

TN-101, 320 / TWA-130, 160, 200

POWERFUL, HIGH SPEED TILTING TABLES

The TWA-Series tables are top of the line, high speed, high power, high accuracy tilting rotary tables. The TN-101 and TWA-130 are ideal for use on drilling and tapping machines.

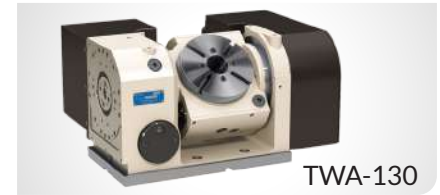


Table Model		TN-101	TWA-130	TWA-160	TWA-200	TN-320					
Tilt Range		-17° ~ +107°	-17° ~ +107°	-30° ~ +110°	-30° ~ +110°	-30° ~ +110°					
Spindle outer diameter	mm	86h7	90h7	100h7	120h7	-					
Table diameter (optional)	mm	(135)	(135)	(160 or 200)	(200 or 250)	320					
Table height at 0° position	mm	180 (205 w/face plate)	210 (235 w/face plate)	235 (260 w/face plate)	270 (300 w/face plate)	355					
Center height at 90° position	mm	135	150	180	210	255					
Center bore	Nose Diameter (w/ face plate)	mm	55H7 (40H7)	55H7 (40H7)	55H7 (50H7)	65H7 (60H7)	105H7				
	Thru Diameter	mm	35	35	40	45	102				
Table T-slot width		12H8 (w/ face plate)	12H8 (w/ face plate)	12H8 (w/ face plate)	12H8 (w/ face plate)	14H7					
Guide block width		14h7	14h7	18h7	18h7	18h7					
Servo motor (Fanuc)*	Rotary	Alpha 2i	Alpha 2i	Alpha 2i	Alpha 2i	Alpha 4i	Alpha 4i	Alpha 8i	Alpha 8i		
	Tilt	Alpha 2i	Alpha 2i	Alpha 2i	Alpha 2i	Alpha 4i	Alpha 4i	Alpha 8i	Alpha 8i		
Maximum motor speed	rpm	5,000	5,000	5,000	5,000	5,000	5,000	4,000	4,000		
Speed reduction ratio		1/60	1/120	1/60	1/120	1/72	1/120	1/45	1/90	1/120	1/240
Maximum table speed	rpm	83.3	41.7	83.3	41.7	69.4	41.7	111.1	55.5	33.3	16.7
Inertia converted into motor shaft	x 10 ⁻³ kg·m ²	.072	.078	.074	.072	.17	.18	.38	.45	.82	.45
Clamp system		Pneumatic	Pneumatic	Pneumatic Dual Taper	Pneumatic Dual Taper	Pneumatic Dual Taper	Pneumatic Dual Taper	Pneumatic Dual Taper	Pneumatic Dual Taper	Hydraulic @500 psi**	Hydraulic @500 psi**
Clamp torque @72psi [500 psi]	Nm (ft. lbs.)	200 (147)	300 (221)	500 (369)	500 (369)	500 (369)	800 (590)	800 (590)	1,000 (737)	[2,200] [(1,621)]	[2,200] [(1,621)]
Indexing accuracy	arc sec.	±20	-	±20	-	±15	-	±15	-	±10	-
Tilting accuracy	arc sec.	-	±22.5	-	±22.5	-	±22.5	-	±22.5	-	±22.5
Net Weight	kg (lbs.)	65 (143)	76 (167)	127 (279)	190 (418)	440 (968)					
Allowable wheel torque - rotary	Nm (ft. lbs.)	152 (112)	152 (112)	200 (147)	450 (332)	931 (686)					
Allowable work inertia	kg·m ²	.08	.08	.19	.59	1.53					
Allowable work weight	0° tilt angle	kg (lbs)	35 (77)	35 (77)	60 (132)	120 (264)	150 (330)				
	0° ~ 90° tilt angle	kg (lbs)	20 (44)	20 (44)	40 (88)	70 (154)	100 (220)				
Allowable work moment		Nm (ft. lbs.)	24 (17.7)	24 (17.7)	39.2 (28.9)	53.7 (39.6)	163.3 (120.4)				
Allowable load when table clamped		N (lbf)	3,920 (878)	3,920 (878)	7,840 (1,756)	13,720 (3,073)	19,600 (4,390)				
		Nm (ft. lbs.)	200 (147)	500 (369)	500 (369)	800 (590)	2,200 (1,621)				
		Nm (ft. lbs.)	300 (221)	500 (369)	800 (590)	1,000 (737)	2,200 (1,621)				

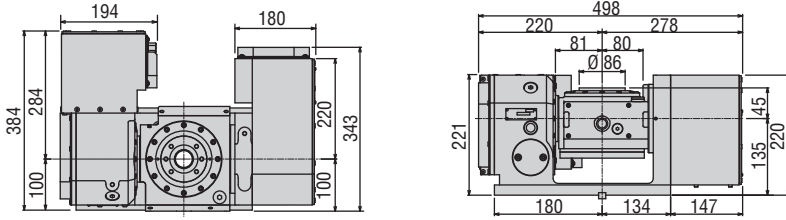
* Other motors & RPM available • ** Booster optional • Specifications subject to change without notice

NC Tilting Rotary Tables ▶ Standard Models

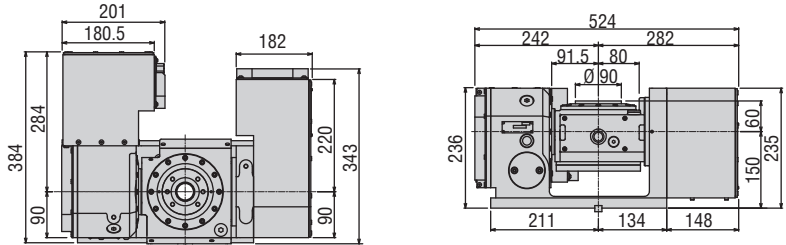
Dimensions

Drawings not to scale • Dimensions = mm

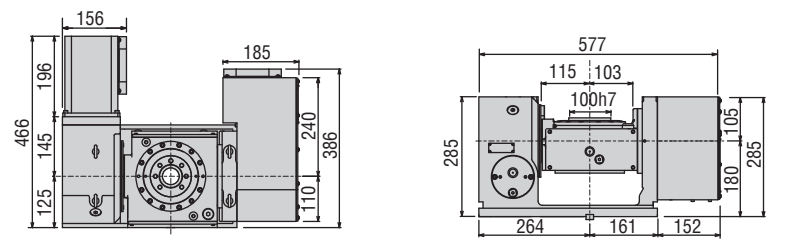
TN-101



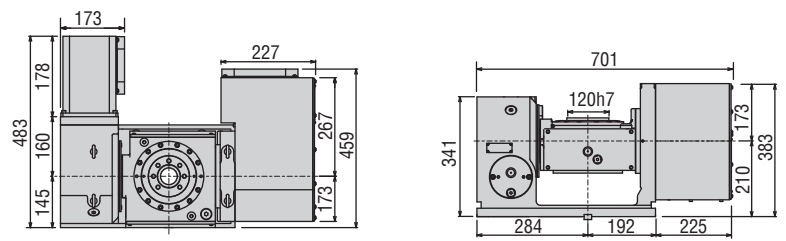
TWA-130



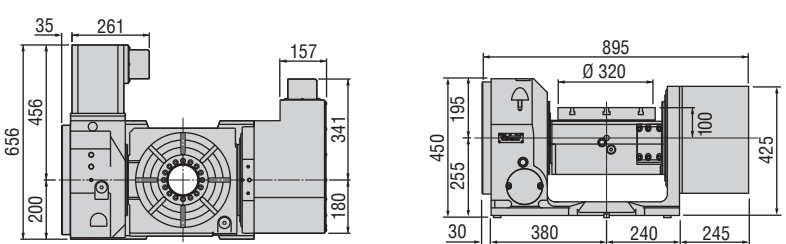
TWA-160



TWA-200



TN-320



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

WORKPIECE MOUNTING SPACE FOR TILTING ROTARY TABLES

	0° ~ +90°	0° ~ +107°	-17° ~ 0°
TN-101			
TWA-130			
TWA-160			
TWA-200			
TN-320			

Note: To ensure workpiece, rotary table, and machine tool integration, contact TSUDAKOMA for 3D CAD support.

TWA-130 Pull Stud Option



Options & Accessories

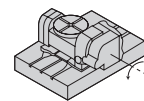
TPC NC Controller	
Chucks	
Tailstock	
Support Spindle	
Face Plate	
Encoder / Scale	
Pull Stud Device	
Rotary Joint	
Booster	
PVC or Steel Cables	

Clamping Block and Bolt

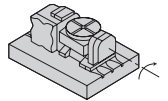
Dimensions = mm

	Type	Q'ty	Layout	T-Slot Width	A	B	C	D	E	F	G	H	I	J	K	L	M
TN-101	I	4	a b	14	20	12	70	10	35	25	20	12	8	50	35	23	12
TWA-130	I	4	a b	14	20	12	70	10	35	25	20	17	8	55	35	23	12
TWA-160	I	4	a b	18	20	12	70	10	35	25	17	15	11	55	35	28	16
TWA-200	I	4	a b	18	25	12	80	12	33	35	22	21	11	65	40	28	16
TN-320	I	4	a b	18	25	12	80	12	33	35	22	21	11	65	40	28	16

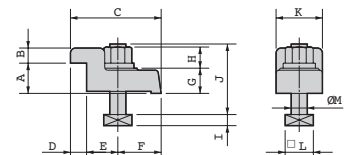
Layout a



Layout b



Type I



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 TSUDAKOMA (opt.)