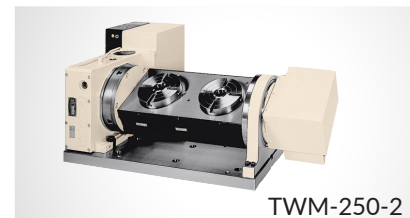


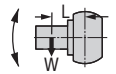
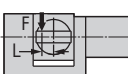
TWM-100-2, 160-2, 250-2/ TTNC-101-4

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.



TWM-250-2

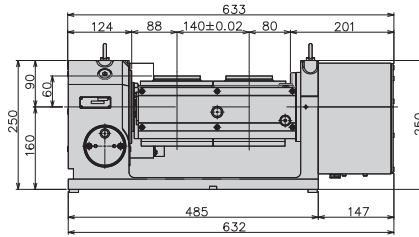
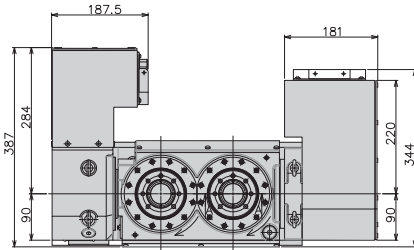
Table Model			TWM-100-2		TTNC-101-4		TWM-160-2		TWM-250-2	
Tilt Range			-17° ~ +107°		-110° ~ +110°		-30° ~ +110°		-30° ~ +110°	
Minimum table center distance			140		120		250/320		320/400	
Spindle outer diameter mm			90h7		80h7		100		140	
Table diameter (optional) mm			(135)		(115)		160/200		(250)	
Table 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	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	4,000
Speed reduction ratio			1/60	1/120	1/60	1/90	1/60	1/90	1/90	1/90
Maximum table speed rpm			83.3	41.6	66.7	44.4	83.3	44.4	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

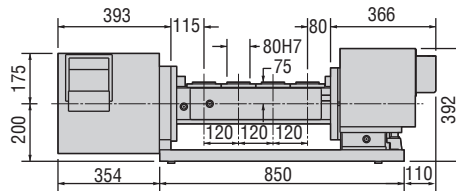
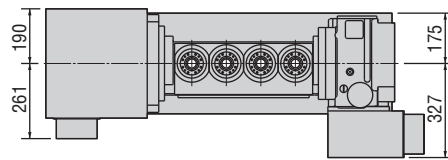
TWM-100-2



TTNC-101-4 5C Collet Option



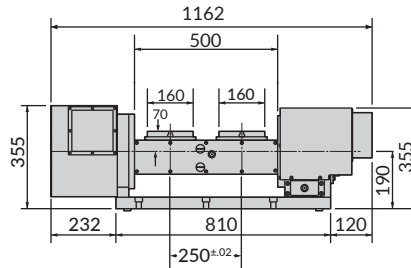
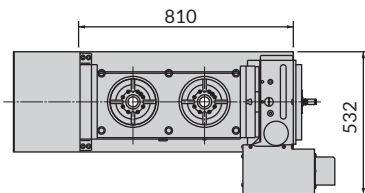
TTNC-101-4



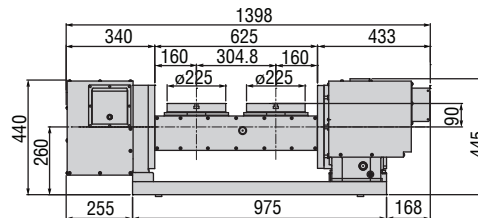
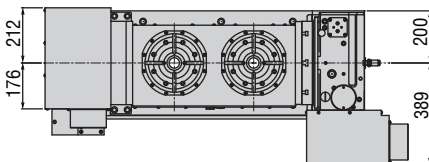
TWM-160-2 RJ Rotary Joint Option



TWM-160-2



TWM-250-2

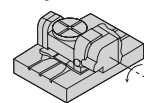


Options & Accessories

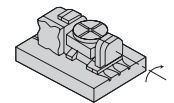
TPC NC Controller	p.62
Chucks	p.74
Tailstock	p.75
Support Spindle	p.77
Face Plate	p.77
Encoder / Scale	p.78
Pull Stud Device	p.79
Rotary Joint	p.79
Booster	p.80
PVC or Steel Cables	p.81

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

