Specifications of TPC

	TPC-Jr	TPC5
Control axis	1 axis	
Servo motor	AC servo: ABS detector	
Command unit	0.001°(Decimal)	1 sec,0.001°,0.0001°(Decimal)
Indexing number Direct indexing	1 to 999999 even indexing	
Indexing number Arc-indexing	1 to 999 even indexing	1 to 9999 even indexing
Max. command angle	±999.999°	±999°59'59'',±999.999°,±999.9999°
Command system	INC, ABS, Shortcut ABS, INC/ABS mixed system	
Input system	MDI	
Program control	Workpiece No. (W0000 to 9999)	
Program capacity	1,000 blocks (Total of main and sub programs)	2,000 blocks (Total of main and sub programs)
Positioning speed	Max. motor rotation speed: 3,000rpm	Max. motor rotation speed: 2,000rpm
Operation Mode	AUTO: Operation interlocked with a machining center SINGLE: Single operation of TPC CHECK: Program check and call PROG: Program edit MDI: Setup operation JOG: Manual feed, step feed HANDLE: Manual pulse operation	AUTO: Operation interlocked with a machining center SINGLE: Single operation of TPC CHECK: Program check and call PROG: Program edit MDI: Setup operation HANDLE: Manual pulse operation
Display	OELD 20 figures× 4lines	Liquid crystal display 20 figures×4lines
Direct indexing number command	Move angle is directly commanded	
Repetition	Command of number of move amount repetitions 999(TPC-Jr) 1 to 9999(TPC5)	
Direct indexing number command	Indexing number of six digits for 360 degrees	
Arc-indexing number command	Command of arbitrary 3-digit angle(TPC-Jr)or 4-digit angle(TPC5)	
Lead cutting command	Interlocked operation with one axis of the machining center in the open loop status	
Zero point return command	Allows return to the first, second or third-zero point	
Feedrate command	F0: positioning speed F1 to 9: cutting feedrate	
Feedrate setting	1. By radius and surface speed setting 2. By move amount per second	
Sub-program	Up to eight levels of nesting are possible	
Workpiece coordinate system setting	Allows a workpiece coordinate to be set at any point	
Dwell	Allows output of a positioning completion signal to be delayed	
Single directional positioning	Allows positioning in one direction	
Backlash compensation	In increments of 0.001°	Setting by command unit
Soft limit function	Sets a soft limit measured from the 1st zero position	
Automatic setting at power ON	1. Mode selection, AUTO/CHECK 2. Workpiece number setting 3.Block number setting	
Edit function	1. Insert 2. Delete 3. COPY	
Alarm	1. Program format errors 2. Program memory errors 3. Communication errors 4. Soft limit alarms 5. Overtravel 6. Servo motor alarms 7. Overheat in the cabinet(TPC5)	
Override function	×	5 to 200% 5% steps
JOG/HANDLE feeding	Manual pulse feed, Jog feed, step feed	Manual pulse feed, jog feed
Overtravel	The rotation range of the rotary table can be limited by limit switches. (Standard tilting axis)	
Manual 2nd zero setting	Enables the 2nd zero position to be set and changed at any point in the JOG(HANDLE)mode	
Input/output signal check	○	
Power	1φ200/220V±10% 50/60Hz	3φ200/220V±10% 50/60Hz
Earth (less than 100 ohm earth resistance)	Model / Power capacity / Fuse rating Jr K2 1.2KVA 10A Jr K3 1.9KVA 15A	Model / Power capacity / Fuse rating TPC5-SR6 2.3KVA 10A TPC5-SR12 4.0KVA 15A TPC5-SR30 5.9KVA 20A
Environmental conditions	Ambient temperature: 0-40 degree Relative humidity: 20-80%(no condensation) Vibration: 0.3G or less, No corrosive gas	
Weight	**Jr K2 unit** Weight: 7.0kg 285mm(W)×255mm(D)×135mm(H) **Jr K3 unit** Weight: 7.6kg 285mm(W)×255mm(D)×135mm(H)	**Control unit** Weight: 15kg 235mm(W)×377mm(D)×380mm(H) **MDI unit** Weight: 0.5kg 111mm(W)×30mm(D)×199mm(H)
External output signal	From TPC to machining center Contact ratings: DC24V, 0.1A or less	

	TPC-Jr	TPC5
FIN1	Positioning completion signal during interlocking operation	
	●	●
FIN2	Output of G7 completion or workpiece number setting completion (selectable by parameters)	
	●(AUTO mode)	◇
FIN3	Output of G7 completion or workpiece number setting completion (selectable by parameters)	
	×	◇
FIN4	Output of zero position (selectable by parameters)	
	×	◇
Workpiece number setting completion	Output at workpiece number setting completion (selectable by parameters)	
	●	◇
In AUTO mode	Output in AUTO mode	
	×	◇
LEVEL	Output during positioning (selectable by parameters)	
	●(Rotary table zero position)	◇
ALARM	Output in when alarm detected	
	●	◇
External input signal	From machining center to TPC (External power DC24V is also available.)	
START	Positioning start signal during interlocking operation (M-signal)	
	●	●
STOP	Input to stop rotary table	
	●	●
INTERLOCK	Input to interlock rotary table	
	×	◇
Selection of outer program	Workpiece number can be set externally	
	●	◇
BF (Strobe signal)	Strobe signal for setting workpiece number externally	
	●	◇
M-signal	M signal data fixed input system	
	●(6 points)	◇(16 points)
MDI lock	Input for locking MDI key operation	
	×	◇
Zero point return	1st zero return command	
	●	◇
Manual pulse generator	Manual operation can be performed with a manual pulse generator	
	Movement magnification:×1,×10,×100	
	◆	●
Full-closed feedback control	×	Enable full-closed control (highly precise) with the Inductosyn or rotary encoder
MP scale	Detecting unit 0.0001°(360poles) or 0.00005°(720poles)	
	×	◆
Encoder	Detecting unit 0.0001°or 0.00005°	
	×	◆
Serial channel	TPC program, feed rate and parameters can be stored in an external device	
	Format: ISO	Format: ISO
	◆(RS232C)	◆(RS232C)
Cable supplied (standard)	Between rotary table and TPC-Jr(1 pc) For Motor: 5m	Between rotary table and TPC5(2 pcs.) For motor power supply: 5m For motor detector: 5m
	–	Between TPC5 and MDI unit: 7m
	Power cable: 5m	Power cable: 5m
	Interlocking cable: 5m	Interlocking cable: 5m
Cable supplied (Option)	Cables of different length are available	
	RS232C cable: 5m	Interlocking cable: 5m
	Manual pulse generator (cable) 3m	B signal cable: 5m
	–	RS232C cable: 5m

●:Standard
◇:Optional interlocking cables are supplied
◆:Optional units and parts are supplied