

Southwestern Industries, Inc.

TRAK LPM Specifications

with the ProtoTRAK PMX Control

LPM Specifications

Overall L x W x H	13.9' x 7.37' x 9'
Table size	35 3/8" X 19 5/8"
Teelots:	5 x .71" x 3.94"
no. x width x pitch	
Table max load	1000 lbs.
Travels: X x Y x Z	31" x 18.5" x 21"
Max spindle nose to table	24"
Min spindle nose to table	3 3/8"
Max clearance spindle center to column	19 1/4"
Max Rapid speed X x Y x Z ipm	800 x 800 x 700
Electrical requirements	208-240V / 70 amp
Tool holder type	CAT40
Spindle nose diameter	2.75
Max RPM	8000
Tool Capacity	16
Max tool weight incl holder	15 lbs
Max tool diameter	3.14
Tool clamping force	1500 lbs
Tool carousel to table	18"
HP Peak	15
HP Continuous	10

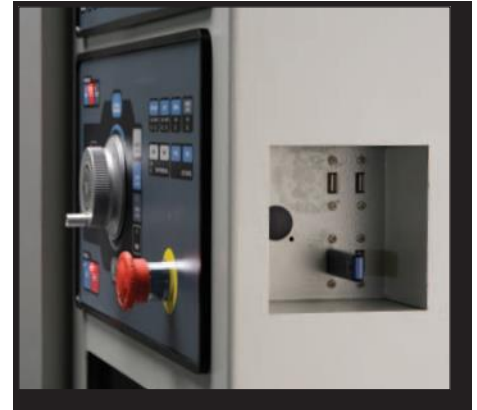
Standard Features

- Internal wash down nozzles
- Air gun
- Wash down gun
- Halogen work lights
- Auto lube system
- Mobile Tool setting system (incl. cart)
- Belt drive spindle
- Coolant pump
- Wash down pump
- Oil/coolant separation system
- Status lights
- Rigid tapping
- Chip Auger
- Air blast to clear chips from spindle

Options

- Fixture cart
- Sets of ball lock liners, primary and secondary
- Ball lock locating guide
- Fixture plates – small, medium and large
- Fixture clamping devices – set of 4
- Retention knobs – CAT 40 – set of 16
- Vise fixture kit – fixture, fence, stop
- Vise Stop Assembly – incl 1", 2" and 3" extensions
- Offline Programming
- DXF File converter
- Transformer 440 to 220
- Integrated 4th Axis

ProtoTRAK PMX Hardware Specifications

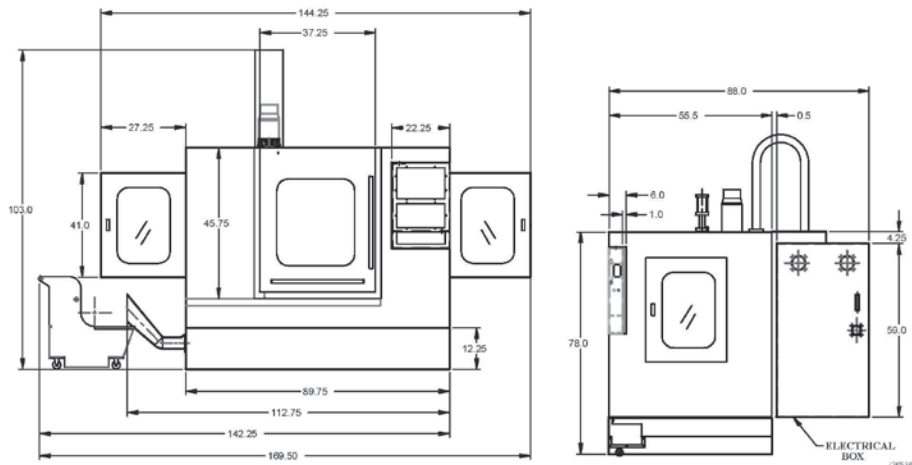


- Jog wheel for TRAKing and positioning
- 12.1" color active-matrix screen
- Industrial-grade Pentium® processor
- 1 GB Ram
- 4 User USB connectors
- Override of program feedrate
- LED status lights built into display
- RJ45 Port with 10/100 Ethernet
- Override of program spindle speed
- 4th axis interface

Software Features - General Operation

- Clear, uncluttered screen display
- Prompted data inputs
- English language – no codes
- Soft keys - change within context
- Windows® operating system
- Color graphics with adjustable views
- Inch/mm selectable
- Convenient modes of operation
- Absolute Home location
- Spindle load indicator
- Reference to ball lock locations on table
- Dimension reference indicator
- Selectable view between Current and Staged programs

Overall Dimensions



Features And Specifications

DRO Mode Features

- Incremental and absolute dimensions
- Jog with selectable feed rates
- Powerfeed X, Y or Z
- Servo return to 0 absolute
- Go To Dimensions from convenient reference
- Spindle speed setting with manual override
- Selectable handwheel resolution
- Convenient choice of dimensional references:
Machine Home, Part Zero, Abs
Zero Ball lock locations

Program Mode Features

- Auto Geometry Engine
- Geometry-based programming
- ToolPath programming
- Scaling of print data
- Multiple fixture offsets
- Programming of Auxiliary Functions
- Event Comments
- Three-axis Geometry conversational programming
- Incremental and absolute dimensions
- Automatic diameter cutter comp
- Circular interpolation
- Linear interpolation
- Look – graphics with a single button push
- List step – graphics with programmed events displayed
- Alphanumeric program names
- Program data editing
- Program pause
- Conrad – automatic corner radius
- Programmable spindle speeds
- Math helps with graphical interface
- Auto load of math solutions
- Tool step over adjustable for pocket routines
- Pocket bottom finish pass
- Selectable ramp or plunge cutter entry
- Subroutine repeat of programmed events
- Nesting
- Rotate about Z axis for skewing data
- Mirror of programmed events
- Copy
- Copy rotate
- Copy mirror
- Tool data entry in event programming
- Selectable retract in Bore operations

Auxiliary Functions

- Coolant on/off
- Air on/off
- Pulse indexer
- Part change table position

Canned Cycles

- Position
- Drill
- Bolt Hole
- Mill
- Arc
- Circle pocket
- Rectangular pocket
- Irregular Pocket
- Circular profile
- Rectangular profile
- Irregular Profile
- Circle Island
- Rectangular Island
- Irregular Island
- Helix
- Thread milling
- Engrave
- Tapping
- Face Mill

Edit Mode Features

- Delete events
- Erase program
- Spreadsheet editing
- Global data change
- G-Code editor
- Clipboard to copy events between programs
- Move between subprograms in a master program

Program Set Up

Mode Features

- Program diagnostics
- Advanced tool library
- Tool names
- Tool length offset with modifiers
- Tool path graphics with adjustable views
- Program run time estimation clock
- Convenient part/fixture management screen
- Fixture offsets
- Part offsets within fixture
- Convenient manual tool handling when tools required exceed ATC capacity
- Photo storage and display
- Notes
- Z Safety Dimension to prevent crashes
- Tool Crib
- Tool by Tool or Part by Part run strategy
- Convenient Tool Reconciliation between programs and ATC
- Convenient ATC capacity

Machine Set Up

Mode Features

- Advanced diagnostic routines
- Software travel limits set in the factory
- Prompted Tool loading and ATC Management
- Checklist to assure nothing is forgotten
- Single key press to get to step needing attention

Run Mode Features

- TRAKing
- 3D CAM file program run
- 3D G code file run with tool comp
- Real time run graphics with tool icon
- Countdown clock for total part cycle time or manual tool change
- Error alarms prevent Run when set up steps are skipped
- Work on Staged programs while Current program runs

Program In/Out

Mode Features

- CAM program converter
- Converter for prior-generation ProtoTRAK programs
- DXF/DWG file converter (Optional)
- Selection of file storage locations
- Automatic file back-up routine
- Preview graphics for unopened files
- Networking
- Create Master routine for combining programs
- Transfer of Staged program to Current
- Tool reconciliation for Master Programs

Control Options

The DXF File Converter Option

- Import and convert CAD data into ProtoTRAK programs
- DXF or DWG files
- Chaining
- Automatic Gap Closing
- Layer control
- Easy, prompted process you can do right at the machine

CAM Out Converter Option

- Save ProtoTRAK files as CAM files for running on different controls

4th Axis Option

Hardware and software that allows true 4th axis interpolation. Includes indexer, tailstock and fixture plate.