Southwestern Industries, Inc.

TRAK K3 EMX Knee Mill with the ProtoTRAK EMX CNC

TRAK K3 EMX Machine Specifications
- Table Size –50" X 10"
- T-Slots – 5/8" x 3 x 2 ½"
- Table Travel – 32"
- Saddle Travel – 16"
- Knee Travel – 16"
- Ram Travel – 24"
- Maximum Quill Travel – 5"
- Quill Diameter – 3 3/8"
- Spindle Taper – R8
- Spindle Speed Range – 60-4200 RPM
- Head Tilt – 45 deg. forward, 45 deg. back, 90 deg. left, 90 deg. right
- Spindle Motor – 3 HP
- Power Requirement Control – 110V; 1P; 10A
- Power Requirement Machine – 220/440V; 3P; 8.5/4.25A
- Maximum Weight on Table – 850 lbs.
- Machine Weight – 2816 lbs.
- Machine dims l,w,h, - 71" x 59" x 84"
- Maximum rapid feed – 100 IPM
- Way surface type – Dovetail X, Z Square Y
- Precision 7207 CP4 spindle bearings
- Chrome hardened and ground quill
- Meehanite castings
- Slide ways are Turcite coated
- Wide way surfaces are hardened and ground

ProtoTRAK EMX CNC
Control Hardware Specifications
- Two-axis CNC, three-axis DRO
- Digital Servo Amplifiers – custom designed for ProtoTRAK operation
- D.C. Servo Motors – rated at 280 in-oz. Continuous torque are twice that required
- Precision Ground Ball Screws – in the table and saddle
- Modular Design – simplifies service and maximized uptime
- 115V/60HZ/15 amps
- Feedrate Override of programmed feedrate and rapid
- Polycarbonate Sealed Membrane Keypad and Gasket Sealed Control
- Enclosures to lock out contamination
- 7.4" LCD with adjustable contrast
- Floppy Disk Storage for part programs
- Rugged Industrial PC

Software
- Part geometry programming – the tool path is generated for you automatically
- Diameter Cutter Compensation – allows programming of the part rather than the center of the tool path
- Circular interpolation – makes arcs and any size hole easy to do with standard tools
- Linear Interpolation – to machine lines at any angle
- Conrad – provides automatic corner radius programming with one data input
- Incremental and Absolute – programming can even be mixed within an event
- Error Messages – to identify programming mistakes

- Fault Messages – for system self-diagnostics
- Program Downloading – from offline CAD/CAM systems via a modified FANUC 6 post-processor
- Teach – to program manual position and mill moves
- Parts Graphics display
- Look – a single button press to view graphics during programming
- Math Help – for finding points in a prompted format with graphical representation of prompts
- Machine Tool Error Compensation and Backlash Compensation custom set on mill after installation
- Selectable Inch/mm measurement readout
- Jog of X and Y from 1 to 100 inches per minute
- Continue Mill to eliminate repetitive data inputs while programming

Programmed Canned Cycles
- Posn/Drill – single point
- Bolt Hole – series of points evenly spaced around a circle
- Mill – straight line in any direction
- Arc – any portion of a circle
- Pocket – a rectangle or circle and all the material inside, includes finish cut
- Frame – a perimeter of a rectangle or circle, includes finish cut
- Repeat – of programmed events with or without offset

Service
- The SWI Customer Service Group provides after-sale support over the telephone via a toll-free
- service number - (800) 367-3165.
- Machine design makes self-service easy for when the customer is able to resolve the problem.
- Express Exchange program in which nearly all electronic and mechanical sub-assemblies are in stock.
- In response to a problem, any parts you need may be shipped to arrive the next day.

Available Options/Accessories
- Off-line Programming for running the ProtoTRAK software on the PC
- Remote Stop/Go (RSG) switch
- Power Drawbar
- Halogen Worklamp
- Chip Pan
- Riser Block
- Knee Power Feed
- Coolant Pump