal, Small Type)) | ●        |            | ●       |           |
| <b>[Software]</b>                                     |          |            |         |           |
| RAKU-RAKU Loader 4                                    | ●        |            | ●       |           |
| RAKU-RAKU Monitor 3                                   | ●        |            | ●       |           |
| Measurement Monitor 3 *1                              | ◎        |            | ◎       |           |
| <b>[Safety Devices]</b>                               |          |            |         |           |
| Front Door Interlock                                  | ●        |            | ●       |           |
| Front Door Locking Mechanism                          | ○        |            | ○       |           |
| Safety Relay  | ●        |            | ●       |           |
| Control Panel Breaker with Tripper                    | ●        |            | ●       |           |

### Main Function List

| Specifications · Contents | 0i-TD    |         | 31i-B/32i-B |  |
|---------------------------|----------|---------|-------------|--|
|                           | Standard | CM      | Standard/CM |  |
| Loader Type               | A, B, C  | A, B, C | D           |  |

#### [Controlled Axes]

|  |   |   |    |
|--|---|---|----|
| Least Input Increment *2                     | ● | ● | ●  |
| Maximum Programmable Dimension (±999999.999) | ● | ● | ●  |
| Cs Contour Control                           | - | ● | CM |
| Least Input Increment C *3                   | ▲ | ○ | ○  |
| Inch/Metric Selection                        | ● | ● | ●  |
| Interlock                                    | ● | ● | ●  |
| Machine Lock *4                              | ○ | ○ | ○  |
| Emergency Stop                               | ● | ● | ●  |
| Stored Stroke Check 1                        | ● | ● | ●  |
| Stored Stroke Check 2, 3 *5                  | ▲ | ○ | ○  |
| Stroke Limit Check Before Movement           | ▲ | ○ | ○  |
| Chuck Tailstock Barrie *6                    | ▲ | ○ | ○  |
| Mirror Image (Each Axis)                     | ▲ | ▲ | ▲  |
| Chamfering ON/OFF                            | ● | ● | ●  |
| Overload Detection *7                        | ▲ | ▲ | ▲  |
| Position Switch                              | ● | ● | ●  |

#### [Operation]

|                                    |   |   |   |
|------------------------------------|---|---|---|
| Auto Run (Memory)                  | ● | ● | ● |
| MDI Run                            | ● | ● | ● |
| DNC Run *8                         | ○ | ○ | ○ |
| DNC Run with Memory Card *8 *9     | ○ | ○ | ○ |
| Program Number Search              | ● | ● | ● |
| Sequence Number Search             | ● | ● | ● |
| Sequence Number Collation and Stop | ● | ○ | ○ |
| Program Restart                    | ◎ | ◎ | ◎ |
| Manual Interrupt · Restore         | ▲ | ▲ | ▲ |
| Wrong Operation Preventive         | ▲ | ▲ | ▲ |
| Buffer Register                    | ● | ● | ● |
| Dry Run                            | ● | ● | ● |
| Single Block                       | ● | ● | ● |
| Jog Feed                           | ● | ● | ● |
| Manual Reference Point Return      | ● | ● | ● |
| Dogless Reference Point Setting    | ● | ● | ● |
| Manual Handle Feed, 1 Unit         | ● | ● | ● |

#### [Interpolating Functions]

|                                     |   |   |    |
|-------------------------------------|---|---|----|
| Positioning (G00)                   | ● | ● | ●  |
| Exact Stop Mode (G61)               | ● | ● | ●  |
| Tapping Mode (G63)                  | ● | ● | ●  |
| Cutting Mode (G64)                  | ● | ● | ●  |
| Exact Stop (G09)                    | ● | ● | ●  |
| Linear Interpolation (G01)          | ● | ● | ●  |
| Circular Interpolation (G02/G03)    | ● | ● | ●  |
| Dwell (G04)                         | ● | ● | ●  |
| Polar Coordinate Interpolation      | - | ● | CM |
| Cylindrical Interpolation           | - | ● | CM |
| Helical Interpolation               | ○ | ● | CM |
| Thread Cutting · Synchronous Feed   | ● | ● | ●  |
| Multiple Thread Cutting             | ● | ● | ●  |
| Thread Cutting Cycle and Retraction | ● | ● | ●  |
| Continuous Thread Cutting           | ● | ● | ●  |
| Variable Lead Thread Cutting        | ● | ○ | ○  |
| Skip (G31)                          | ◎ | ◎ | ◎  |
| Reference Point Return (G28)        | ● | ● | ●  |
| Reference Point Return Check (G27)  | ● | ● | ●  |
| 2nd Reference Point Return (G30)    | ● | ● | ●  |
| 3rd, 4th Reference Point Return     | ◎ | ◎ | ◎  |

#### [Feed Functions]

|   |   |   |   |
|---|---|---|---|
| Rapid Traverse Override (F0,25%,50%,100%)       | ● | ● | ● |
| Feed Per Minute                                 | ● | ● | ● |
| Feed Per Revolution                             | ● | ● | ● |
| Constant Tangential Speed Control               | ● | ● | ● |
| Cutting Feedrate Clamp                          | ● | ● | ● |
| Automatic Acceleration/Deceleration             | ● | ● | ● |
| Rapid Traverse Bell-Shaped Accel/Decel          | ● | ● | ● |
| Feedrate Override (15 steps)                    | ● | ● | ● |
| Jog Override (15 steps)                         | ● | ● | ● |
| Override Cancel                                 | ● | ● | ● |
| Manual Feed Per Revolution                      | ▲ | ▲ | ▲ |
| Linear Accel/Decel After Feedrate Interpolation | ● | ● | ● |

| Specifications · Contents | 0i-TD    |         | 31i-B/32i-B |  |
|---------------------------|----------|---------|-------------|--|
|                           | Standard | CM      | Standard/CM |  |
| Loader Type               | A, B, C  | A, B, C | D           |  |

#### [Program Input]

|  |   |   |    |
|--|---|---|----|
| Program Code (EIA/ISO Auto Recognition)                            | ● | ● | ●  |
| Label Skip   | ● | ● | ●  |
| Parity Check   | ● | ● | ●  |
| Control In/Out   | ● | ● | ●  |
| Optional Block Skip, 1 Piece                                       | ● | ● | ●  |
| Optional Block Skip (2 to 9 Pieces)                                | ◎ | ◎ | ◎  |
| Program Number 04 Digits   | ● | ● | ●  |
| Program File Name 32 Characters                                    | - | ● | ●  |
| Sequence Number N5 Digits  | ● | - | -  |
| Sequence Number N8 Digits  | - | ● | ●  |
| Absolute/Incremental Command                                       | ● | ● | ●  |
| Decimal Point Input/<br>Pocket Calculator Type Decimal Point Input | ● | ● | ●  |
| Diameter/Radius Programming (X-Axis)                               | ● | ● | ●  |
| Plane Selection G17,G18,G19  | - | ● | CM |
| Rotary Axis Designation  | ● | ● | ●  |
| Rotary Axis Rollover   | ● | ● | ●  |
| Coordinate System Setting (G50)                                    | ● | ● | ●  |
| Auto Coordinate System Setting                                     | ● | ● | ●  |
| Drawing Dimension Direct Input *10                                 | ▲ | ○ | ○  |
| G-Code System A  | ● | ● | ●  |
| G-Code System B/C  | ▲ | ○ | ○  |
| Chamfering/Corner R Programming *11                                | ● | ● | ●  |
| Programmable Data Input(G10)                                       | ● | ● | ●  |
| Sub Program Call (10 Levels)                                       | ● | ● | ●  |
| Custom Macro   | ● | ● | ●  |
| Additional Custom Macro Common Variables                           | ● | ● | ●  |
| Single Canned Cycle  | ● | ● | ●  |
| Combined Canned Cycle  | ● | ● | ●  |
| Combined Canned Cycle II   | ● | ● | ●  |
| Drilling Canned Cycle  | ● | ● | ●  |
| Arc Radius Programming   | ● | ● | ●  |
| Workpiece Coordinate System Shift                                  | ● | ● | ●  |
| Workpiece Coordinate System Shift Direct Input                     | ● | ● | ●  |

#### [Miscellaneous Functions/Spindle Functions]

|   |   |   |    |
|---|---|---|----|
| M Function (M3 Digits)                          | ● | ● | ●  |
| Second Miscellaneous Function (B Function)      | ● | ○ | ○  |
| Miscellaneous Functions Instructions (3 Pieces) | ● | ● | ●  |
| Spindle Functions (S4 Digits)                   | ● | ● | ●  |
| Constant Surface Speed Control                  | ● | ● | ●  |
| Spindle Override                                | ● | ● | ●  |
| Spindle Orientation                             | ● | ● | ●  |
| Rigid Tap (Spindle Center)                      | ● | ● | ●  |
| Rigid Tap (Rotary Tool)                         | - | ● | CM |

#### [Tool Functions/Tool Offset Functions]

|   |   |   |   |
|---|---|---|---|
| T Function (T2+2 Digits)                          | ● | ● | ● |
| Tool Offsets, 128 Pieces (L/R Each 64 Pieces) *12 | ● | - | - |
| Tool Offsets, 200 Pieces (L/R Each 99 Pieces) *13 | - | ● | ● |
| Tool Position Offset                              | ● | ● | ● |
| Tool Diameter/Nose R Compensation                 | ● | ● | ● |
| Tool Geometry/Wear Compensation                   | ● | ● | ● |
| Tool Offset Counter Input                         | ● | ● | ● |
| Tool Offset Measured Value Direct Input           | ● | ● | ● |
| Tool Offset Measured Value Direct Input B *14     | ○ | ○ | ○ |
| Tool Life Management *15                          | ● | ○ | ○ |

#### [Accuracy Offset Functions]

|  |   |   |   |
|--|---|---|---|
| Backlash Compensation                              | ▲ | ▲ | ▲ |
| Backlash Compensation by Rapid Traverse / Feedrate | ▲ | ▲ | ▲ |

#### [Editing]

|   |    |    |    |
|---|----|----|----|
| Part Program Memory Capacity 512kbyte *16 | T  | T  | -  |
| Part Program Memory Capacity 1Mbyte *16   | TT | TT | TT |
| Part Program Memory Capacity 2Mbyte *16   | -  | ○  | ○  |
| Part Program Memory Capacity 4Mbyte *16   | -  | ○  | ○  |
| Part Program Memory Capacity 8Mbyte *16   | -  | ○  | ○  |
| Registrable Programs, 800 Programs *17    | ●  | -  | -  |
| Registrable Programs, 1000 Programs *17   | -  | ●  | ●  |
| Program Editing                           | ●  | ●  | ●  |
| Program Protection                        | ●  | ●  | ●  |

| Specifications · Contents | 0i-TD    |         | 31i-B/32i-B |  |
|---------------------------|----------|---------|-------------|--|
|                           | Standard | CM      | Standard/CM |  |
| Loader Type               | A, B, C  | A, B, C | D           |  |

|  |   |   |   |
|--|---|---|---|
| Extended Program Editing               | ● | ● | ● |
| Playback                               | ◎ | ◎ | ◎ |
| Machining Time Stamp                   | - | ○ | ○ |
| Background Editing                     | ● | ● | ● |
| Multiple-Programs Simultaneous Editing | - | ● | ● |

#### [Setting/Display]

|   |   |   |   |
|---|---|---|---|
| Status Display                          | ● | ● | ● |
| Clock Function                          | ● | ● | ● |
| Current Position Display                | ● | ● | ● |
| Program Comment Display (31 Characters) | ● | ● | ● |
| Parameter Setting and Display           | ● | ● | ● |
| Alarm Display                           | ● | ● | ● |
| Alarm Log Display                       | ● | ● | ● |
| Operation Log Display                   | ▲ | ▲ | ▲ |
| Run Hours and Parts Count Display       | ● | ● | ● |
| Actual Speed Display                    | ● | ● | ● |
| Actual Spindle Speed and T Code Display | ● | ● | ● |
| Servo Adjustment Screen                 | ● | ● | ● |
| Spindle Adjustment Screen               | ● | ● | ● |
| Maintenance Information Screen          | ● | ● | ● |
| Software Operator's Panel               | ◎ | ◎ | ◎ |
| Data Protection Key, 1 Kind             | ● | ● | ● |
| Screen Clear                            | ● | ● | ● |
| Parameter Setup Support Screen          | ● | ● | ● |
| Help Function                           | ● | ● | ● |
| Self Diagnostic Function                | ● | ● | ● |
| Scheduled Maintenance Screen            | ● | ● | ● |
| Auto Data Backup                        | ○ | ● | ● |

#### [Display Languages]

|                                    |   |   |   |
|------------------------------------|---|---|---|
| English                            | ● | ● | ● |
| Other Language *18                 | ▲ | ○ | ○ |
| Display Language Dynamic Switching | ▲ | ▲ | ▲ |

#### [Data I/O]

|                                  |   |   |   |
|----------------------------------|---|---|---|
| RS-232C Interface 1ch            | ● | ● | ● |
| Fast Data Server                 | ◎ | ◎ | ◎ |
| External Workpiece Number Search | ◎ | ◎ | ◎ |
| Memory Card I/O                  | ● | ● | ● |
| USB Memory I/O                   | ● | ● | ● |
| One-Touch Macro Call             | ◎ | ◎ | ◎ |

#### [Communication Function]

|                    |   |   |   |
|--------------------|---|---|---|
| Inclusion Ethernet | ● | ● | ● |
| Fast Ethernet      | ◎ | ◎ | ◎ |

#### [Other]

|             |   |   |   |
|-------------|---|---|---|
| Touch Panel | ◎ | ◎ | ◎ |
|-------------|---|---|---|

● : Standard ○ : Optional ◎ : Special - : None ▲ : Parameter setting is required.  
 (Note: Normally, the parameters need not to be changed. If the parameters are to be set or changed, understand completely the functions of such parameters. Wrong setting could cause the machine to be moved unexpectedly, resulting in machine or workpiece damage or personal injury.)  
 CM : C-Axis/Milling Standard Specification.  
 T : T-2600 Standard Specification. TT : TT-2600 Standard Specification.

- \*1) I/O addition and the PC change are necessary.
- \*2) 0.001mm, 0.0001inch, 0.001deg
- \*3) IS-C 0.0001mm, 0.0001deg, 0.00001inch.
- \*4) Addition of switch is required.
- \*5) Not coexistent with chuck tailstock barrier.
- \*6) Not coexistent with Stored Stroke Check 2, 3.
- \*7) Required when RAKU-RAKU Monitor 3 is used.
- \*8) DNC run mode transfer switch is required.
- \*9) CF card and adaptor is required.
- \*10) Not coexistent with chamfering/corner R.
- \*11) Not coexistent with drawing dimension direct input.
- \*12) T-2600 is 64 Pieces.
- \*13) T-2600 is 99 Pieces.
- \*14) Tool setter is required.
- \*15) Cannot be used when RAKU-RAKU Monitor 3 is installed.
- \*16) The program storage capacity 262Kbyte 655m is required when RAKU-RAKU Monitor 4/ RAKU-RAKU Loader 4 is used.
- \*17) 150registration programs is required when RAKU-RAKU Monitor 4/ RAKU-RAKU Loader 4 is used.
- \*18) Japanese (Kanji), German, French, Spanish, Italian, Chinese (traditional), Chinese (simplified), Korean, Portuguese, Dutch, Danish, Swedish, Hungarian, Czech, Polish, Russian, Turkish



# TT-2600G

## TAKISAWA®

### TAKISAWA MACHINE TOOL CO., LTD.

983 Natsukawa, Kita-ku, Okayama 701-0164, JAPAN

Telephone : (81)86-293-1500

Fax : (81)86-293-5799

Website : <http://www.takisawa.co.jp>

E-mail : [tkj-1@takisawa.co.jp](mailto:tkj-1@takisawa.co.jp) (America)

[tkj-2@takisawa.co.jp](mailto:tkj-2@takisawa.co.jp) (Europe)

[tkj-3@takisawa.co.jp](mailto:tkj-3@takisawa.co.jp) (Asia)

Japanese laws prohibit this machine from being used to develop or manufacture "weapons of mass destruction" or "conventional arms", as well as from being used to process parts for them.  
Export of the product may require the permission of governmental authorities of the country from where the product is exported.  
Should you wish to resell, transfer or export the product, please notify Takisawa Machine Tool Co., Ltd. or our distributor in advance.

\*The appearance, specifications, and relevant software of the product are subject to change for improvement without notice.

\*Please make an inquiry to our sales representatives for details of the product.



ISO 9001 Certified  
JQA-2010  
(Head Office)



JAB  
CM007  
ISO 14001  
12ER-865  
(Head Office)

#### ■ Overseas Network

- THAILAND** Takisawa (Thailand) Co.,Ltd.  
Telephone : (66)2726-1530-2 Fax : (66)2726-1533
- INDONESIA** PT. Takisawa Indonesia  
Telephone : (62)21-45852466 Fax : (62)21-45852467
- INDIA** SAP Takisawa Machine Tools Private Ltd.  
Takisawa Machine Tool India Liaison Office  
Telephone : (91)80-26662386 Fax : (91)80-26662392
- CHINA** Takisawa (Shanghai) Co., Ltd.  
Telephone : (86)21-6235-0938 Fax : (86)21-6235-0905
- USA** Takisawa, Inc.  
Telephone : (1)847-419-0046 Fax : (1)847-419-0043
- GERMANY** Takisawa Machine Tool Germany Representative Office  
Telephone : (49)2056-2598-15 Fax : (49)2056-5994-79