



# MODEL TK429V2

**3+1 AXIS MACHINING CENTER:** Designed for cutting (routing, V-grooving, contouring), drilling, and milling operations in solid aluminum and composite aluminum and steel panels. Other materials include PVC panels and various other plastics or wood.

WORKING DIMENSIONS: X—163", 254", CUSTOM | Y—39", 78", CUSTOM | Z—7.4"

AXIS SPEEDS (INCHES PER MINUTE): X—2,756 | Y—1,968 | Z—1,181



## STANDARD:

- **Working dimensions options:** X—up to 550 inches | Y—up to 102 inches
- **Construction:** Welded steel bed frame with hardened and ground X axis guides and double precision rack and pinion axis motion driven by brushless motors. Bridge type gantry assembly made from cast structural beams with hardened and ground Y and Z axis guides. Precision rack and pinion on Y axis and ball & screw drive motion on Z axis driven by brushless motors. Air blow-bar system for dust/chips removal.
- **Electrospindle:** 7.4 Hp/18,000 RPM ISO30 air cooled is standard. 8.0 Hp 4 pole closed loop control with encoder and vector inverter electrospindles available for heavier machinings. Higher power and RPM electrospindles are available by request.
- **NC:** Modular with industrial PC, 1 GHz CPU, 20 Gb hard drive, Ethernet, 3.5" floppy, serial ports RS 232, parallel port, USB port, 15" color monitor, modem, mouse, keyboard, Windows XP®.
- **Software:** Capability to program while machine is operating. CN6 control software with ISO language editor and compiler, SLW (Self Learning Software; graphical user interface that allows programming based on visual reference between machine display and technical drawings or sketches), ISOWIN (2D graphical user interface for generating and displaying machinings on 3 sides of the work-piece), FORMULA (for carrying out the same machinings on work-pieces of varying dimensions).
- **Tool magazine:** Automatic rotary mounted on gantry (covered). 8 tools plus 2 angle heads. 5 to 10 second tool change.
- **TWIN Mode:** Segmentation of the work area to allow loading/unloading while the machine is operating (254"+ versions only)
- **Clamping system:** CNC controlled vacuum table, segmentable, including all pumps & hardware. T-slots for custom fixtures for profiles.
- **Coolant system:** Pressure fed micro-drop technology. Any non-corrosive coolant can be used
- **Safety device:** Photocells along front of machine, fenced enclosure with modular nets for robotic access along sides and back
- **Linear repeatability:** Positioning controlled by rotary encoders. Programmed linear positions will repeat to + / - 0.0039".
- **Tool length sensor**
- **Dry run capability**
- **Tool life alarm, production counter & cycle timer**
- **Absolute and incremental jog**
- **4 Retractable zero-point stops**
- **5 days on-site installation and training**
- **1 year/2,000 hours warranty on parts and labor**



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## OPTIONS:

- SLW software for the office
- NC Tool: 2D CAM software for drawing and importing CAD drawings then generating machine code in ISO
- TK CAM: 3D CAM software for advanced graphical interface and programming
- Clamp kits for profiles (to be used with the T-slots in the standard bed frame)
- “A” axis kit for use with angle heads. Allows 360° manipulation of angle head for V-grooving and other operations on solid and composite panels
- Vacuum chips/dust removal system
- Bar code utilities for automating program load and for integration to production systems
- Bar code reader - hardwired or wireless
- Laser datum finder
- Probing system
- Remote control console for jog and other controls while standing anywhere along the X axis
- Voltage stabilizer
- Uninterruptible power supply
- Electronics cabinet cooling system

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