

TR-120FF 4th, 5th axis for Tilting NC Rotary Table

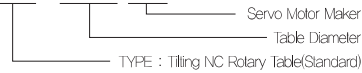


Application / Benefits

Compact Tilting Series, High Precision&High Speed Systems
 Convenient JIG Design, Compact Design, Extremely Rigid Body
 High Clamping power (Hydraulic)

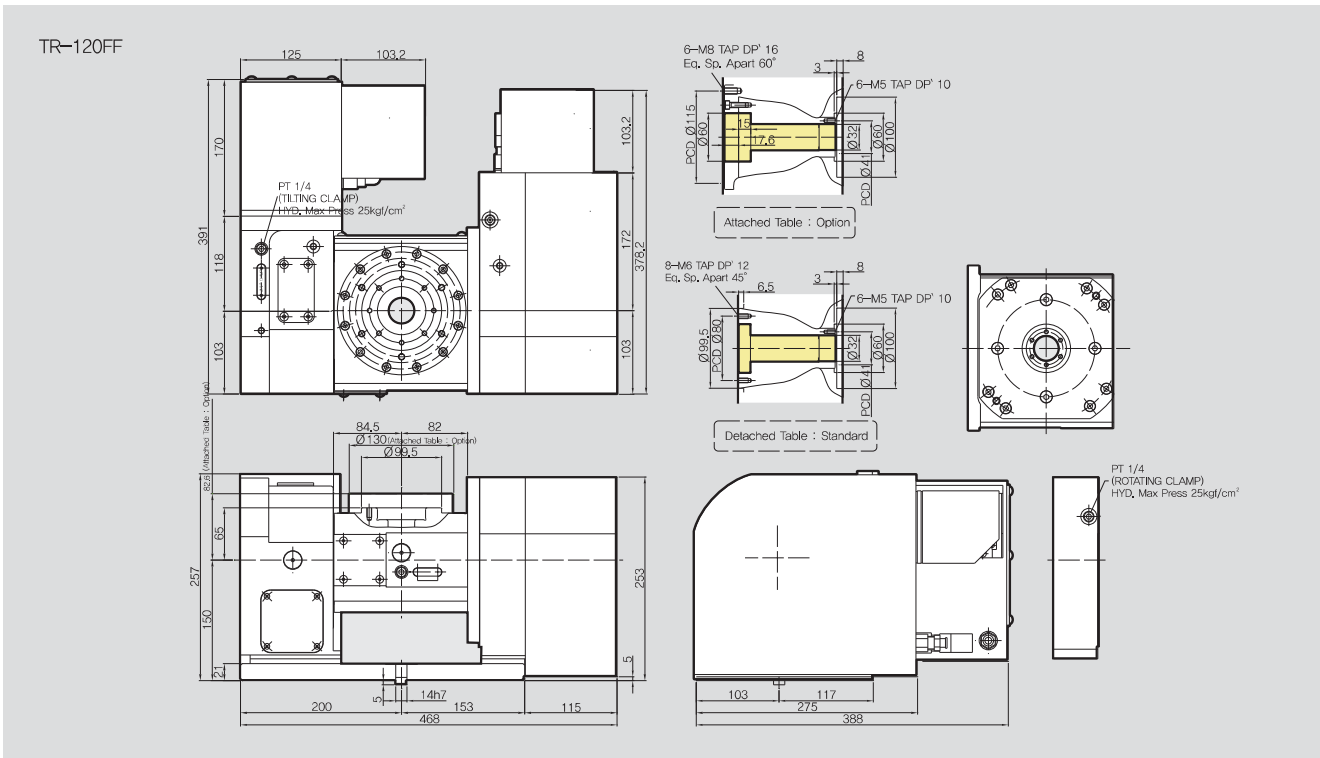
Model No.

TR-120 FF



Servo Motor Maker

- | | |
|----------------|-----------------|
| F : FANUC | H : HEIDENHAIN |
| S : SIEMENS | L : LS MECAPION |
| M : MITSUBISHI | SY : SANYO |
| P : PANASONIC | FA : FAGOR |
| Y : YASKAWA | O : OKUMA |



SPECIFICATIONS

Table Dia. [mm]	Ø130	
Center Height [mm]	150	
Resister Dia. On Face Plate	Ø60H7	
Spindle Through Hole Dia. [mm]	Ø32H8	
Clamp Method	Hydraulic Max. 20bar	
Allowable Work Inertia [kgm ²]	0.06	
Weight [kg]	120	
Max. Spindle Speed [mm ⁻¹]	Rotating Axis	Tilting Axis
	33.3	16.6
Gear Ratio [mm]	1/90	1/180
Repeatability Accuracy [sec]	4	4
Indexing Accuracy [sec]	40	60
Clamp Torque [N · m]	200	300
Servo Motor [FANUC]	αiF2 / 5000	αiF2 / 5000

Tilting Range: -20° ~110°

Allowable load	Horizontal [kg]		35
	Vertical [kg]		20
Allowable cutting load	F [kN]		4
	F x L [N·m]		380
Allowable Cutting Torque	F x L [N·m]		240
	[N·m]		190
Moment Of Tilting Weight	W x L [kgf·m]		10

TR-200FF 4th, 5th axis for Tilting NC Rotary Table



Application / Benefits

Compact Tilting Series, High Precision&High Speed Systems
 Convenient JIG Design, Compact Design, Extremely Rigid Body
 High Clamping power (Hydraulic)

Model No.

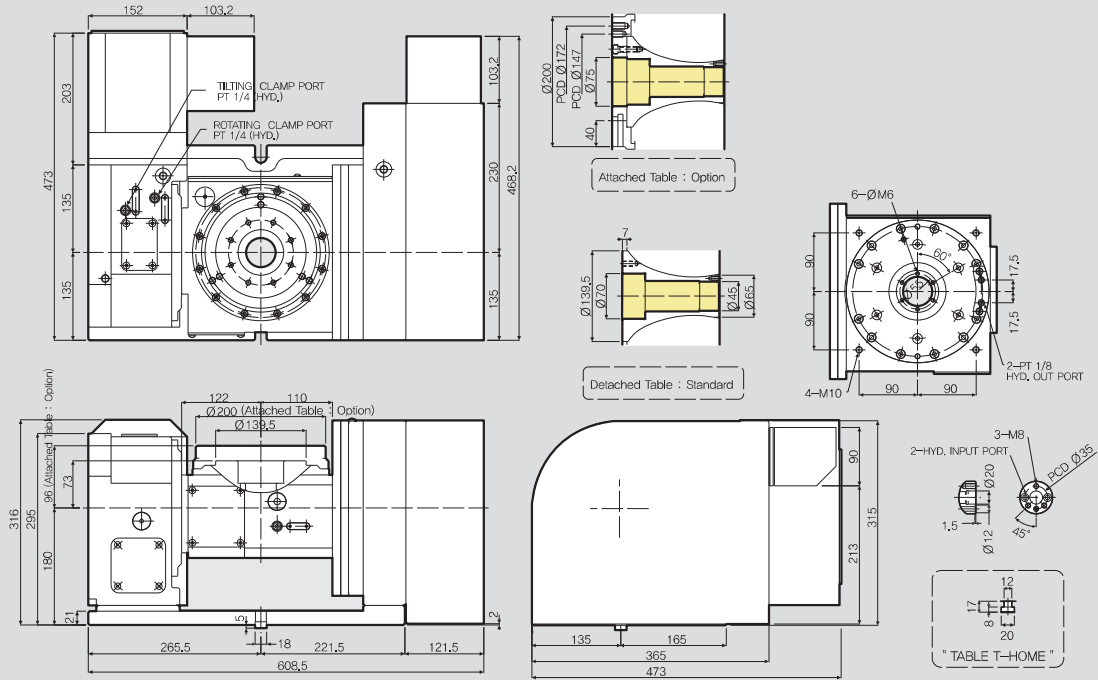
TR-200 FF

— Servo Motor Maker
 — Table Diameter
 — TYPE : Tilting NC Rotary Table(Standard)

Servo Motor Maker

F : FANUC H : HEIDENHAIN
 S : SIEMENS L : LS MECAPION
 M : MITSUBISHI SY : SANYO
 P : PANASONIC FA : FAGOR
 Y : YASKAWA O : OKUMA

TR-200FF



NC Rotary Table

SPECIFICATIONS

Tilting Range: $-20^{\circ} \sim 110^{\circ}$

Table Dia. [mm]	Ø200	
Center Height [mm]	180	
Resister Dia. On Face Plate	Ø70H7	
Spindle Through Hole Dia. [mm]	Ø45H8	
Clamp Method	Hydraulic Max. 35bar	
Allowable Work Inertia [kgm ²]	0.25	
Weight [kg]	250	
	Rotating Axis	Tilting Axis
Max. Spindle Speed [mm ⁻¹]	33.3	16.6
Gear Ratio [mm]	1/90	1/180
Repeatability Accuracy [sec]	4	4
Indexing Accuracy [sec]	30	60
Clamp Torque [N · m]	450	800
Servo Motor [FANUC]	αiF4 / 4000	αiF4 / 4000

Allowable load	Horizontal [kg]		60
	Vertical [kg]		40
Allowable cutting load	F [kN]		5
	F x L [N-m]		800
	F x L [N-m]		450
Allowable Cutting Torque [N-m]			250
Moment Of Tilting Weight W x L [kgf-m]			12

TR-250FF 4th, 5th axis for Tilting NC Rotary Table

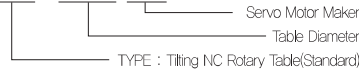


Application / Benefits

Tilting Series, High Precision&High Speed Systems, Convenient JIG Design
Extremely Rigid Body, High Clamping power (Hydraulic)

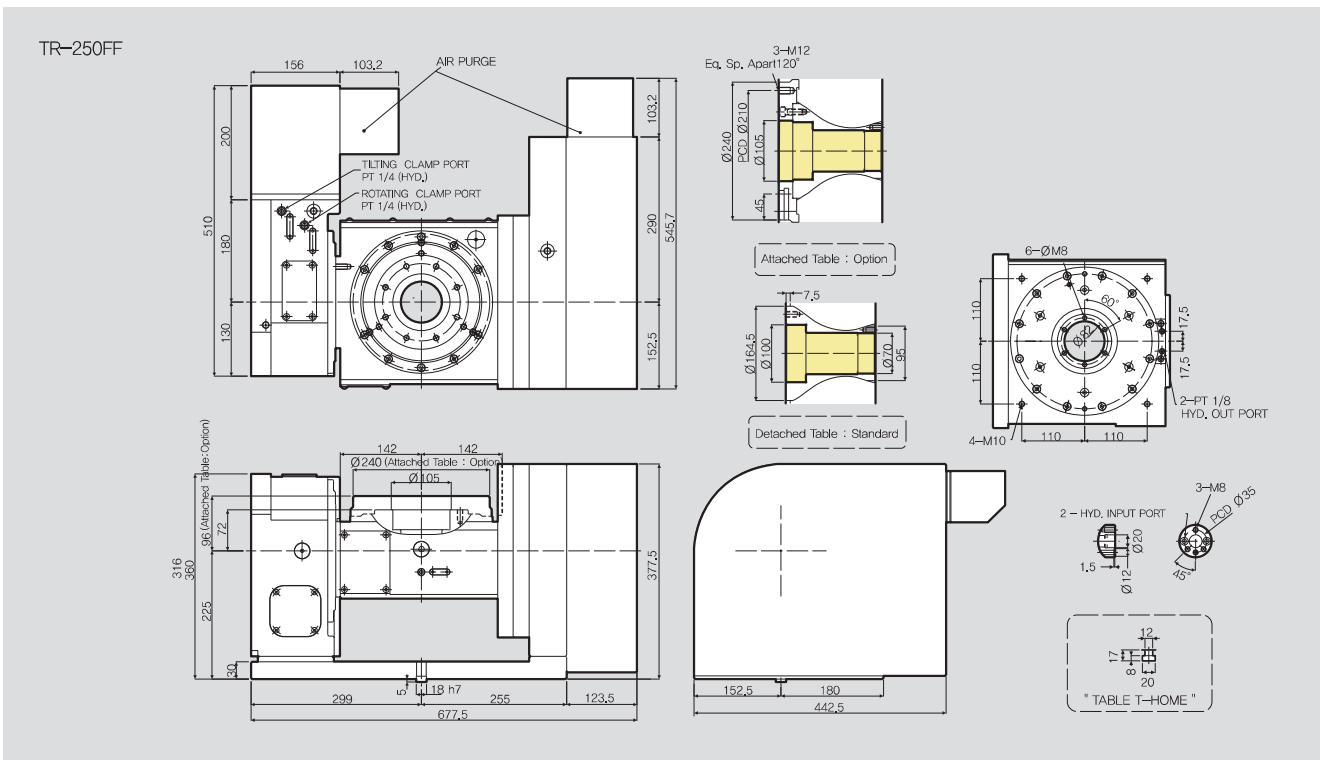
Model No.

TR-250 FF



Servo Motor Maker

- | | |
|----------------|-----------------|
| F : FANUC | H : HEIDENHAIN |
| S : SIEMENS | L : LS MECAPION |
| M : MITSUBISHI | SY : SANYO |
| P : PANASONIC | FA : FAGOR |
| Y : YASKAWA | O : OKUMA |



SPECIFICATIONS

Tilting Range: $-20^{\circ} \sim 110^{\circ}$

Table Dia. [mm]	Ø240	
Center Height [mm]	225	
Resister Dia. On Face Plate	Ø100H7	
Spindle Through Hole Dia. [mm]	Ø70H8	
Clamp Method	Hydraulic Max. 35bar	
Allowable Work Inertia [kgm ²]	0.78	
Weight [kg]	295	
	Rotating Axis	Tilting Axis
Max. Spindle Speed [mm ⁻¹]	33.3	16.6
Gear Ratio [mm]	1/90	1/180
Repeatability Accuracy [sec]	4	4
Indexing Accuracy [sec]	30	60
Clamp Torque [N · m]	900	1200
Servo Motor [FANUC]	αiF4 / 4000	αiF4 / 4000

Allowable load	Horizontal [kg]		100
	Vertical [kg]		60
Allowable cutting load	F [kN]		12
	F x L [N·m]		1200
Allowable Cutting Torque	F x L [N·m]		900
	[N·m]		600
Moment Of Tilting Weight	W x L [kgf·m]		26

TR-320FF 4th, 5th axis for Tilting NC Rotary Table



Application / Benefits

Tilting Series, High Precision&High Speed Systems, Convenient JIG Design
Extremely Rigid Body, High Clamping power (Hydraulic)

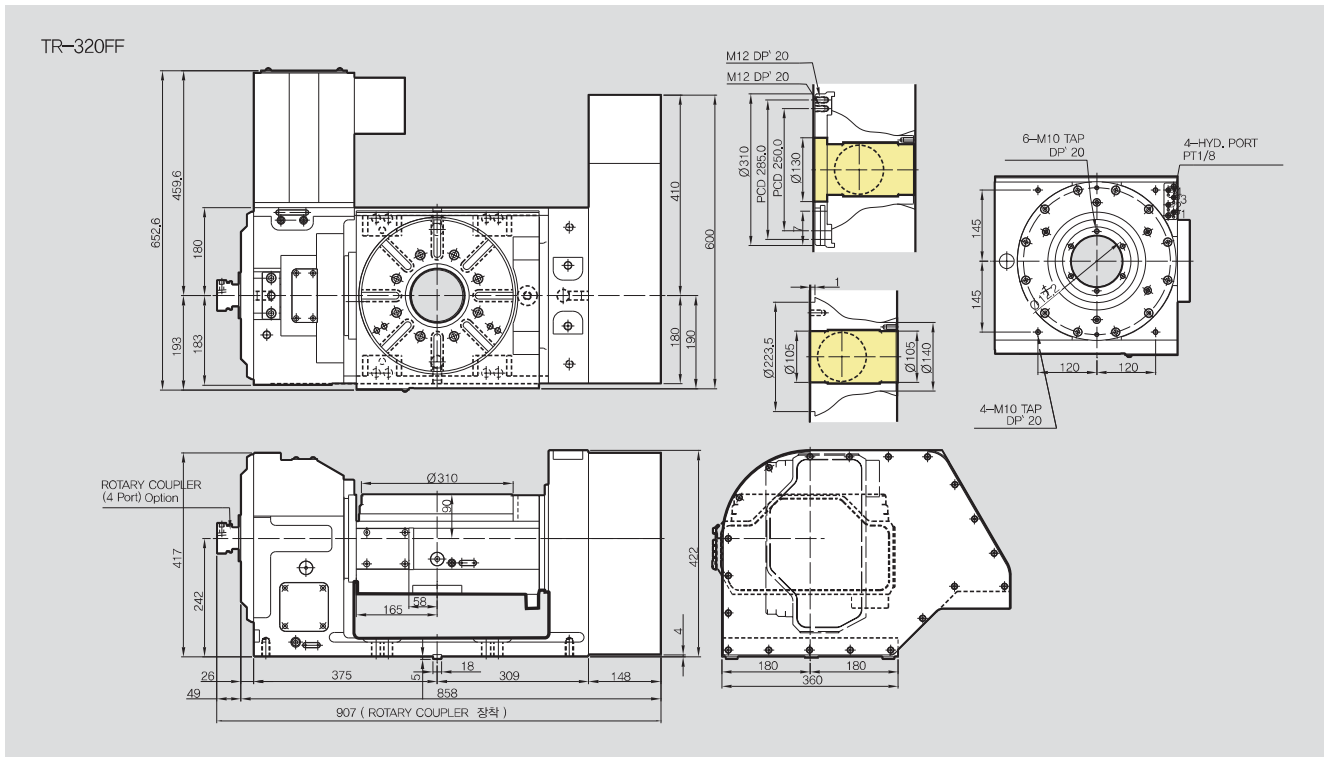
Model No.

TR-320 FF

— Servo Motor Maker
— Table Diameter
— TYPE : Tilting NC Rotary Table(Standard)

Servo Motor Maker

F : FANUC H : HEIDENHAIN
S : SIEMENS L : LS MECAPION
M : MITSUBISHI SY : SANYO
P : PANASONIC FA : FAGOR
Y : YASKAWA O : OKUMA



SPECIFICATIONS

Tilting Range: $-20^{\circ} \sim 110^{\circ}$

Table Dia. [mm]	Ø320	
Center Height [mm]	242	
Resister Dia. On Face Plate	Ø130H7	
Spindle Through Hole Dia. [mm]	Ø105H8	
Clamp Method	Hydraulic Max. 35bar	
Allowable Work Inertia [kgm ²]	-	
Weight [kg]	410	
	Rotating Axis	Tilting Axis
Max. Spindle Speed [mm ⁻¹]	25	25
Gear Ratio [mm]	1/120	1/120
Repeatability Accuracy [sec]	4	8
Indexing Accuracy [sec]	30	60
Clamp Torque [N · m]	2300	2600
Servo Motor [FANUC]	αiF8 / 3000	αiF12 / 3000

Allowable load	Horizontal [kg]		150
	Vertical [kg]		100
Allowable cutting load	F [kN]		13.5
	F x L [N-m]		2600
Allowable Cutting Torque	F x L [N-m]		2300
	[N-m]		800
Moment Of Tilting Weight	W x L [kgf-m]		-