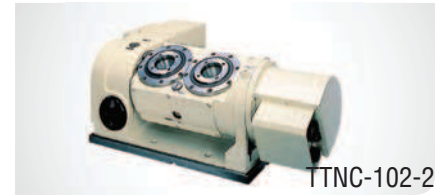


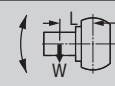

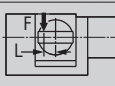



**TTNC-102-2, 101-4, 151-2, 201-2**

MULTI-SPINDLE FOR HIGH PRODUCTION

Multiple spindle tilting rotary tables for high production 4<sup>th</sup> & 5<sup>th</sup> axis machining. These tables are suitable for simultaneous machining of multiple workpieces with complex shapes or five faces.



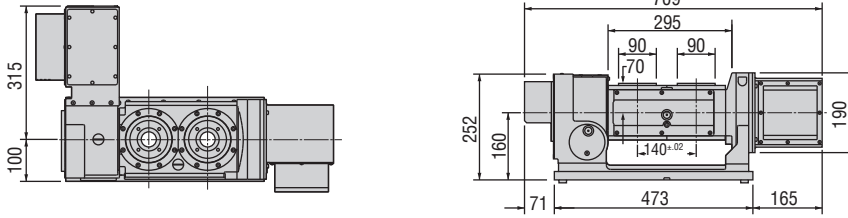
Model		TTNC-102-2	TTNC-101-4	TTNC-151-2	TTNC-201-2				
Tilt Range		-17° ~ +107°	-110° ~ +110°	-110° ~ +110°	-110° ~ +110°				
Minimum table center distance		140	120	250	304.8				
Spindle outer diameter	mm	90h7	80h7	-	-				
Table diameter (optional)	mm	(135)	(115)	160	225				
Table height at 0° position (w/ face plate)	mm	230 (255)	275 (300)	270	350				
Center height at 90° position	mm	160	200	200	260				
Center bore	Nose Diameter (w/ face plate)	mm	55H7 (40H7)	50H7 (50H7)	35H7	40H7			
	Thru Diameter	mm	35	30	35	32			
Table T-slot width (w/ face plate)		(12H8)	(10H8)	12H7	12H7				
Guide block width		14h7	18h7	18h7	18h7				
Servo motor (Fanuc)*	Rotary								
	Tilt								
		Alpha 2i	Alpha 2i	Alpha 8i	Alpha 8i	Alpha 4i	Alpha 8i	Alpha 8i	Alpha 12i
Maximum motor speed	rpm	5,000	5,000	3,000	3,000	4,000	3,000	3,000	3,000
Speed reduction ratio		1/90	1/180	1/60	1/90	1/90	1/90	1/90	1/120
Maximum table speed	rpm	55.6	27.8	50	33.3	44.4	33.3	33.3	25
Inertia converted into motor shaft	x 10 <sup>-3</sup> kg·m <sup>2</sup>	.20	.06	.52	1.08	.45	1.09	.48	3.2
Clamp system		Pneumatic	Pneumatic	Pneumatic	Hydraulic**	Pneumatic	Hydraulic**	Hydraulic**	Hydraulic**
Clamp torque @72psi [500 psi]	Nm (ft. lbs.)	127 (94)	284 (209)	80 (59)	[980] [(722)]	78 (57)	[1,000] [(737)]	[490] [(361)]	[2,450] [(1,806)]
Indexing accuracy	arc sec.	±20	-	±30	-	±15	-	±7.5	-
Indexing repeatability	arc sec.	±2	-	±4	-	±2	-	±2	-
Tilting accuracy	arc sec.	-	±22.5	-	±30	-	±30	-	±30
Tilting repeatability	arc sec.	-	±2	-	±2	-	±2	-	±2
Net Weight	kg (lbs.)	100 (220)		370 (814)		340 (748)		550 (1,210)	
Allowable wheel torque - rotary	Nm (ft. lbs.)	93 (69)		176 (130)		147 (108)		470 (346)	
Allowable work inertia	kg·m <sup>2</sup>	0.08		0.05		0.19		0.63	
Allowable work weight	0° tilt angle 	Kg (lbs)	35 (77)		25 (55)		40 (88)		50 (110)
	0° ~ 90° tilt angle 	kg (lbs)	20 (44)		25 (55)		40 (88)		50 (110)
Allowable work moment		Nm (ft. lbs.)	54.8 (40.4)		176 (129.7)		156.8 (115.6)		254.8 (187.8)
Allowable load when table clamped		N (lbf)	1,960 (439)		1,960 (439)		6,860 (1,537)		9,800 (2,195)
		Nm (ft. lbs.)	127 (93.6)		80 (59)		78 (57.5)		490 (361)
		Nm (ft. lbs.)	284 (209)		980 (722)		980 (722)		2,450 (1,806)

\* Other motors & RPM available • \*\* Booster optional • Specifications subject to change without notice

## Dimensions ▶

Drawings not to scale • Dimensions = mm

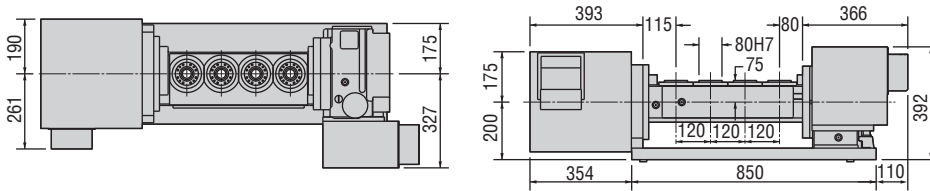
### TTNC-102-2



- TTNC-101-4  
5C Collet Option



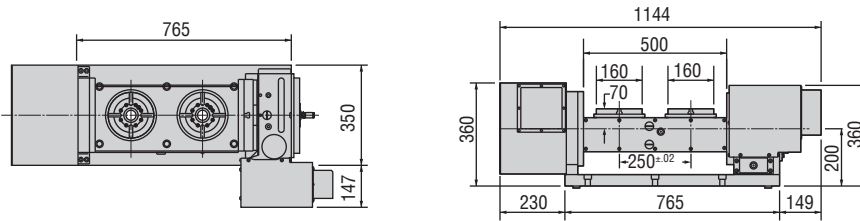
### TTNC-101-4



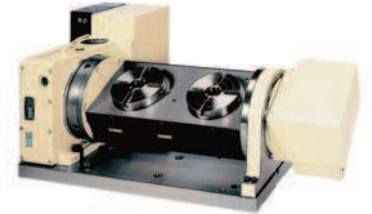
- TTNC-151-2 RJ  
Rotary Joint Option



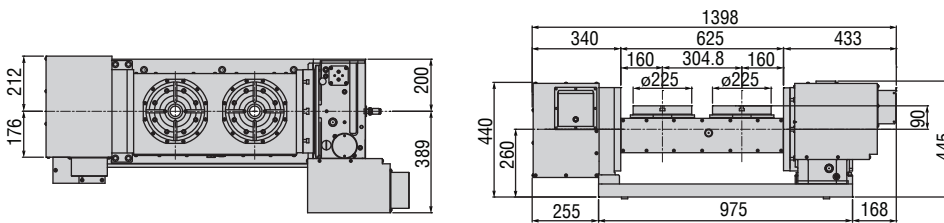
### TTNC-151-2



- TTNC-201-2



### TTNC-201-2

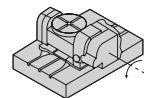


## Options & Accessories

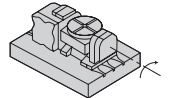
TPC NC Controller	p.66
Chucks	p.77
Tailstock	p.79
Support Spindle	p.79
Face Plate	p.81
Encoder / Scale	p.82
Pull Stud Device	p.83
Rotary Joint	p.83
Air/Hydraulic Booster	p.84
PVC or Steel Cables	p.84

The dimensions above are for tables with a FANUC servo motor. Other motors available (dimensions may increase).

## Layout a



## Layout b



## Clamping Block and Bolt ▶

Dimensions = mm

	Type	Q'ty	Layout	T-Slot Width	A	B	C	D	E	F	G	H	I	J	K	L	M
TTNC-102-2	I	4	a b	14	20	12	70	10	35	25	20	17	8	55	35	23	12

Note 1: In the case of layout b, contact us for details about mounting.

Note 2: When using a machine with a T-slot pitch other than the above, use suitable clamping blocks and bolts that are available on the market, or order custom-made ones from KOMA (opt.)

## Type I

