



## MACHINERY SOLUTIONS, INC.

3111 Via Mondo, Rancho Dominguez  
CA 90221 U.S.A.

Phone: (310) 537-2522  
Fax: (310) 637-0490

web site: [www.victormachines.com](http://www.victormachines.com)  
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## 1640DCL Digital Control Lathe

### MACHINE SPECIFICATIONS

- Multiple Function CNC Lathe
  1. Manual Hand wheel Operation
  2. CNC G-Code Operation
- 16.1" swing over bed, 8.6" swing over cross-slide
- $\varnothing 2.05$ " diameter hole through spindle
- 40.0" between centers
- 7" X-axis cross-slide travel
- One-piece casting base
- Headstock gears are made from chromium molybdenum steel (SCM21), hardened by carbonization, and precisely ground to provide smooth and quiet running
- Spindle is supported by three precision bearings to insure accuracy and rigidity during heavy cutting (Suitable for large diameter work-pieces)
- Ribbed bed constructed from an annealed processed casting insures no deformation occurs on the slide ways
- Hardened and ground bed ways
- Rigid construction of the tailstock is able to withstand heavy drilling and cutting
- Automatic force type lubrication system to all sliding surfaces & ball screws
- Hardware over travel limit switch for all travel directions (On tracks to allow for easy adjustments)
- Tailstock travel limit switch to avoid unexpected crashes
- Complete GSK system with GSK AC Servo Motors & Drives
- Handwheel (x1) for manual and automatic turning operations
- 8.4" LCD Screen / CNC Keyboard mounted on slide rails for easy access
- Front dual sliding doors to protect operator from chips and coolant
- Control panel conveniently mounted on swivel arm for easy access with doors closed
- 7.5 HP high power spindle motor



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### MACHINE SPECIFICATIONS (continued)

- Vector control spindle drive – Excellent torque characteristic at all spindle speeds
- Manual tailstock with Inch/Metric graduations
- Tailstock taper: MT #4; Quill diameter: 2.05", Quill Travel : 4.72"
- Feed rates: 0.01 ~ 200.0 in/min by program input
- Rapid traverse: X-axis = 200 in/min, Z-axis = 300 in/min
- Spindle speeds (Variable and programmable through 2 manual ranges):
  - Low Gear = 40 ~ 360 RPM
  - High Gear = 280 ~ 2,400 RPM
- Automatic spindle jog during gear changes makes gear shifts easy
- Spindle Nose: D1-6 cam lock
- Quick Change Tool Post Set – one tool post + 5 holders
- Standard Tool size 0.75" x 0.75" square shank
- Chuck guard with safety interlock switch to prevent unexpected spindle movement
- Fluorescent work light – Fully integrated to allow for CNC on/off control
- Coolant system – Fully integrated to allow for CNC control of on/off function
- Set of leveling pads, screws, and nuts
- Set of wrenches for operating machine
- Set of Operating and Maintenance manuals
- Floor area: 1640DCL: 98" x 53"
- Net weight: 1640DCL: 4,500lbs.

### CONTROL SPECIFICATIONS

- GSK 980 TDC ultra-compact CNC integrated with 8.4" LCD display and full function keypad
- High quality engineering at GSK ensures reliable technology and performance
- GSK GS2000 AC Servo System with high resolution absolute encoders
- With USB interface, it supports file operation in flash disk, system configuration and software
- Simultaneous 2-axis linear and circular interpolation
- G70 – G76 canned cycle functions
- Program capacity: 40MB, 384 programs (including subprogram, macro programs)
- Full CNC G-code, M-code, T-code, and S-code Functions
- Simultaneous multiple M-code processing (Up to 3 M-codes)
- Graph programming assistance, Grammar inspection, 2D tool display, graph preview
- Custom Macro B Programming Language for G-code programming (optional)
- Real time tool path line graphics (Optional 3D solid model tool path graphics available)
- 6 CNC Operation Modes: MEM, EDIT, MDI, Mchn Gdnce, Man/Hndwl, Ref Return
- 5 Auxiliary CNC Modes: Dry Run, Single Block, Optional Blk Skip, Manual Hand wheel Interrupt, and Auxiliary Function lock
- Constant Surface Speed (CSS) control for manual and automatic operations (Standard)



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### **CONTROL SPECIFICATIONS (continued)**

- Conversational graphics programming
- Diameter / Radius programming
- Absolute and incremental programming
- Inch / Metric input and display
- Data backup and recovery
- On screen tool path graphics to verify tool path of part programs
- Taper, Chamfer, Radius, Roughing, Grooving, and Drilling in Manual and Automatic modes
- Inch/Metric threading; Straight, Taper, and Multi-lead threading
- User programmable "Software Travel limits" to limit the travel for X & Z axes
- Intelligent hardware travel limits - only stops movement in the over-travel direction
- Inch / Metric feed rate input: inch/rev and inch/min or mm/rev and mm/min
- Gear indicator lights and tool number light on status panel
- Auto spindle jog during gear changes
- Spindle load meter: 0% - 180% of rated load
- Lock switch for disabling parameter and program input / modification
- Conveniently mounted machine controls on apron - E-Stop, Playback, Start, Stop
- Spindle control : forward, reverse, stop, and speed dial
- User selectable Feed rate override profiles: Linear or Exponential
- Auto/Jog feed rate override: 0% to 200%
- Spindle override: 50% to 150%
- Rapid Traverse override: 0%, 25%, 50%, & 100%
- Incremental / continuous jog for X & Z axes
- Intelligent Bi-directional home search for X & Z axes
- Multiplier switch for hand wheel sensitivity: 0.0001", 0.001", & 0.01"
- Full CNC control of coolant on-off functions via M-codes
- Full CNC control of work light on-off functions via M-codes
- CNC M-Code Controlled Power Contactors for controlling various accessories (Optional)
- Three coordinate systems: Machine, Absolute, & Relative
- Program storage 63 part program storage, 40 meters of paper tape (131 feet)
- Backlash error compensation(mode and rate are set with parameter, range 0mm-2mm or 0"-0.2")
- Ball screw pitch error compensation (from Laser Calibration Data)
- Built-in USB port for loading/unloading of part programs and other CNC data
- 32 Tool Geometry and 32 Tool Wear offsets with tool nose radius compensation
- Self diagnostics with error messages on screen
- MPG trial cut and program zero-return
- Auxiliary programming and program path review function
- Build-in PLC programs, the currently running PLC program can be selected



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**PRICE LIST**

<b><u>MODEL</u></b>	<b><u>LIST PRICE</u></b>
VICTOR 1640 DCL™ w/ GSK 980 TDc Control .....	<b>\$ 28,950.00</b>

**STANDARD ACCESSORIES:**

- Rear enclosure with dual sliding doors
- Automatic lubrication system
- Ball screw pitch error compensation
- Constant Surface Speed (CSS)
- Built-in flood coolant system
- High visibility fluorescent work lamp
- Run-time / Parts Counter
- Tool nose radius compensation
- Quick Change Tool Post Set– ¾" Tool

**OPTIONAL ACCESSORIES:**

3-Jaw chuck (D1-6) 8" .....	\$ 720.00
3-Jaw chuck (D1-6) 10" .....	\$ 920.00
4-Jaw chuck (D1-6) 10" .....	\$ 720.00
Steady rest w/ rollers 3"~8" .....	\$ 800.00
Follow rest .....	\$ 550.00
Face Plate (D1-6) .....	\$ 515.00
Live center M.T. #4 .....	\$ 380.00
5C Hand Level type Collet closer .....	\$ 1,500.00
5C Air Operated Style Collet Closer* .....	\$ 4,400.00
(Includes: Foot-operated kit, installation and full CNC integration)	
5C Collet set (16 pieces) .....	\$ 550.00

**TOOLING SYSTEM UPGRADES (Instead of standard quick change tool post)**

Upgrade to Aloris Indexable Tool Post (BXA-I Series) – ¾" tool shank .....	add \$ 1,500.00
Upgrade to Star-V25 Horizontal 4-Pos CNC Turret – ¾" ~ 1" tool shank .....	add \$ 2,345.00

*\*\*Customized Holder Sets and Indexable Tooling are also available. Please call for more details. \*\**



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**GSK CNC SOFTWARE SPECIFICATIONS**

Constant Surface Speed Control.....	\$	Standard
Electronic Hand wheels (3 units).....	\$	Standard
Manual Handle / Spindle Interrupt.....	\$	Standard
Run-Timer / Parts Counter .....	\$	Standard
Backlash Error Compensation.....	\$	Standard
Ball screw Pitch Error Compensation.....	\$	Standard
Tool Geometry & Wear Offsets .....	\$	Standard
Tool Nose Radius Compensation.....	\$	Standard
Chamfering Corner R Function.....	\$	Standard
G70-G76 Canned Cycle Functions .....	\$	Standard

**CNC HARDWARE**

GSK 980 TDc CNC System.....	\$	Standard
USB Port for File Transfer .....	\$	Standard

**VICTOR DCL TRAINING OPTIONS**

DCL20-01	GSK CNC Controller Manual .....	\$	Standard
DCL20-03	“On-the-Machine” Training at Victor HQ (Los Angeles) – per day .....	\$	550.00
	(Topics covered dependent on customer’s request)		
DCL20-04	“On-the-Machine” Training at Customer Site – 1 <sup>st</sup> day .....	\$	900.00
DCL20-05	Additional day of training at Customer Site .....	\$	700.00
	(Customer pays all travel rate charges)		

(Prices & availability subject to change.)