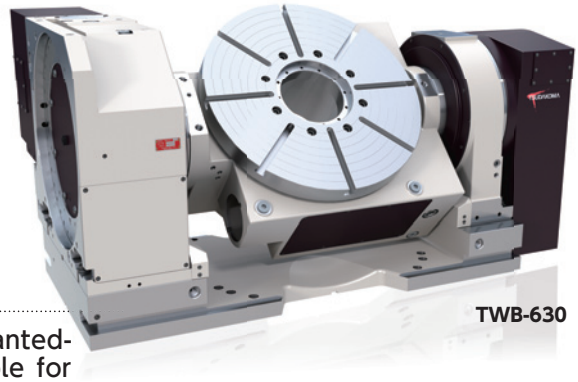
Standard type

TWB

TWB-320•630•1000

TTNC TTNC-1500


TWB-630

Large tilting models that enable 5-face machining and slanted-hole machining with single chucking of workpiece. Suitable for machining of component parts for heavy industries such as aircraft, power generator and construction machine industry.

Specifications

Unit: mm

		TWB-320		TWB-630		TWB-1000		TTNC-1500*1	
Tilt range		−30° to +110°		−110° to +110°		−30° to +110°		−5° to +95°	
Table diameter		ϕ320		ϕ630		ϕ1,000		ϕ1,500	
Table height at 0° position		355		585		650		1,155	
Center height at 90° position		255		450		650		1,055	
Center bore	Nose diameter	ϕ105H7		ϕ220H7		ϕ360H7		ϕ75H7	
	Through-bore	ϕ80		ϕ181		ϕ310		—	
Table T-slot width		14H7		18H7		18H7		28H7	
Guide block width		18h7		18h7		—		—	
Servo motors (for FANUC)		Rotary axis	Tilt axis	Rotary axis	Tilt axis	Rotary axis	Tilt axis	Rotary axis	Tilt axis
		αiF8	αiF12	αiF12	αiF12	αiF12	αiF30	TPC5-SR30	TPC5-SR30
Inertia converted into motor shaft	$\times10^{-3}$kg·m^2	1.8	2.95	3.45	2.13	5.24	7.01	5.37	7.46
Speed reduction ratio		1/90	1/120	1/180	1/360	1/360	1/360	1/720	1/1,440
Table max. rpm (Motor rpm: 2,000min^{-1})	min^{-1}	22.2	16.6	16.6 (Motor rpm: 3,000min^{-1})	8.3 (Motor rpm: 3,000min^{-1})	8.3	5.5	1.38 (Motor rpm: 1,000min^{-1})	0.69 (Motor rpm: 1,000min^{-1})
Clamp system Supplied pressure		Hydraulic or air-hydraulic (Option)	Hydraulic or air-hydraulic (Option)	Hydraulic or air-hydraulic (Option)	Hydraulic or air-hydraulic (Option)	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Clamp torque	N·m	2,200 (3.5MPa) 3,000 (4.9MPa)	3,100 (3.5MPa) 4,700 (4.9MPa)	7,600 (3.5MPa)	13,100 (3.5MPa)	16,000 (3.5MPa)	32,000 (3.5MPa)	12,000 (3.5MPa)	25,000 (3.5MPa)
Indexing accuracy (the sum)	arc sec	20	—	15	—	15	—	20	—
Tilting accuracy Tilt 0° to 90°	arc sec	—	60	—	60	—	60	—	45
Net weight	kg	470		1,750		6,000		12,000	
Strength of worm gears (Rotary axis)	N·m	1,011		5,601		7,840		21,560	
Allowable work weight	0° (Horizontal) W	kg	350		1,000		4,000		2,500
	0° to 90° (Tilting) W	kg	175		500		2,000		1,500
Allowable work moment	W×L W	N·m	190		2,000		5,360		7,840
Allowable load (when table is clamped)	F F	N	35,000		34,000		100,000		49,000
	F×L F L	N·m	2,200 (3.5MPa) 3,000 (4.9MPa)		7,600		16,000		12,000
	F×L F L	N·m	3,100 (3.5MPa) 4,700 (4.9MPa)		13,100		32,000		25,000
Allowable work inertia	$J=\frac{W\cdot D^2}{8}$ ϕD W	kg·m^2	2		50		320		2,255

CE correspondence model (excluding TTNC)

＊1 Above specifications are for one of experienced production. Those might be changed depending on use conditions.

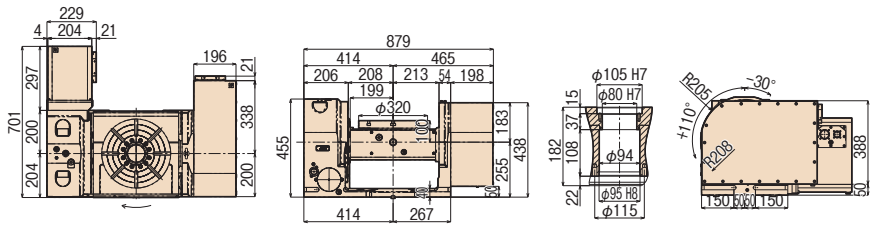
Tech.Info. Servo motors of other manufacturers P.68

Option High-precision Spec. P.64 Pull Stud P.66
Rotary Joint P.66 Air-hydraulic Booster P.67

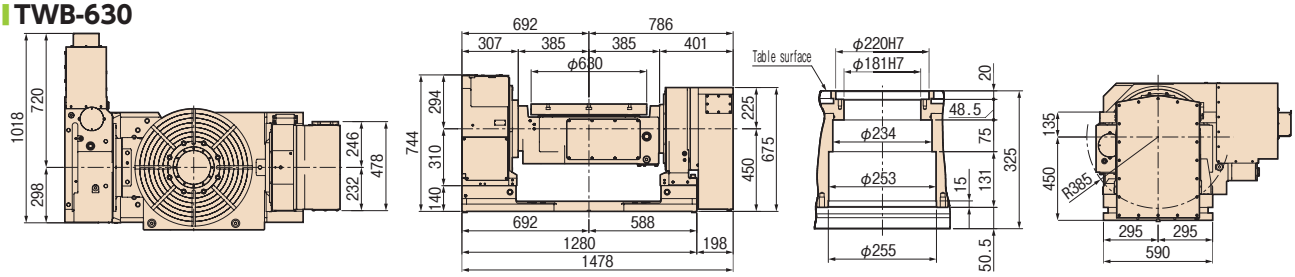
Dimensions

Unit: mm

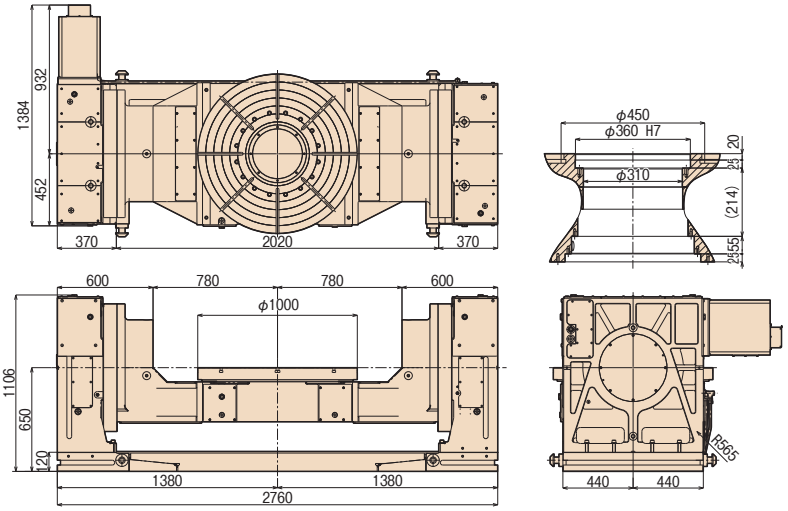
TWB-320

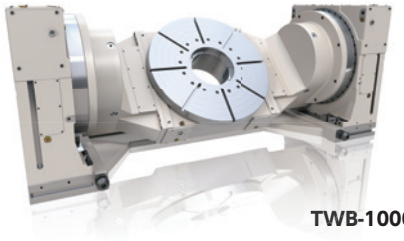


TWB-630

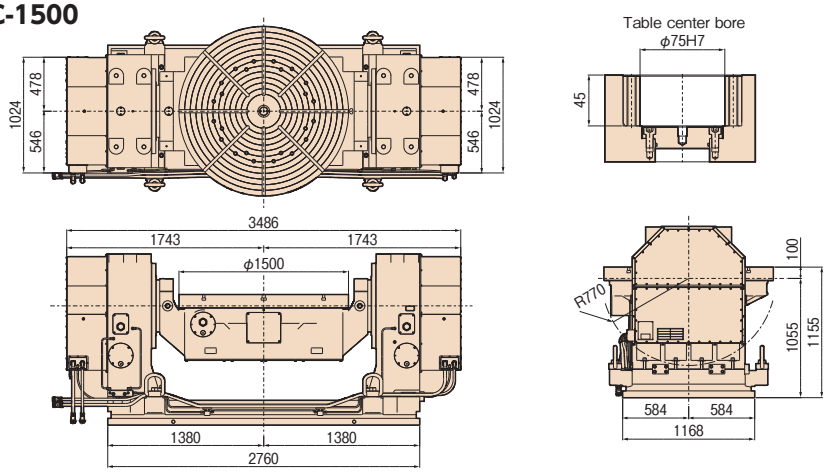


TWB-1000





TTNC-1500



Note: The above dimensions are for FANUC servo motors. The dimensions of servo motors of other manufacturers may be larger.

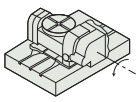
Clamping block and bolt

Unit: mm

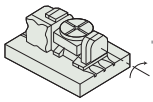
	Type	Q'ty	Layout	T-slot pitch	T-slot width	A	B	C	D	E	F	G	H	I	J	K	L	M
TWB-320	I	4	a b	140 to 190 70 to 150	18	25	12	80	12	33	35	22	21	11	65	40	28	16
TWB-630	I	4	a b	168 to 450 80 to 267	18	40	20	110	18	42	50	25	21	11	70	46	28	16
TWB-1000	Ⅳ	8	—	—	24	40	18	63	18	15	30	58	20	14	105	60	38.2	20
TTNC-1500	Ⅱ	10	—	—	28	60	28	95	29	16	50	95	22	17.5	146	100	41.3	24

Note: 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. (Option)

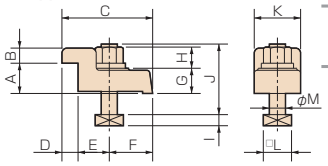
Layout a



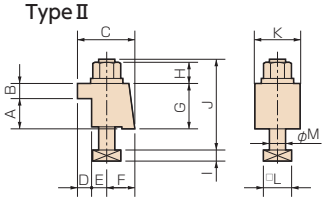
Layout b



Type Ⅰ



Type Ⅱ



Type Ⅳ