Southwestern Industries, Inc.

TRAK TRL 2470SX Lathe with the ProtoTRAK SLX CNC

TRAK TRL 2470SX Machine Specifications

- Height of Centers- 12”
- Distance between centers- 70”
- Swing over bed – 24”
- Swing over saddle wings – 24”
- Swing over cross slide – 14.5”
- Cross slide travel – 12.5”
- Tool section max – 1”
- Coolant – 15 gal.
- Bed Width – 14.57”
- Bed Height – 15”
- Spindle Nose – D1-8
- Spindle through hole – 4.09”
- Spindle Taper – MT #8
- Taper in reduction sleeve – MT #5
- Spindle diameter front bearing – 5.51”
- Number of bearings - 2
- Bearing Class (Radial Runout) – Normal
- Number of Spindle Speed Ranges - 2
- Spindle Speed Range (RPM) – 40-670, 100-1800
- Spindle HP – 15
- Voltage - 220
- Amps/full load – 42
- Control – 110V/1P/12A
- Machine – 220V/3P/60Hz
- Dimensions net LxWxH 129 x 60 x 77”
- Dimensions ship LxWxH – 134 x 64 x 77”
- Weight net - 6500 lbs.
- Weight ship – 6900 lbs.
- Tail stock quill travel – 8.5"
- Quill diameter – 3.5"
- Quill taper hole - MT#5
- Coolant pump motor - 1/8 HP
- Dynamic spindle motor brake
- Way surface hardness - 480-560 HB
- Direct drive headstock - no gear shifting
- Quiet operation
- Dual sliding doors to control chips and coolant with one door removable
- Meehanite cast monolithic base
- Heavy ribbed base construction
- Bedways hardened and ground
- Sliding surfaces Turcite coated
- Dovetails on cross slide, V-ways on saddle
- Adjustable saddle gibs
- Maximum rapid 250 ipm

Machine Options

- Chuck
- Coolant pump
- Face plate
- Follow rest
- Indexer – 4 or 8-station
- Work lamp
- Remote stop/go switch
- Steady rest
- Tooling kit
- TRAKing
- Gang Tooling
- Headstock oil cooler

ProtoTRAK SLX System Specifications

(O) indicates optional feature

- **ProtoTRAK System Hardware**
- ProtoTRAK SLX CNC
- Two-axis CNC, two-axis DRO
- Electronic handwheels for manual operation
- 10.4" color active-matrix screen
- Industrial-grade Intel® processor
- 1 Gb RAM
- 4 USB ports
- RJ45 port/Ethernet port (O)
- Override of program feedrate
- Override of program spindle speed
- LED status lights built into display
- Gasket-sealed enclosures
- Jogstick for convenient jog
- Clean front panel with few hard keys

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 (see below)

DRO Mode features

- Incremental and absolute dimensions
- Powerfeed X or Z
- Tapers of any angle
- Radius
- Fillet
- Go To dimensions (O)
- Servo motor return to Home
- Spindle speed setting with override

- Tool offsets from library
- Fine/course handwheel resolution (O)

Program Mode features

- Geometry-based programming
- Event comments (O)
- Incremental and absolute dimensions
- Automatic tool nose radius compensation
- Circular interpolation
- Linear interpolation
- Look –graphics with a single button push
- List step – graphics with programmed events displayed
- Alphanumeric program names
- Conrad – one input for automatic corner radius programming
- Chamfer – one input for automatic chamfer programming
- Math helps with graphical interface
- Auto load of math solutions
- Subroutine repeat of programmed events
- Nesting
- Programmable spindle speeds
- CSS (Constant Surface Speed) programming (O)
- IPR (Inch per Revolution) programming (O)
- Gang tooling (O)

Canned cycles

- Position
- Drill
- Bore
- Turn
- Arc
- Cycle
- Thread
- Groove
- Custom thread (O)
- Tap (O)

Edit mode Features

- Delete events
- Erase program
- Spreadsheet editing (O)
- Global data change (O)
- Clipboard to copy events between programs (O)

Set Up Mode Features

- Program diagnostics
- Advanced tool library
- Tool library file save
- Icon-prompted tool setting
- Tool offsets with modifiers
- Single tool set-up
- Gang tool set-up (O)
- Indexer tool set-up (O)
- Advanced diagnostic routines

- Software travel limits
- Tool path graphics with adjustable views
- Program run time estimation clock
- Verify software (O)

Run Mode Features
- CAM file program run
- Real time run graphics with tool icon
- Countdown clock to next pause or tool change (O)
- TRAKing of programs during program run (O)
- Automatic indexing for tool change (O)
- Gang tool operation (O)

Program In/Out Mode Features
- Simple program storage to USB memory device
- CAM program converter
- Converter for prior-generation ProtoTRAK programs
- DXF/DWG file converter (O)
- Selection of file storage locations (O)
- Automatic file back-up routine (O)
- Preview graphics for unopened files (O)
- Networking (O)

Control Options
Advanced Features with Verify Option
- Verify – see a 3-D model machined before cutting chips
- Spreadsheet editing
- Global data change
- Clipboard to copy events to another program
- Event comments
- Program run time estimator
- CSS (Constant Surface Speed) programming
- IPR (Inch per Revolution) programming
- Gang tooling
- Additional Canned Cycles:
    - Custom thread
    - Tap

Networking Option
- Networking via RJ 45 port

The DXF File Converter Option
Import and convert CAD data into ProtoTRAK programs
DXF or DWG files
Chaining
Automatic Gap Closing
Layer control
Drawing Line Edit
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

TRAKing/Electronic Handwheels Option
TRAKing of programs during program run
Selectable Fine/Coarse handwheel resolution