Southwestern Industries, Inc.

TRL 1630SX Lathe Specifications with the ProtoTRAK SLX Control

Machine Specifications

- Height of Centers-8"
- Distance between centers-30"
- Swing over bed -16"
- Swing over saddle wings-16"
- Swing over cross slide-8.6"
- Cross slide travel-8.5"
- Tool section max-3 /4"
- Coolant tank capacity - 8 gal.
- Width of Bed-12.6"
- Height of Bed-12.6"
- Spindle Nose (Camlock)-D1-6
- Spindle through hole-2.12"
- Spindle taper-MT#6
- Taper in reduction sleeve -N/A
- Spindle dia at front bearing-3.15"
- Number of bearings-2
- Bearing class (radial round)-P5
- Spindle speed range (RPM)-150-2500
- Optional Tailstock Quill travel-5"
  - Quill diameter-2.36"
  - Quill taper hole-MT#4
- Spindle Motor HP -7.5
- Power requirements, control-110V; 1P; 8 A
- Power requirements, machine-220V;3P;60Hz
- Amps full load current-25
- Dimensions net - 79 x 40 x 56"
- Dimensions shipping - 87 x 45 x 67"
- Weight net – 2,875 lbs.
- Weight shipping – 3,420 lbs.
- Maximum rapid feed X - 100
- Maximum rapid feed Z - 150
- Coolant pump motor -1/8 HP
- Spindle motor brake - Dynamic braking
- Way surface hardness - 400 – 450 HB
- Head stock lubrication - Oil bath
- Sliding door for easy set-ups
- Bedways hardened and ground
- Sliding surfaces Turcite coated
- Dovetails on cross slide, V-ways on saddle
- Adjustable saddle gibs

Machine Options
- Collet closer
- Chuck
- Coolant pump
- Face plate
- Follow rest
- Indexer – 4 or 8-station
- Work lamp
- Remote stop/go switch
- Steady rest
- Tooling kit
- Tailstock

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 Pentium® processor
- 1 GB Ram
- 4 USB connectors
- RJ45 port and Ethernet card (O)
- Override of program feedrate
- Override of program spindle speed
- LED status lights built into display
- Gasket-sealed enclosures
- Jogstick for convenient jog
- USB Thumb drive flash memory 512 MB or more (O)
- 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
- Jog at rapid with override
- 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
- Program run time clock in Run Mode (O)
- 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

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
- Program storage to USB flash drive
- 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
- Go To Dimensions
- Selectable Fine/Coarse handwheel resolution