

**TTNC-451, 631, 1001, 1500 • RT-225**

LARGE, HIGH POWER TILTING TABLE

These large tilting tables feature massive hydraulic clamping torque and enable 5-face and slanted-hole machining with single chucking of workpiece. They are suitable for machining of component parts for heavy industries such as aerospace, power generator and construction.



Model		TTNC-451	TTNC-631	TTNC-1001	TTNC-1500				
Tilt Range		-10° ~ +95°	-10° ~ +95°	-20° ~ +110°	-30° ~ +95°				
Table diameter		450	630	1,000	1,500				
Table height at 0° position		425	585	900	1,155				
Center height at 90° position		325	450	700	1,055				
Center bore	Nose Diameter	140H7	180H6	75H7	75H7				
	Thru Diameter	140	180	-	-				
Table T-slot width		14H7	18H7	22H7	28H7				
Guide block width		18h7	18h7	-	-				
Servo motor (Fanuc)*		Rotary	Tilt	Rotary	Tilt	Rotary	Tilt	Rotary	Tilt
		Alpha 12i	Alpha 12i	Alpha 12i	Alpha 12i	Alpha 22i	Alpha 30i	Alpha 30i	Alpha 30i
Maximum motor speed		3,000	3,000	3,000	3,000	2,000	2,000	2,000	2,000
Speed reduction ratio		1/180	1/360	1/180	1/360	1/360	1/1,440	1/720	1/1,440
Maximum table speed		16.7	8.3	16.7	8.3	5.6	1.4	2.7	1.4
Inertia converted into motor shaft		1.98	2.7	5.42	3.77	4.37	4.1	5.37	7.46
Clamp system**		Hydraulic @500psi	Hydraulic @500psi	Hydraulic @500psi	Hydraulic @500psi	Hydraulic @1,000psi	Hydraulic @1,000psi	Hydraulic @500psi	Hydraulic @500psi
Clamp torque		980 (722)	980 (722)	4,410 (3,250)	2,352 (1,733)	9,800 (7,223)	19,600 (14,445)	12,000 (8,844)	12,500 x (2) (9,213) x (2)
Indexing accuracy		±7.5	-	±7.5	-	±7.5	-	±10	-
Indexing repeatability		±2	-	±2	-	±2	-	±2	-
Tilting accuracy		-	±30	-	±30	-	±30	-	±22.5 (scale)
Tilting repeatability		-	±2	-	±2	-	±2	-	±4
Net Weight		780 (1,716)	1,700 (3,740)	4,600 (10,120)	12,000 (26,400)				
Allowable wheel torque - rotary		1,666 (1,228)	3,284 (4,420)	13,230 (9,751)	21,560 (15,890)				
Allowable work inertia		5.1	29.7	312.6	2,255				
Allowable work weight	0° tilt angle	200 (440)	600 (1,320)	2,500 (5,500)	2,500 (5,500)				
	0° ~ 90° tilt angle	150 (330)	300 (660)	1,500 (3,300)	1,500 (3,300)				
Allowable work moment		294 (217)	980 (722)	7,840 (5,778)	7,840 (5,778)				
Allowable load when table clamped		19,600 (4,390)	24,500 (5,488)	29,400 (6,587)	49,000 (10,976)				
		980 (722)	4,410 (3,250)	9,800 (7,223)	12,000 (8,844)				
		980 (722)	2,352 (1,733)	19,600 (14,445)	12,500 x (2) (9,213) x (2)				

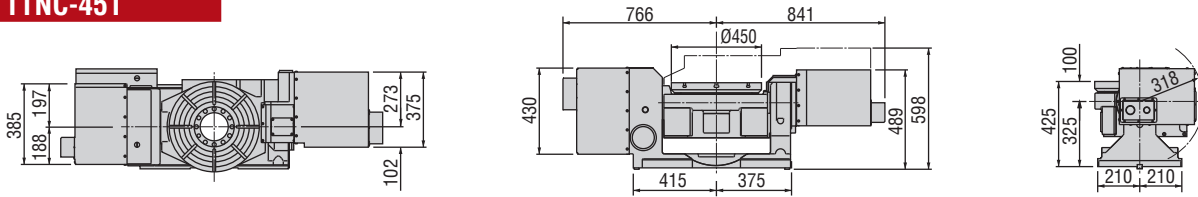
\* Other motors & RPM available • \*\* Booster optional • Specifications subject to change without notice

# NC Tilting Rotary Tables ▶ Standard Models

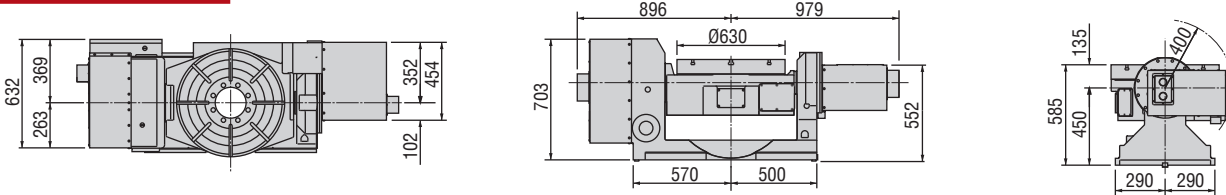
## Dimensions ▶

Drawings not to scale • Dimensions = mm

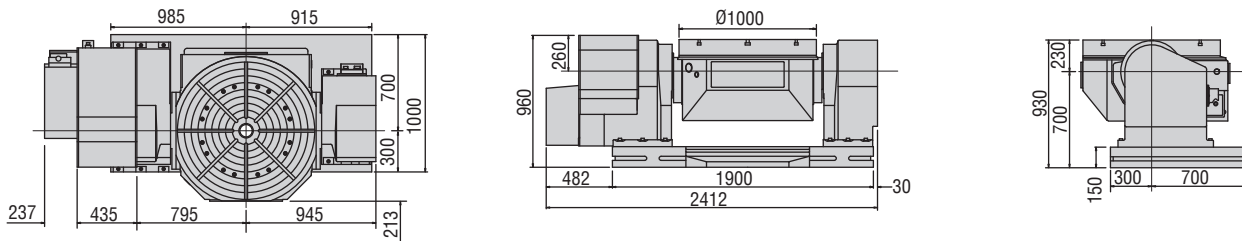
### TTNC-451



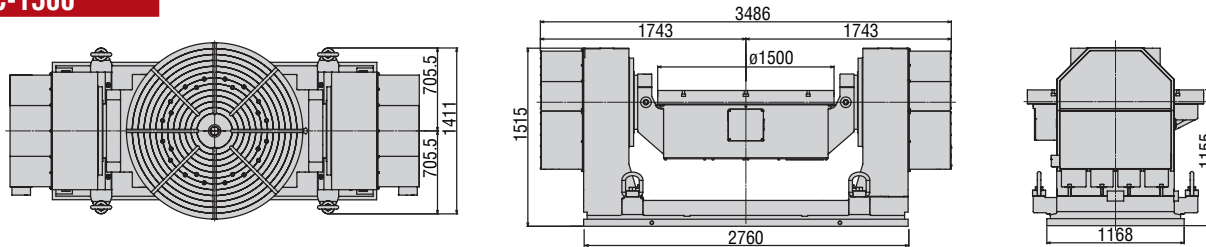
### TTNC-631



### TTNC-1001



### TTNC-1500

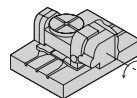


The dimensions above are for tables with a FANUC servo motor. Other motors available (dimensions may increase).

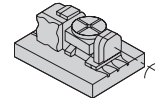
## Options & Accessories

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

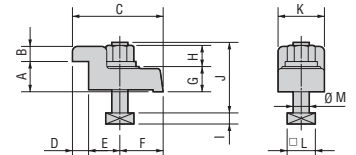
## Layout a



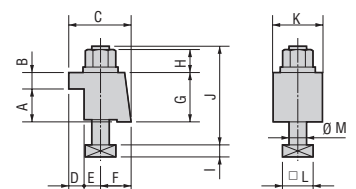
## Layout b



## Type I



## Type II



## 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-451	I	4	a b	18	40	20	109	18	42	50	25	21	11	70	46	28	16
TTNC-631	I	4	a b	18	40	20	110	18	42	50	25	21	11	70	46	28	16
TTNC-1001	II	8	-	24	50	20	74	20	18	36	70	29	16	130	70	40	22
TTNC-1500	II	10	-	28	60	28	95	29	16	50	95	22	17.5	146	100	41.3	24

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.)