

NC ROTARY TABLE

# Tilting NC Rotary Table TT251·TT321

※TW is the side motor type tilting table

## High rigidity tilting tables to suit 5 axis machining on large work pieces with heavy cutting

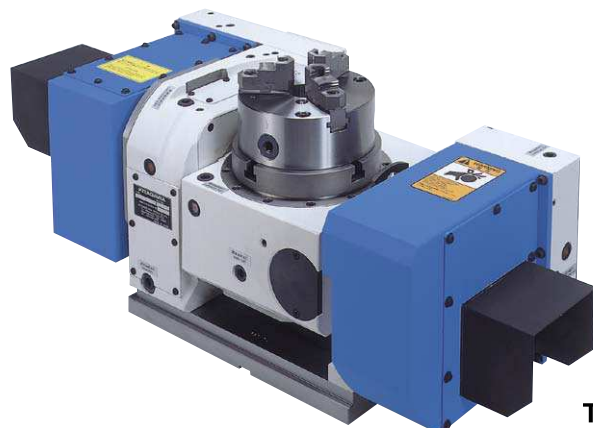
- Minimum size in its class
- High rigidity for heavy cutting
- High accuracy
- Rotary Joint built in as option
- Cylinder mountable
- Hydraulic clamping method
- Integrated air booster provides high clamping torque (comparable to hydraulic) from a standard air supply

\*CE correspondence

※In specification with the foreign trade control ordinance, permission of the ministry of economy, trade and industry is required when exporting twin axis products overseas.

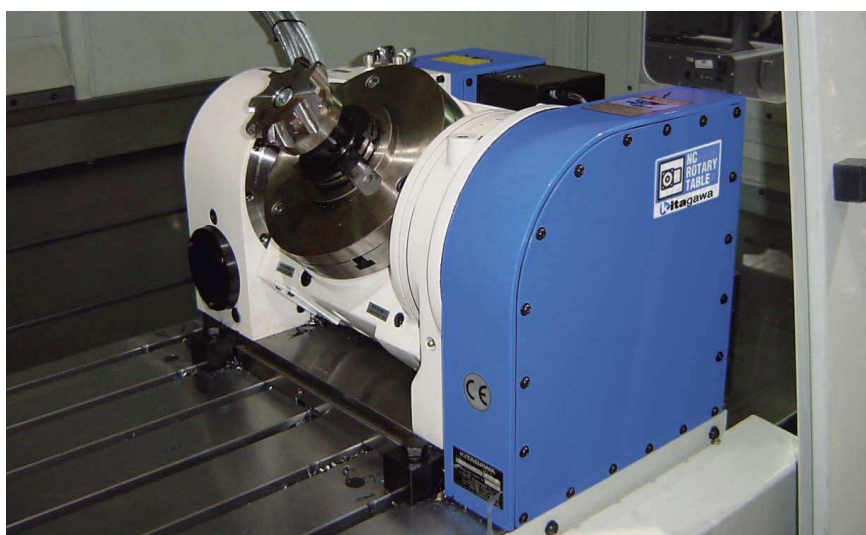


TT251



TW

### Sample Application



▲Allows the complex machining of large work pieces.

4th axis specifications				M signal specification			
<b>TT</b>	<b>251</b>	<b>B</b>	<b>* * * *</b>	<b>TT</b>	<b>251</b>	<b>H V</b>	<b>* *</b>
Table Size 251·321		Design No.		Table Size 251·321		Design No.	
Type		Clamping method		Type		Quinte specification	
TT:STD type TW:Tilting straight type		B:External air hydraulic booster H:Hydraulic		TT:STD type TW:Tilting straight type		B: Air-Hydraulic (external air hydraulic booster) H: Hydraulic	
		Tilting axis motor type Rotary axis motor type					

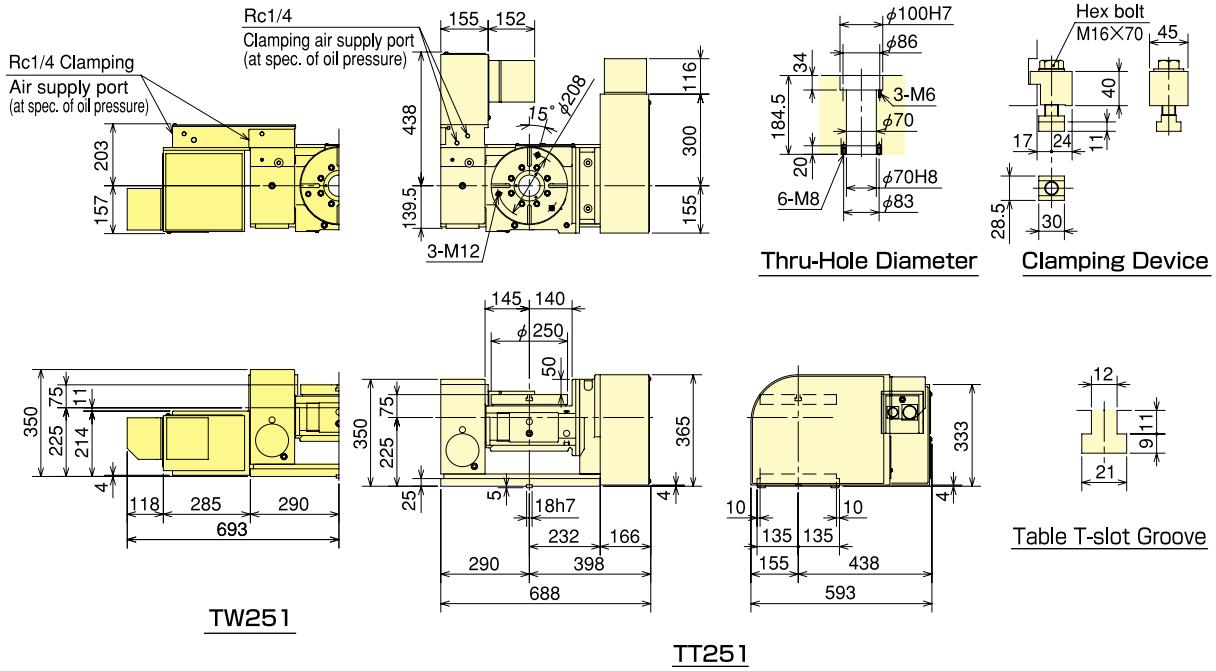
## Specifications

Model		TT251/TTS251	TT321/TTS321	
Tilting angle		-35° ~ +110°	-35° ~ +110°	
Table dia (mm)		φ 250	φ 320	
Register diameter on Face Plate (mm)		φ 100 H 7	φ 135 H 7	
Spindle through hole diameter (mm)		φ 70	φ 110	
Centre Height (mm)		225	255	
Clamping method		Air-Hydraulic/Hydraulic	Air-Hydraulic/Hydraulic	
Clamping torque (N·m) (In pneumatic 0.45MPa/hydraulic 3.5MPa)	Rotating axis	900	2600	
	Tilting axis	1200	2600	
Motor axis reduced inertia (kg·m <sup>2</sup> )	Rotating axis	0.00070	0.00083	
	Tilting axis	0.00054	0.00046	
Servomotor (for FANUC specification)		α iF 4/5000	α iF 8/3000	
Gear ratio	for FANUC specification	Rotating axis	1/90	1/120
		Tilting axis	1/180	1/360
	M signal specification	Rotating axis	1/90	1/180
		Tilting axis	1/180	1/360
Max. spindle speed	for FANUC specification	Rotating axis (for min <sup>-1</sup> /motor300min <sup>-1</sup> )	33.3	25
		Tilting axis (for min <sup>-1</sup> /motor300min <sup>-1</sup> )	16.6	8.3
	M signal specification	Rotating axis (for min <sup>-1</sup> /motor300min <sup>-1</sup> )	33.3	16.6
		Tilting axis (for min <sup>-1</sup> /motor300min <sup>-1</sup> )	16.6	8.3
Allowable work inertia (kg·m <sup>2</sup> )		0.78	1.92	
Indexing accuracy (sec)	Rotating axis	20	20	
	Tilting axis	45	45	
Repeatability (sec)		4	4	
Mass of product TT/TTS (kg)		260 / 270	350 / 360	
Rotary Joint (Option · P97 reference)		RJ70H25T02 Hydraulic/Pneumatic6-port	RJ70H32T03 Hydraulic/Pneumatic6-port	
Allowable Load	at horizontal (kg)	100	150	
	at tilted (kg)	60	100	
Allowable load (When clamped to table)	F (kN)	12	16	
	F×L (N·m)	1200	2600	
	F×L (N·m)	900	2600	
Allowable cutting torque	T (N·m)	600	1000	
Moment of tilting weight capacity	W×L (kgf·m)	26	75	

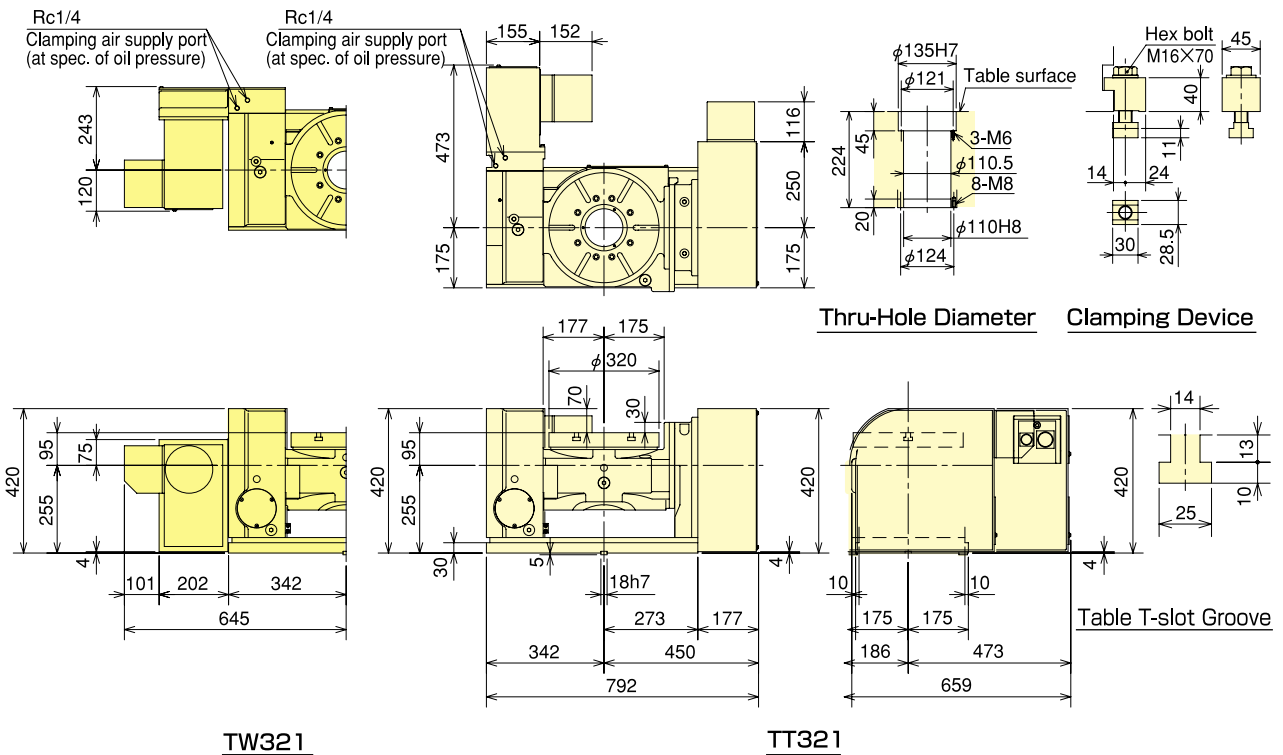
Note) 1. The switch for pressure checking is incorporated to all series except TC/DM of NC tables. 2. In case of hydraulic clamp specification, the solenoid valve for the table clamp not incorporated. Consequently, customer shall prepare it. 3. Neither cable nor hose is fitted between NC rotary table and machine tool... 4. Each product mass is determined by a Kitagawa M signal spec.

## ■Dimensions [4th axis specifications]

### TT251 (TW)



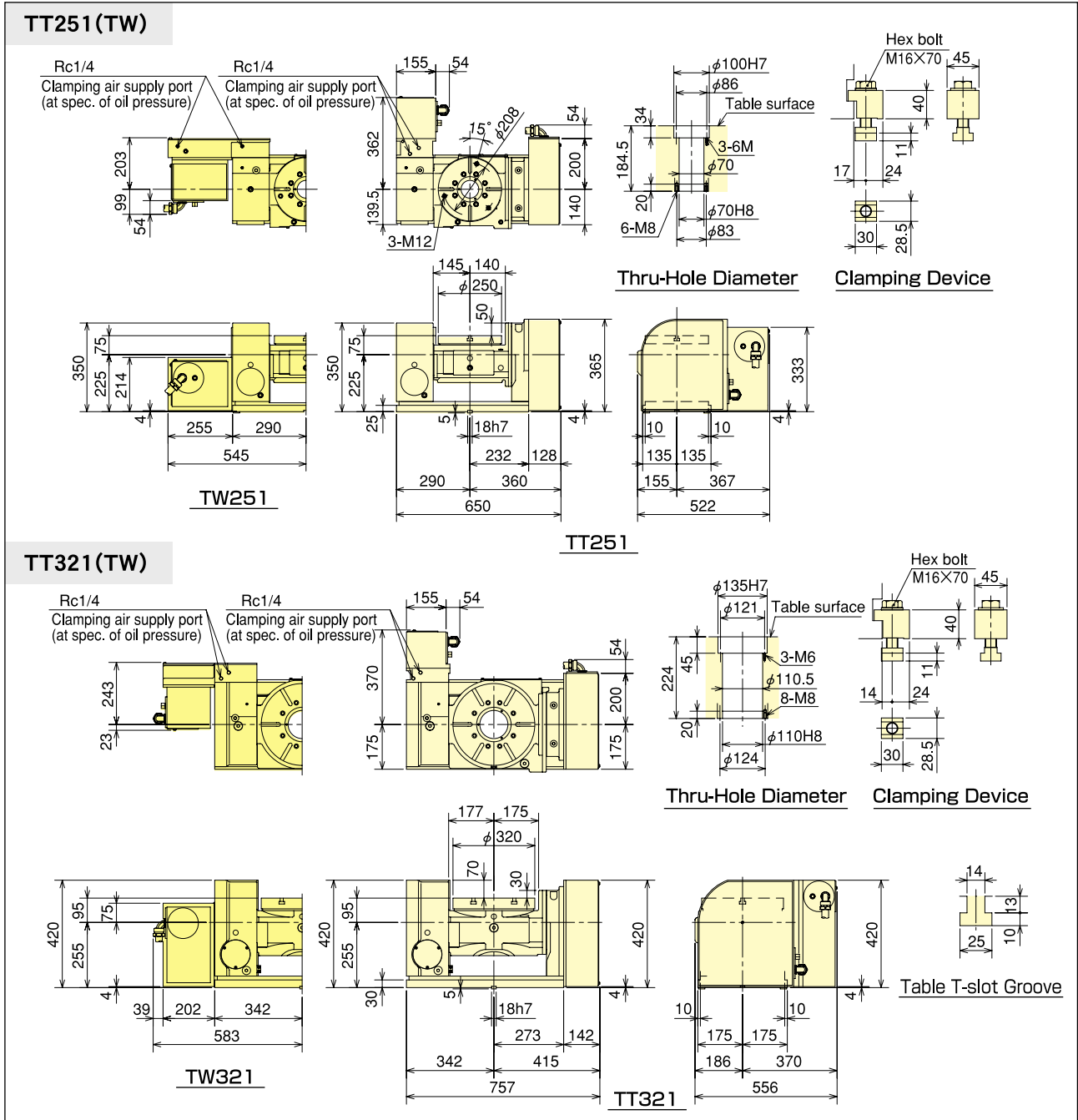
### TT321 (TW)



※The above dimensions are the same as FANUC spec.  
Those dimensions may vary from motor to motor that is mounted.

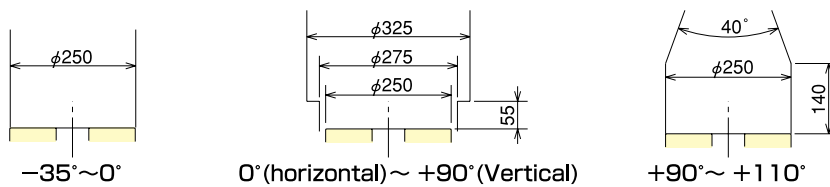
**■Dimensions [Kitagawa own controller]**

\*The dimensions may vary from motor to motor that is mounted.



# DATA Tilting NC table • Work loadable area

**TW251**



**TW321**

