

Multi-spindle Type

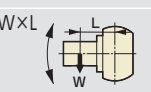
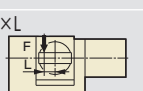
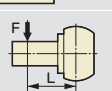
TWM**TWM-100•160•250**

TWM-160,PS

Tilt type multi-spindle enables highly productive machining. Simultaneous machining of multiple workpieces with complex shapes and 5-face machining is possible.

Specifications

Unit: mm

		TWM-100,PS		TWM-160		TWM-250	
Tilt range		-17° to +107°		-30° to +110°		-30° to +110°	
Spindle diameter		φ 90h7		φ 100h7		φ 140h7	
Table diameter		φ 135 (Option)		φ 160 or φ 200 (Option)		φ 250 (Option)	
Distance between spindles		140		250 or 320		320 or 400	
Table height at 0° position		220 (245 w/face plate)		250 (280 w/face plate)		325 (355 w/face plate)	
Center height at 90° position		160		190		260	
Center bore	Nose diameter	φ 55H7		φ 55H7		φ 80H7	
	Through-bore	φ 40		φ 40		φ 50	
Guide block width		14h7		18h7		18h7	
Servo motors (for FANUC)		Rotary axis	Tilt axis	Rotary axis	Tilt axis	Rotary axis	Tilt axis
Inertia converted into motor shaft	$\times 10^{-3} \text{kg} \cdot \text{m}^2$	$\alpha \text{IF}2$	$\alpha \text{IF}2$	$\alpha \text{IF}4$	$\alpha \text{IF}8$	$\alpha \text{IF}8$	$\alpha \text{IF}12$
Speed reduction ratio		0.13	0.14	0.52	0.50	0.69	4.40
Table max. rpm	min^{-1} (Motor rpm: 3,000 min^{-1})	1/60	1/120	1/60	1/90	1/90	1/90
Clamp system	Supplied pressure	50	25	50	33.3	33.3	33.3
Clamp torque	N·m	Pneumatic 0.49MPa	Pneumatic 0.49MPa	Pneumatic 0.49MPa	Pneumatic 0.49MPa	Pneumatic 0.49MPa	Hydraulic or air-hydraulic (Option) 3.5MPa
Clamp torque	N·m	200	500	500	1,000	1,000	3,100
Indexing accuracy(the sum)	arc sec	40	—	30	—	20	—
Tilting accuracy	Tilt 0° to 90° arc sec	—	45	—	60	—	60
	Tilt - 30° to 90° arc sec	—	—	—	75	—	75
Net weight	kg	110		240 (PS) 260 (PL)		550 (PS) 595 (PL)	
Strength of worm gears (Rotary axis)	N·m	152		200		596	
Allowable work weight	0° (Horizontal)  kg/axis	35		40		100	
	0° to 90° (Tilting)  kg/axis	20		40		100	
Allowable work moment	$W \times L$  N·m	24		55.8		347.4	
Allowable load (when table is clamped)	F  N	3,920		10,800		14,400	
	$F \times L$  N·m	200		500		1,000	
	$F \times L$  N·m	500		1,000		3,100	
Allowable work inertia (per single-axis)	$J = \frac{W \cdot D^2}{8}$  $\text{kg} \cdot \text{m}^2$	0.05		0.13		0.9	

CE correspondence model

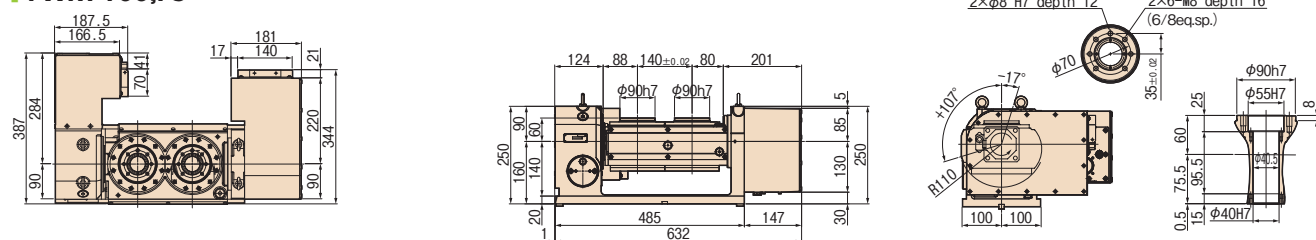
Tech.Info. Servo motors of other manufacturers **P.68**

Option Rotary Joint **P.66**

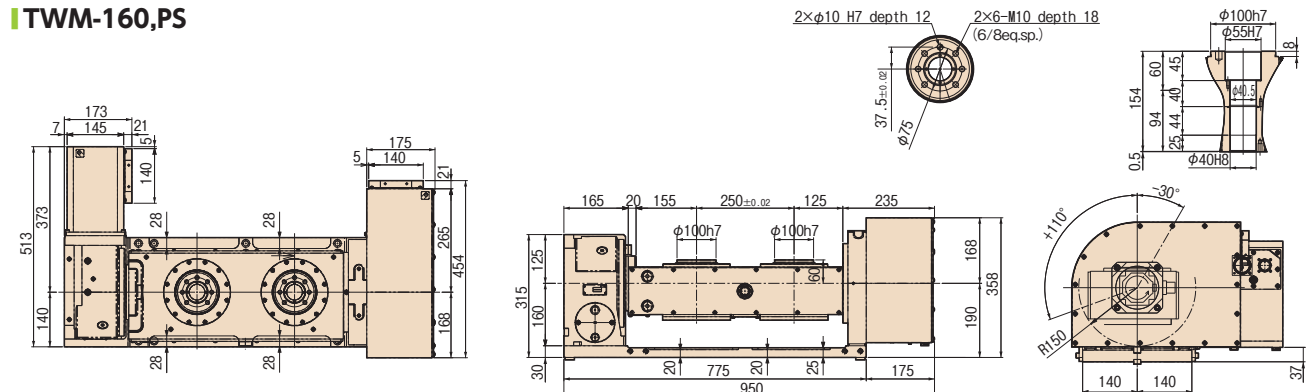
Dimensions

Unit: mm

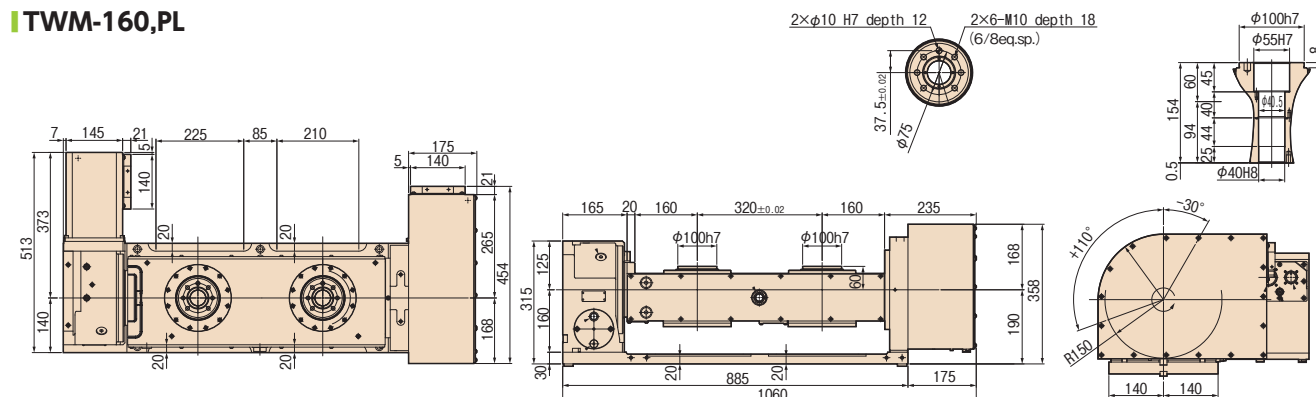
TWM-100,PS



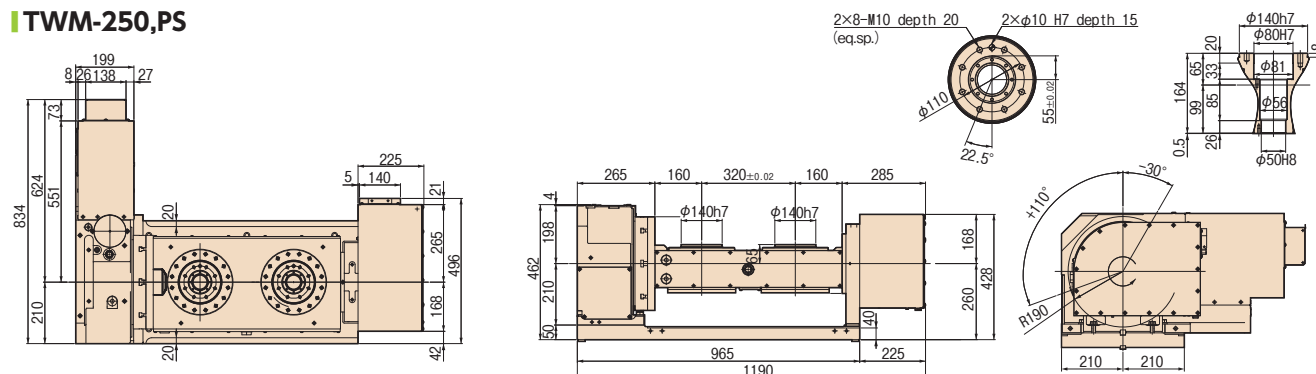
TWM-160,PS



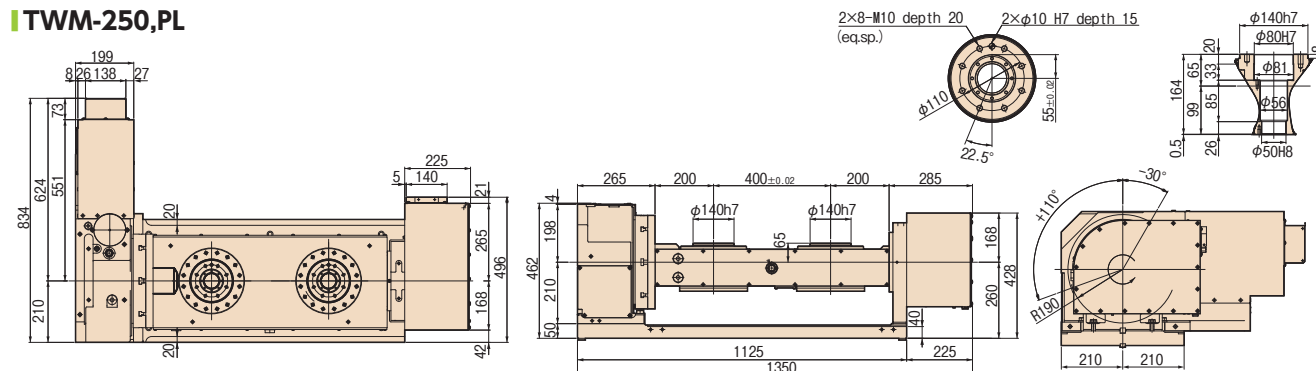
TWM-160,PL



TWM-250,PS



TWM-250,PL



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

RBS

RBH

Multi-Spindle
RBM

TBS

RWE/RWA
RN

RWH

RWA-B
RNCV-B

RWB

RWB-K
RNCK

RCB

RCH
RNC

RCV

Multi-Spindle
RWM

TWA/TN

TWB
TTNC

Multi-Spindle
TWM

RDS

RTV
RTT

TDS
TDB

NC Controllers

Accessories

Options

Technical
Information