

TBS-130,H / 160,H / 250,H

TILTING BALL DRIVE SYSTEM ROTARY TABLES

High accuracy, high rigidity, energy saving and zero maintenance rotary tables. TBS Series tilt rotary tables are built using the ball drive system featuring advantages like zero backlash, improved cycle times, energy conservation and a lifetime adjustment-free transmission system.



TBS-160, H

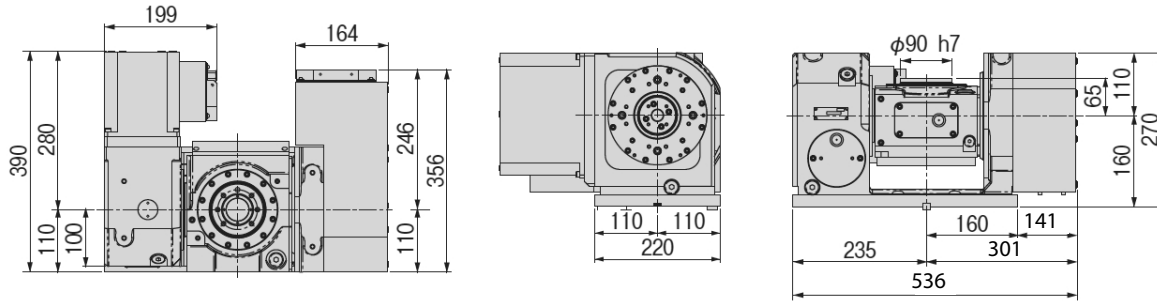
Model		TBS-130,H	TBS-160,H	TBS-250,H			
Tilt Range		-30° ~ +110°	-30° ~ +110°	-30° ~ +110°			
Spindle outer diameter		90h7	100h7	140H7			
Table diameter (optional)		(135)	(160 or 200)	(250)			
Table height at 0° position		225 (250 w/ faceplate)	270 (300 w/ faceplate)	290 (320 w/ faceplate)			
Center height at 90° position		160	200	235			
Center bore	Nose Diameter (w/faceplate)	55H7 (40H7)	55H7 (50H7)	80H7 (75H7)			
	Thru Diameter	40	40	50			
Table T-slot Width (with faceplate)		(12H8)	(12H8)	(12H8)			
Servo motor*		Rotary	Tilt	Rotary	Tilt	Rotary	Tilt
		Alpha 2i	Alpha 2i	Alpha 2i	Alpha 4i	Alpha 8i	
Maximum motor speed	rpm	5,000	5,000	5,000	5,000	4,000	
Speed reduction ratio		1/48	1/60	1/60	1/60	1/45	1/60
Maximum table speed	rpm	104.2	83.3	83.3	83.3	88.8	66.6
Inertia converted into motor shaft	$\times 10^{-3}\text{kg}\cdot\text{m}^2$.074	.072	.17	.18	.465	
Clamp system		Pneumatic					
Holding torque @72psi	Nm (ft. lbs.)	700 (516)				1,000 (737)	
Indexing accuracy	arc sec.	±10					
Tilting accuracy	arc sec.	±17.5				±20	
Net Weight	kg (lbs.)	125 (276)	160 (353)	280 (617)			
Allowable work inertia	kg·m ²	.08	.19	1.05			
Allowable work weight kg (lbs)	0° tilt angle	35 (77)	60 (132)	135 (298)			
	0° ~ 90° tilt angle	20 (44)	40 (88)	85 (187)			
Allowable work moment	Nm (ft. lbs.)	61.1	59.6	186.7 (137)			
Allowable load when table clamped	N (lbf)	3,920 (878)	10,800	14,400 (64,054)			
	Nm (ft. lbs.)	700 (516)	700 (516)	1,000 (737)			
	Nm (ft. lbs.)	700 (516)	700 (516)	1,000 (737)			

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

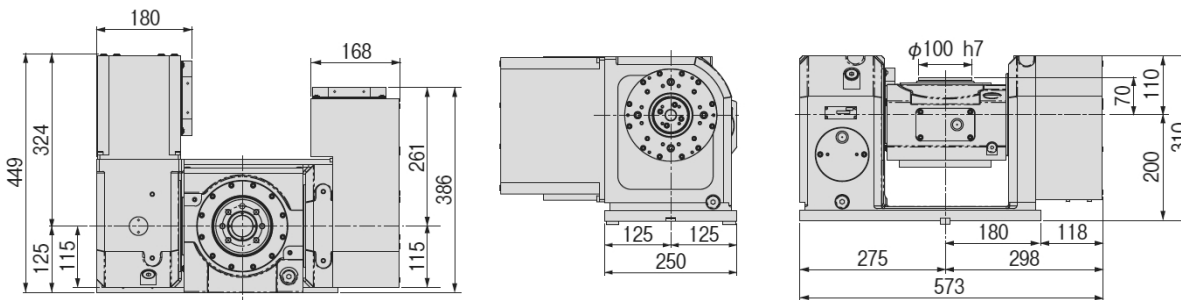
Dimensions

Drawings not to scale • Dimensions = mm

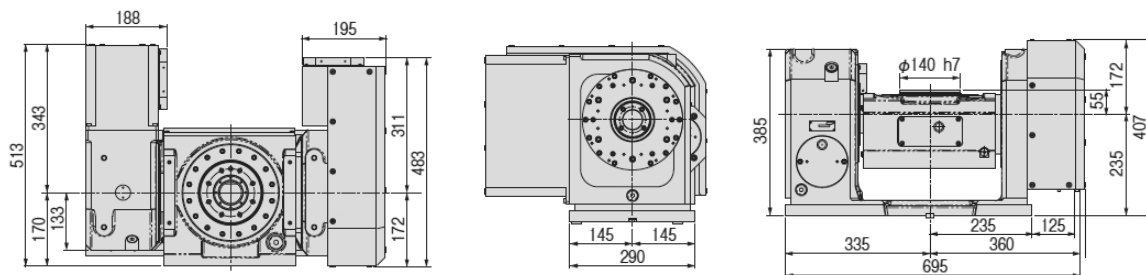
TBS-130,H



TBS-160,H



TBS-250,H



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).

Clamping Block and Bolt

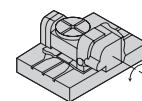
Dimensions = mm

	Type	Q'ty	Layout	T-Slot Width	A	B	C	D	E	F	G	H	I	J	K	L	M
TBS-130	I	4	a b	12	20	12	70	10	35	25	20	17	8	55	35	23	12
TBS-160	I	4	a b	12	20	12	70	10	35	25	17	15	11	55	35	28	16
TBS-250	I	4	a b	12	25	12	80	12	33	35	22	21	11	65	40	28	16

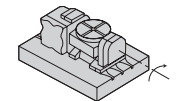
Note 1: In the case of layout B, contact us for details about mounting.

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.)

Layout a



Layout b



Type I

