



NC ROTARY
TABLE

High Performance NC Rotary Table

TR series

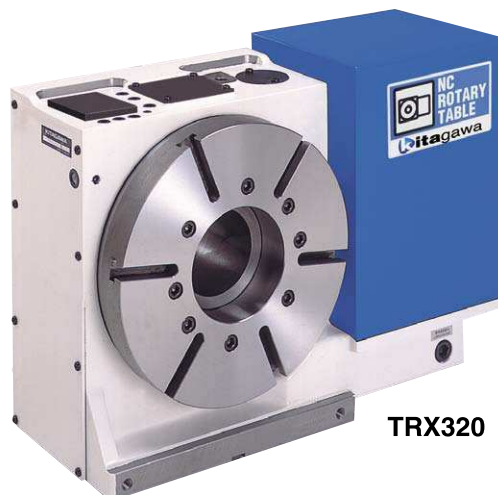
Side motor mounted,
Vertical or Horizontal Usage

TRX320 • TR400 • TR500 • TR630
TLX250 • TLX320 • TL400

High performance range for machining large work pieces

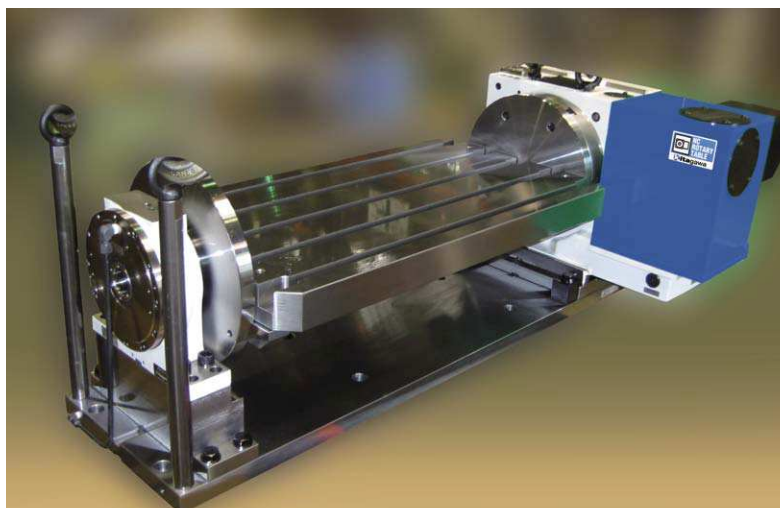
- High rigidity for heavy cutting
- Hydraulic clamping method
- High accuracy
- Hydraulic clamping torque obtained by pneumatic pressure via air hydraulic booster. (TRX, TLX)
- Rotary joint options available
- Vertically and horizontally installed type
- Large thru-hole
- Vertical mounted motor
- Rotary scale can be fitted to further increase accuracy

* CE correspondence

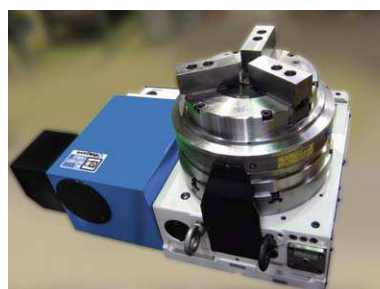


TRX320

Sample Application



▲ Only Kitagawa can offer this combination of NC Rotary Table and chuck



▲ Can be used vertically and horizontally. Left and right hand versions available to suit machining area.

4th axis specifications				M signal specification			
TRX 320 H * * *		TRX 320 B V * *					
Table Size TRX: 320 TLX: 250·320		Table Size TRX: 320 TLX: 250·320		Table Size TR: 400·500·630 TL: 400		Table Size TR: 400·500·630 TL, TU: 400·500	
Type Right hand: TRX Left hand: TLX		Type Right hand: TRX Left hand: TLX		Type Right hand: TR Left hand: TL Top-motor : TU		Type Right hand: TR Left hand: TL Top-motor : TU	
Design No. Motor type		Design No. Motor type		Design No. Motor type		Design No. Motor type	
Clamping method B: Air-Hydraulic(integrated air hydraulic booster) H: Hydraulic		Clamping method B: Air-Hydraulic(integrated air hydraulic booster) H: Hydraulic		Clamping method B: Air-Hydraulic(integrated air hydraulic booster) H: Hydraulic		Clamping method B: Air-Hydraulic(integrated air hydraulic booster) H: Hydraulic	
Quinte specification		Quinte specification		Quinte specification		Quinte specification	
TR 400 H 2 * * *		TR 400 H V * *					
Table Size TR: 400·500·630 TL: 400		Table Size TR: 400·500·630 TL, TU: 400·500		Table Size TR: 400·500·630 TL, TU: 400·500		Table Size TR: 400·500·630 TL, TU: 400·500	
Type Right hand: TR Left hand: TL		Type Right hand: TR Left hand: TL		Type Right hand: TR Left hand: TL Top-motor : TU		Type Right hand: TR Left hand: TL Top-motor : TU	
Design No. Motor type		Design No. Motor type		Design No. Motor type		Design No. Motor type	
Gear Ratio 2: 1/180		Gear Ratio 2: 1/180		Gear Ratio 2: 1/180		Gear Ratio 2: 1/180	
Clamping method B: Air-Hydraulic(external air hydraulic booster) H: Hydraulic		Clamping method B: Air-Hydraulic(external air hydraulic booster) H: Hydraulic		Clamping method B: Air-Hydraulic(external air hydraulic booster) H: Hydraulic		Clamping method B: Air-Hydraulic(external air hydraulic booster) H: Hydraulic	
Quinte specification		Quinte specification		Quinte specification		Quinte specification	

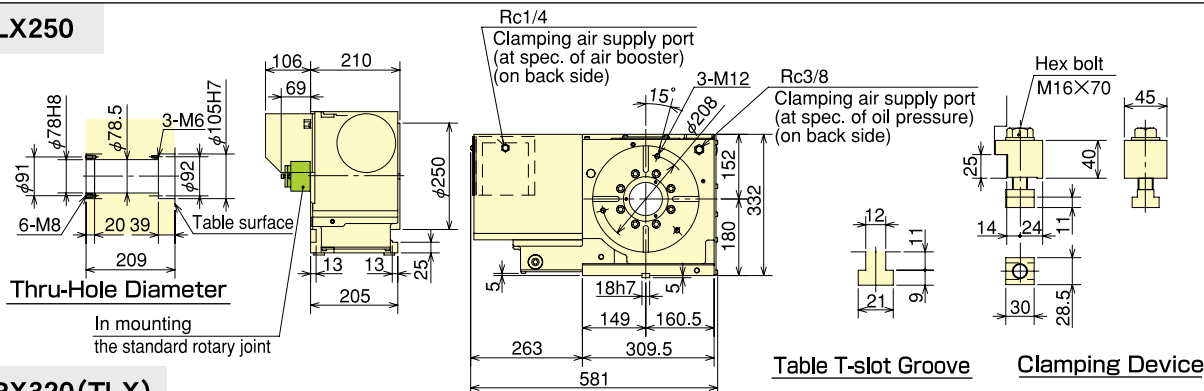
Specifications

Model		TLX250	TRX320	TR400	TR500	TR630
Right hand		×	○	○	○	○
Left hand		○	○	○	○	×
Table dia (mm)		φ 250	φ 320	φ 400	φ 500	φ 630
Register diameter on Face Plate (mm)		φ 105H7	φ 135H7	φ 180 H 7	φ 200 H 7	φ 280 H 7
Spindle through hole diameter (mm)		φ 78	φ 110	φ 150	φ 170	φ 250
Centre Height (mm)		180	225	255	310	400
Clamping method		Air-Hydraulic/Hydraulic	Air-Hydraulic/Hydraulic	Air-Hydraulic/Hydraulic	Air-Hydraulic/Hydraulic	Air-Hydraulic/Hydraulic
Clamping torque (N·m) (Pneumatic: TRX·TLX 0.5MPa, TR·TL 0.45MPa) Hydraulic 3.5MPa		1100	2600	2500	3200	4000
Motor axis reduced inertia (kg·m ²)		0.00073	0.00085	0.0028	0.0028	0.0064
Servomotor (for FANUC specification)		α IF 4/5000	α IF 8/3000	α IF 12/4000	α IF 12/4000	α IF 22/3000
Gear ratio (Decel. Ratio in M signal)		1/90(1/120)	1/120(1/180)	1/180	1/180	1/180
Max. spindle speed	FANUC specification (min ⁻¹)	33.3(3000min ⁻¹)	25 (3000min ⁻¹)	11.1(2000min ⁻¹)	11.1(2000min ⁻¹)	11.1(2000min ⁻¹)
	M signal specification (min ⁻¹)	25 (3000min ⁻¹)	16.6(3000min ⁻¹)	8.3(1500min ⁻¹)	8.3(1500min ⁻¹)	8.3(1500min ⁻¹)
Allowable work inertia (kg·m ²)		1.95	4.48	10.00	18.73	49.62
Indexing accuracy (sec)		20	20	20	20	20
Repeatability (sec)		4	4	4	4	4
Mass of product (kg)		142	181	350	550	900
Manual Tailstock (as an option · P89 reference)		TS250RN	TS320RN	TS400RN	TS500RN	TS630RN
Tail Spindle (as an option · P93 reference)		TSR181A	TSR181A-45	Order production	Order production	Order production
Rotary Joint (as an option · P97 reference)		RJ70H25D05 Hydraulic/Pneumatic6-port	RJ70H32K02 Hydraulic/Pneumatic6-port	Order production	Order production	Order production
Allowable Load	Horizontal (kg)	250	350	500	600	1000
	Vertical (kg)	125	180	250	300	400
Allowable load (When clamped to table)	F (kN)	21	26	32	50	70
	F×L (N·m)	1600	2500	5000	8000	10000
	F×L (N·m)	1100	2600	2500	3200	4000
Allowable cutting torque	T (N·m)	730	1000	1700	2600	5000

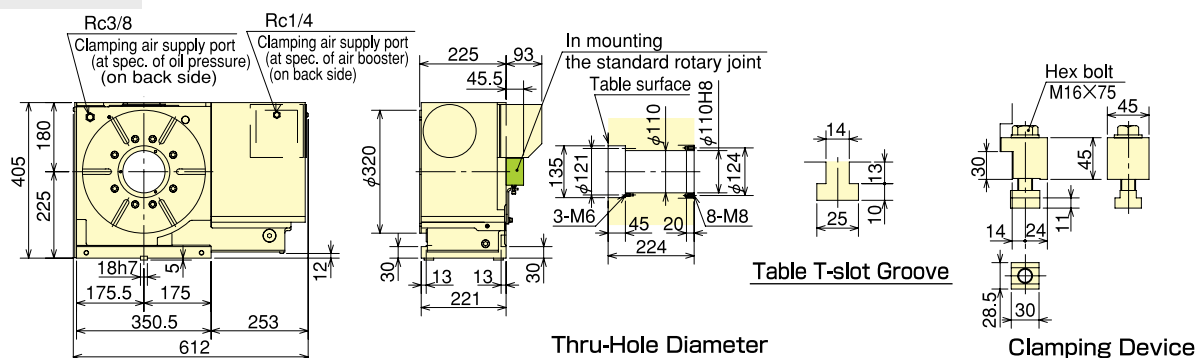
Note) 1. The switch for pressure checking is incorporated to all series except TC/DM of NC tables. 2. In case of air + hyd. clamp specification, the solenoid valve for table clamp is incorporated. 3. Solenoid valve is not incorporated in case of hydraulic clamp method. Consequently, customer shall prepare 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, TRX320 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 P93. 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]

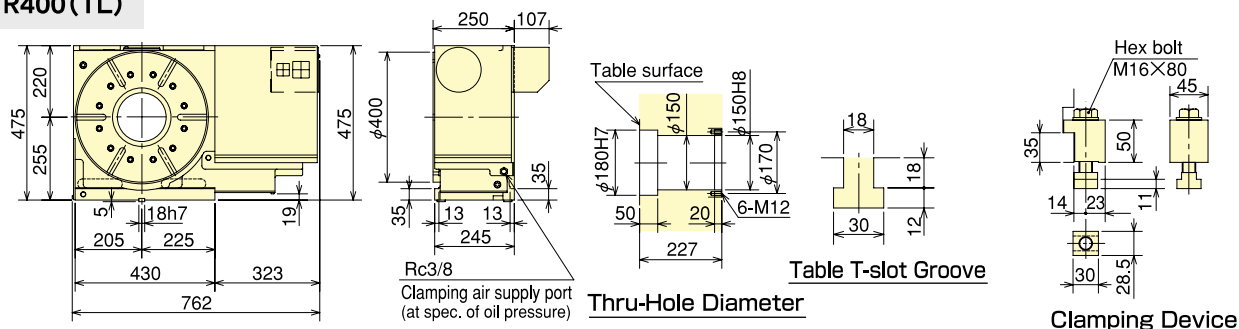
TLX250



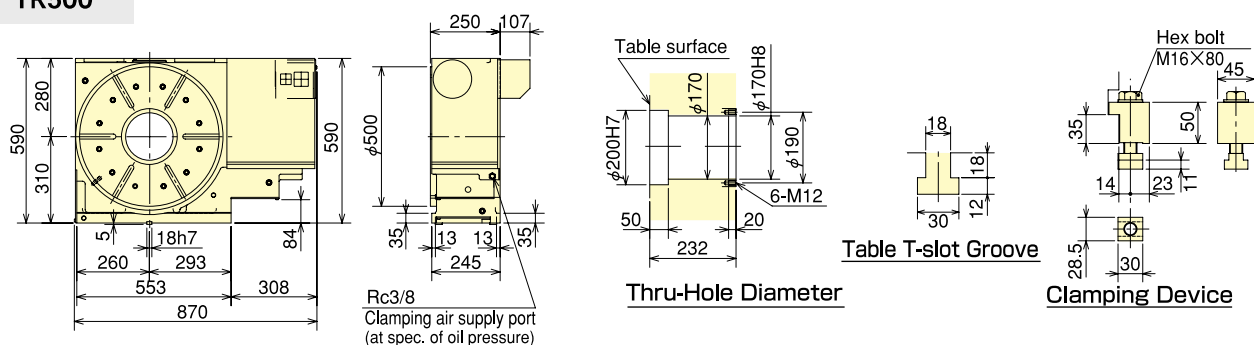
TRX320(TLX)



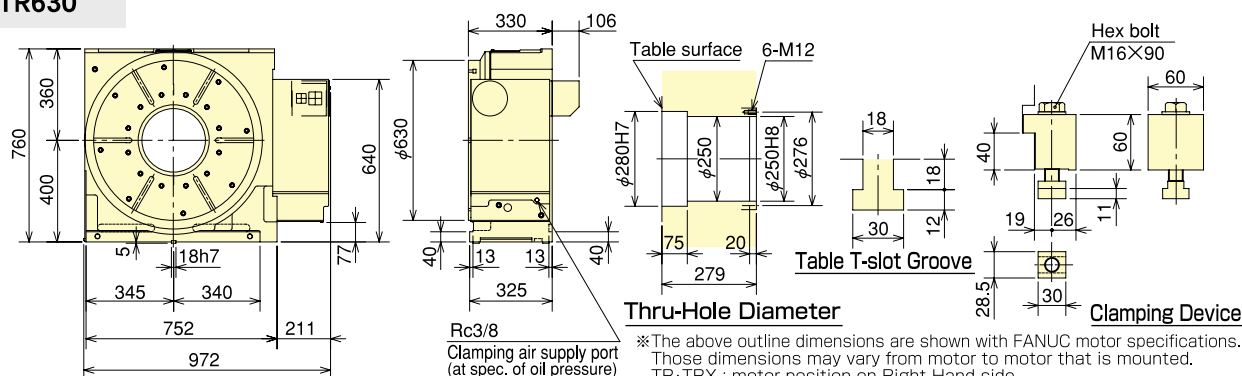
TR400(TL)



TR500



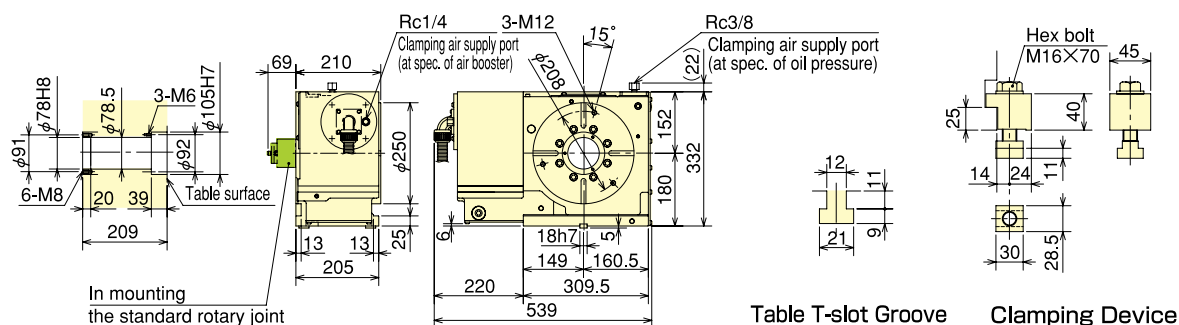
TR630



*The above outline dimensions are shown with FANUC motor specifications. Those dimensions may vary from motor to motor that is mounted.
TR·TRX : motor position on Right Hand side.
TL·TLX : motor position on Left Hand side.

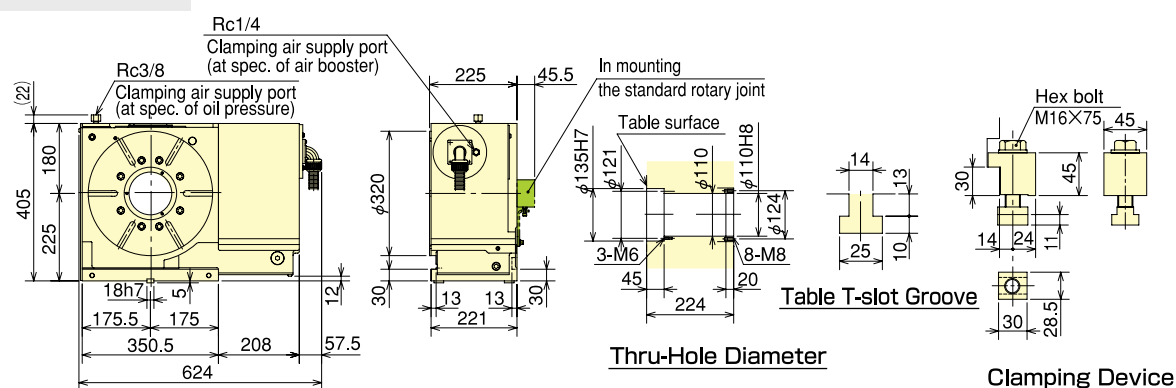
*The dimensions may vary from motor to motor that is mounted.

TLX250

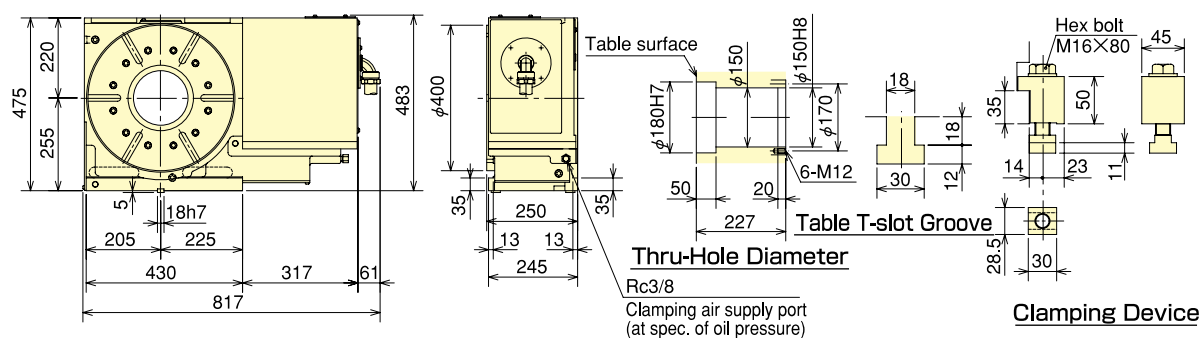
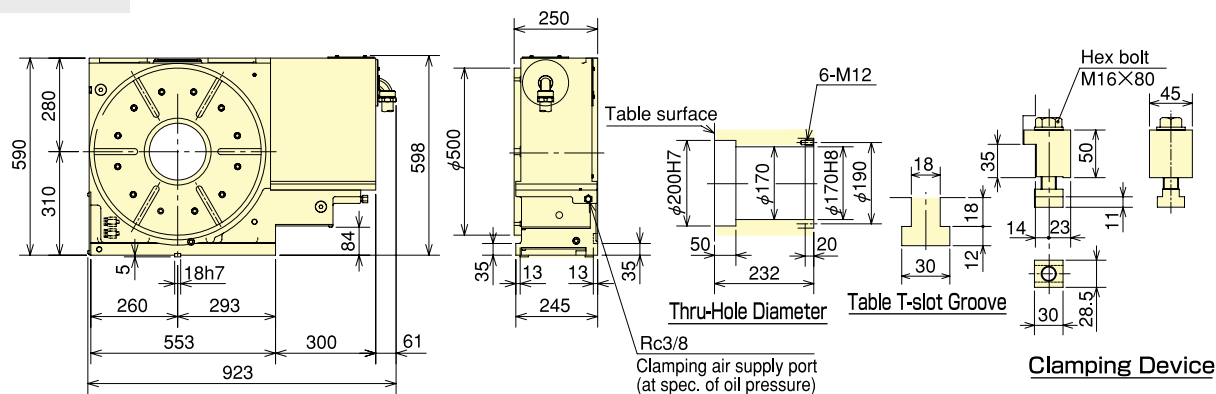


Thru-Hole Diameter

TRX320(TLX)



TR400(TL)

**TR500**

※TR・TRX : motor position on Right Hand side. TL・TLX : motor position on Left Hand side.
 ※Contact to Kitagawa on TR630 with MAC mini i Series. Kitagawa about M signal spec. of 630-size.