Southwestern Industries, Inc.
TRL 1845SX Lathe Specifications with the ProtoTRAK SLX Control

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

Machine Specifications

- Height of Centers - 9"
- Distance between centers - 45"
- Swing over bed – 18.1"
- Swing over saddle wings -17"
- Swing over cross Slide – 9.13"
- Cross slide travel – 10.6"
- Tool section max - 1"
- Coolant tank capacity - 13 gal.
- Width of Bed – 13.4"
- Height of Bed – 12.4"
- Spindle Nose (Camlock) - D1-6
- Spindle through hole - 2.36"
- Spindle taper - MT#6
- Taper in reduction sleeve - MT#4
- Spindle dia at front bearing - 3.35"
- Number of bearings - 2
- Bearing class (radial round)- Normal
- Spindle speed range (RPM)- 80-850, 250-2500
- Tailstock Quill travel - 6"
  - Quill diameter - 2.56"
  - Quill taper hole - MT#4

- Spindle Motor HP - 10
- Power requirements, control - 110V; 1P; 10 A
- Power requirements, machine - 220V;3P;60Hz
- Amps full load current - 33
- Dimensions net – 94 x 52 x 73"
- Dimensions shipping - 91 x 52 x 84"
- Weight net - 3285
- Weight shipping - 3800
- Maximum rapid feed X - 100
- Maximum rapid feed Z - 250
- Coolant pump motor - 1/8 HP
- Spindle motor brake - Dynamic braking
- Way surface hardness - 480 – 560 HB
- Head stock lubrication - Oil bath
- 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

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 Celeron® processor
- 256 Mb Ram
- P/S 2 Keyboard connector
- 2 USB connectors
- RJ45 port and Ethernet card (O)
- Override of program feedrate
- Override of program spindle speed
- LED status lights built into display
- TEAC floppy drive
- Gasket-sealed enclosures
- Jogstick for convenient jog
- 128 Mb USB Thumb Drive flash memory (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
- Simple program storage to floppy
- 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 Option
- 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/Memory Option
- Directory/File/Folder Program organization
- Automatic file back up routine
- Preview Graphics for unopened files
- USB Thumb Drive flash memory, 128 MB or more
- 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