

Multi-spindle Type

TWM

TWM-100•160•250

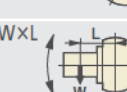
Tilt type multi-spindle enables highly productive machining. Simultaneous machining of multiple workpieces with complex shapes and 5-face machining is possible.



TWM-160, PS

Specifications

Unit: mm

		TWM-100,PS		TWM-160		TWM-250	
Tilt range		-17° to +107°		-30° to +110°		-30° to +110°	
Spindle diameter		φ90h7		φ100h7		φ140h7	
Table diameter		φ135 (Option)		φ160 or φ200 (Option)		φ250 (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	φ55H7		φ55H7		φ80H7	
	Through-bore	φ40		φ40		φ50	
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	$\times 10^{-3} \text{kg} \cdot \text{m}^2$	αiF2	αiF2	αiF4	αiF8	αiF8	αiF12
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

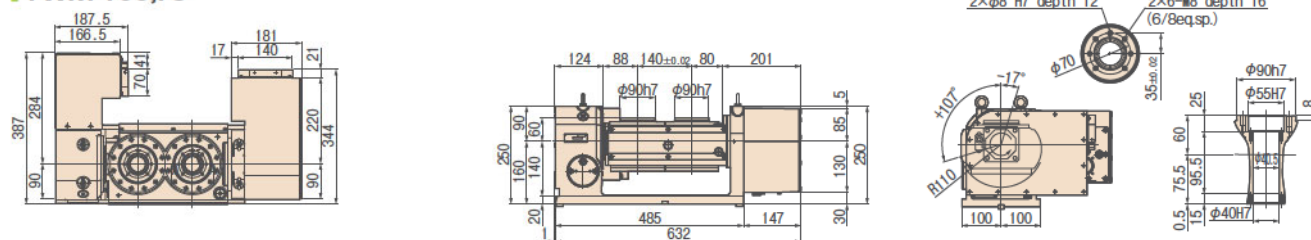
Tech. Info. Servo motors of other manufacturers **P.68**

Option Rotary Joint **P.66**

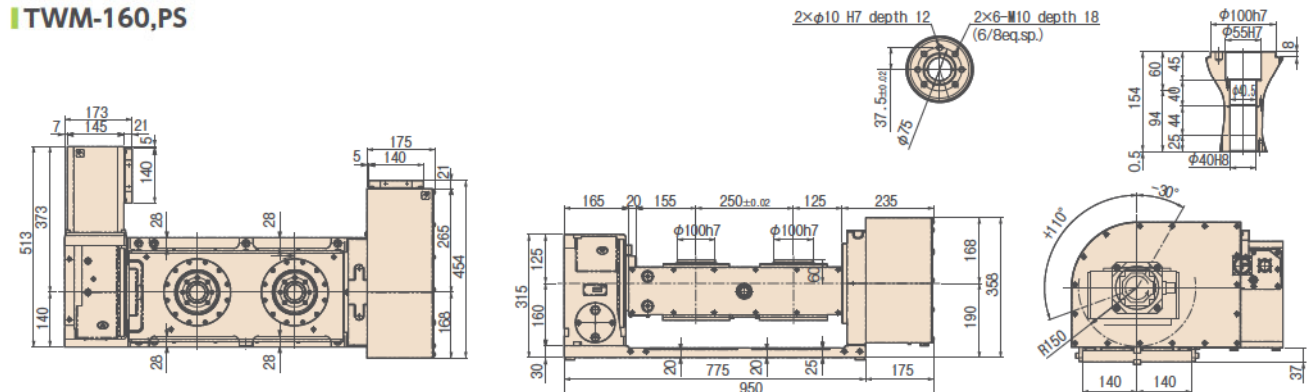
Dimensions

Unit: mm

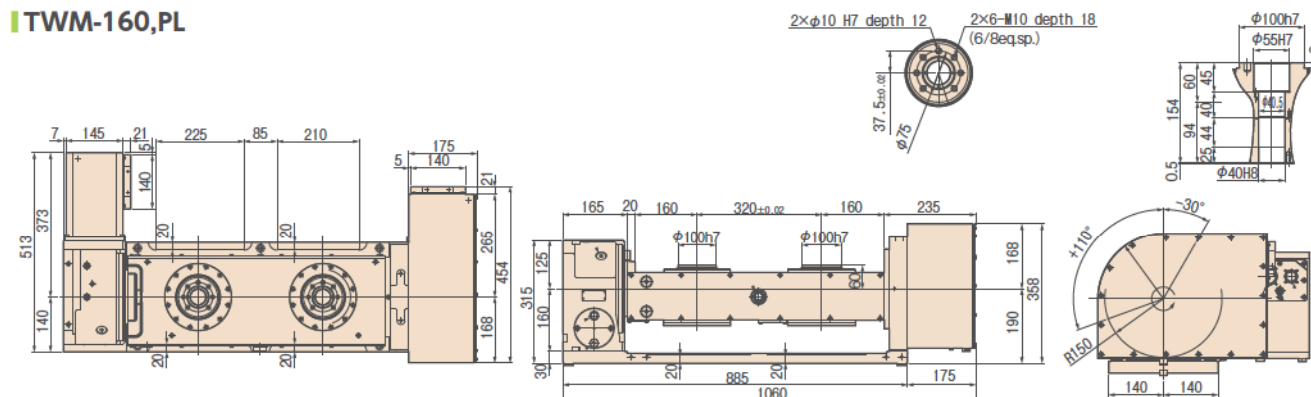
TWM-100,PS



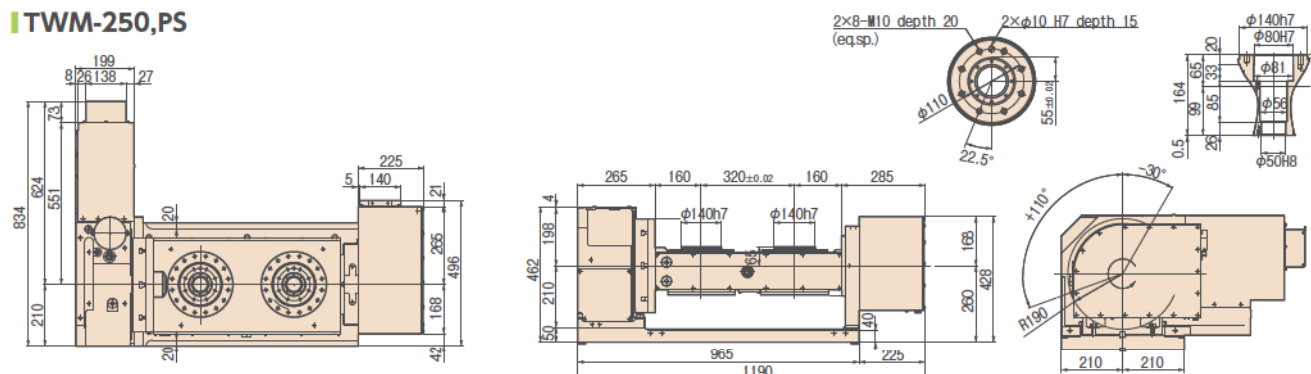
TWM-160,PS



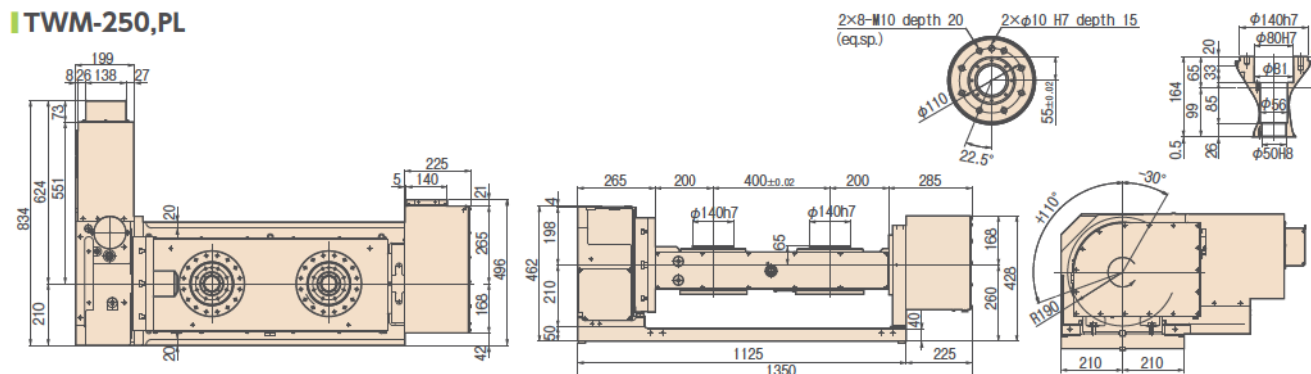
TWM-160,PL



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