

TWM-100-2, 160-2, 250-2/ TTNC-101-4

MULTI-SPINDLE FOR HIGH PRODUCTION

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

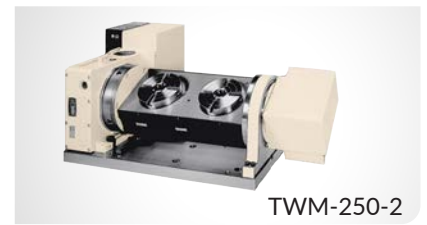




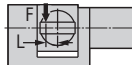



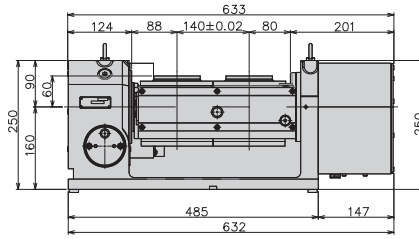
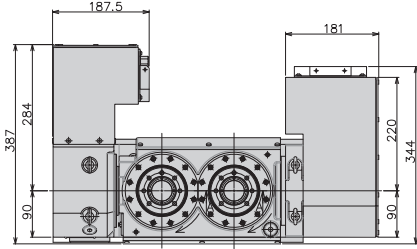
Table Model			TWM-100-2	TTNC-101-4	TWM-160-2	TWM-250-2				
Tilt Range			-17° ~ +107°	-110° ~ +110°	-30° ~ +110°	-30° ~ +110°				
Minimum table center distance			140	120	250/320	320/400				
Spindle outer diameter		mm	90h7	80h7	100	140				
Table diameter (optional)		mm	(135)	(115)	160/200	(250)				
Table height at 0° position (w/ face plate)		mm	220 (245)	275 (300)	250	325				
Center height at 90° position		mm	160	200	190	260				
Center bore	Nose Diameter (w/ face plate)	mm	55H7 (40H7)	50H7 (50H7)	55H7	80H7				
	Thru Diameter	mm	40	30	40	50				
Table T-slot width (w/ face plate)			(12H8)	(10H8)	-	-				
Guide block width			14h7	18h7	18h7	18h7				
Servo motor (Fanuc)*			Rotary	Tilt	Rotary	Tilt	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	4,000	4,000	5,000	4,000	4,000	
Speed reduction ratio			1/60	1/120	1/60	1/90	1/60	1/90	1/90	
Maximum table speed		rpm	83.3	41.6	66.7	44.4	83.3	44.4	44.4	
Inertia converted into motor shaft		x 10 ⁻³ kg·m ²	.13	.14	.52	1.08	.52	.50	.73	.44
Clamp system			Pneumatic	Pneumatic	Pneumatic	Hydraulic**	Pneumatic	Pneumatic	Pneumatic	Hydraulic**
Clamp torque @72psi [500 psi]		Nm (ft. lbs.)	200 [(271)]	500 [(368)]	80 [(59)]	[980] [(722)]	500 [(368)]	1,000 [(737)]	1,000 [(737)]	3,100 [(2,284)]
Indexing accuracy		arc sec.	±20	-	±30	-	±15	-	±10	-
Tilting accuracy		arc sec.	-	±22.5	-	±30	-	±30	-	±30
Net Weight		kg (lbs.)	110 (242)	370 (814)	250 (550)	550 (1,210)				
Allowable wheel torque - rotary		Nm (ft. lbs.)	93 (69)	176 (130)	-	-				
Allowable work inertia		kg·m ²	0.08	0.05	0.13	0.9				
Allowable work weight	0° tilt angle	 Kg (lbs)	35 (77)	25 (55)	40 (88)	100 (220)				
	0° ~ 90° tilt angle	 kg (lbs)	20 (44)	25 (55)	40 (88)	100 (220)				
Allowable work moment	 Nm (ft. lbs.)	24 (17)	176 (129.7)	55.8 (115.6)	347.4 (255)					
Allowable load when table clamped	 N (lbf)	1,960 (439)	1,960 (439)	10,820 (1,537)	14,400 (3,237)					
	 Nm (ft. lbs.)	200 (271)	80 (59)	520 (57.5)	1,000 (737)					
	 Nm (ft. lbs.)	520 (368)	980 (722)	1000 (722)	3,100 (2,284)					

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

Dimensions

Drawings not to scale • Dimensions = mm

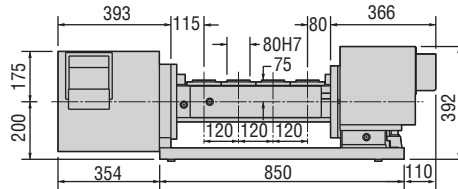
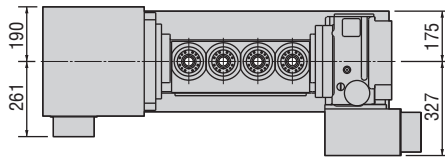
TWM-100-2



TTNC-101-4 5C Collet Option



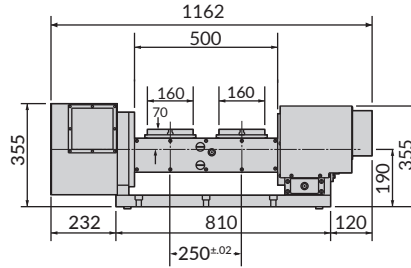
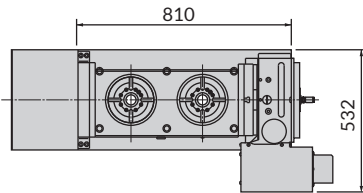
TTNC-101-4



TWM-160-2 RJ Rotary Joint Option



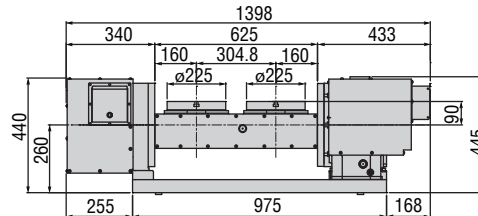
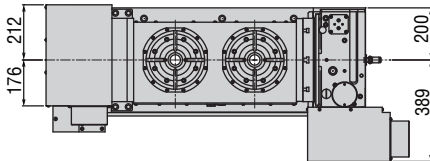
TWM-160-2



Options & Accessories

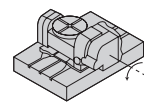
TPC NC Controller	p.62
Chucks	p.74
Tailstock	p.75
Support Spindle	p.77
Face Plate	p.77
Encoder / Scale	p.78
Pull Stud Device	p.79
Rotary Joint	p.79
Booster	p.80
PVC or Steel Cables	p.81

TWM-250-2

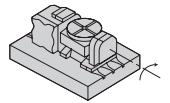


The dimensions above are for tables with a FANUC servo motor. Other motors available (dimensions may increase).

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
TWM-100-2	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

