Product Specifications

Arm Length	**Full length**	800 mm
	First arm	350 mm
	Second arm	450 mm
Working Envelope	**Axis 1**	±132 °
	Axis 2	±152 °
	Axis 3 (Z-axis)	0 ~ 420 mm
	Axis 4 (Z-axial rotation)	±360°
Maximum Speed	**Axis 1**	300 °/sec
	Axis 2	540 °/sec
	Axis 3 (Z-axis)	2,200 mm/sec
	Axis 4 (Z-axial rotation)	1,100 °/ssec
	Composite (Axis 1 and 2 composite)	8,400 mm/sec
Standard Cycle Time	**(With 2 Kg load)**	0.41 sec
Load	**Maximum payload mass**	20 kg
	Allowable moment of inertia	0.6 kg·m2
Position Repeatability	**X-Y**	±0.025 mm
	Axis 3 (Z-axis)	±0.01 mm
	Axis 4 (Z-axial rotation)	±0.01 °
Hard wiring		8 inputs and 8 outputs
Robot Controller Cable		3.5 m
Power Supply		4.3 kVA
Mass		46 kg
Controller		TS5000

Continuous operation is not possible beyond the effective load ratio.

Horizontal 300 mm, vertical 25 mm, round-trip with coarse positioning.

Acceleration/deceleration rates may be limited according to the motion pattern, load mass and amount of offset.

Positioning repeatable accuracy in one-direction movement, when the environmental temperature and robot temperature are constant. It is not the absolute positioning accuracy.

- The specification value may be exceeded depending on moving pattern, load mass and offset amount.
- Positioning repeatability for X-Y and C are for when Z-axis is at the uppermost position.
- Trajectory accuracy is not ensured.

Controller Specifications

	TS5000 Controller
Series	THE, TVM
Teach Pendant	TP5000
Number of controlled axis	4
Position detection	Absolute
Programming language	SCOL2
Movement commands	- PTP (point-to-point) - CP (continous path, linear, circular) - Short-cut - Arch motion
Main memory	Built-in flash ROM (capacity: 12MB)
Auxillary memory	SD card (maximum capacity: 32GB)
Number of registerable programmes	- Main memory: Maximum 512 (user files: 502) (system files: 10) - Auxillary memory: Maximum 512 (user files: 512)
Maximum number of program lines	Data part: 5,000 points Program part: 5,000 lines
I/O general purpose signals	8 inputs, 8 outputs
I/O system signals	- 13 input signals: program selection, start, stop, program reset etc. - 9 output signals: servo on, emergency stop, fault etc.
I/P hand control signals	8 inputs, 8 ouputs
Other functions	- Torque control - Interuptive functions - Self-disgnosis - I/O control and communications during motion - Coordinate calculations - Built-in PLC - Fanless design
Outer dimensions	365mm x 161mm x 350mm (WxHxD)
Mass	11kg
PC software for programming support	TSAssist
Options	- Expansion I/O (21 inputs, 17 outputs) - Field bus functions - Conveyor synchonrization function