

proLIGHT™ 3000 Turning Center



Standard Features

- Cast iron machine base
- Built-in chip tray
- Gortite® way covers
- Precision-ground steel table
- Digital spindle speed display
- Connector for automatic tool turret
- Linear motion system:
 - Zero backlash ball screws
 - 3/4" (19.05 mm) precision-ground and hardened shaft
 - Wipers on all slides
 - Low-friction linear bearings
 - Easily accessible oil ports
- Tooling/Accessories:
 - 4" (102 mm) 3-jaw self-centering chuck
 - Chuck key
 - Spindle Wrench
 - Oil can
 - AC power cord
 - Accessory port adapter cable
 - 25 pin computer cable
- User's Guide/Software

Machine Specifications

Axis Travel

X Axis	4"	(102 mm)
Z Axis	10"	(254 mm)
Swing over bed	6"	(152 mm)
Swing over cross slide	3.9"	(99 mm)

Work Area

Table Size	11.5" x 7"	(292 mm x 178 mm)
Table Load Capacity	100 lbs.	(45 kg)

Spindle

Drive Motor	1 hp (746 W)
Motor Type	DC Permanent Magnet
Speed Range	0 - 1,200 RPM and 0 - 3,600 RPM
Spindle Nose	Threaded 2.25-8 UN-2A-RH
5C Collet Capacity	up to 1-1/16" (25 mm)

Tailstock (Optional)

Taper	Morse #1
Stroke	1.5" (38 mm)
Center distance	9" (229 mm)

Accuracy

Ball screw	0.001"/ft.	(0.025 mm/300 mm)
Repeatability	0.0005"	(0.0127 mm)
Resolution	0.00025"	(0.00635 mm)

Axis Drive Motors

Linear Feed Rate	0.1 – 25 ipm (2 – 635 mm/min)
Circular Feed Rate	0.1 – 18 ipm (2 – 457 mm/min)
Rapid Feed Rate	50 ipm (1270 mm/min)
Stepper Motors	150 oz. in. (105 Ncm), 200 step/rev

Power Requirements

United States	115 VAC (+5%/-10%), 50-60 Hz, 15A
International	230 VAC (+5%/-10%), 50-60 Hz, 8A

Dimensions

Width	36"	(914 mm)
Depth	22"	(559 mm)
Height	24"	(610 mm)

Weight (approximate)

Turning Center	245 lbs.	(111 kg)
Shipping	315 lbs.	(143 kg)



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proLIGHT

proLIGHT™ 3000 Turning Center Specifications

Control Specifications

Interpolation

Rapid and linear interpolation
Circular interpolation with center point or radius input
Threading, single-point with multi-pass

Programming Standards

EIA RS274-D standard G & M codes
Subprograms
Fanuc®-compatible
CAD/CAM compatible

Programming Modes

Incremental and absolute programming
G & M codes for robotic interfacing
Inch or metric programming
Scaling, rotation, mirroring and subprograms

Programming Features

Programmed pause, dwell, chain, and repeat functions
Programmable on/off spindle motor with M codes
Programmable spindle speed control with S codes
Canned cycles for threading, turning, and drilling
Align/homing command
Tool offsets for 199 tools
Cutter compensation
Multiple coordinate systems

Operational Modes

Programmed feed rate control
Feed rate override
Cycle start and stop
Program pause and feedhold
Manual programmed spindle speed control
Computer-controlled jog, go-to, and traverse motion
Operational mode; single block and continuous run
Optional skip and stop

System Input

Calculator-style input for numeric data entry
Keyboard-or mouse-operated menus
Full screen editor support with keyboard or mouse

System Feedback

Error messages
HELP functions on screen
Instantaneous position readout of X and Z axes
2-D graphic tool path verification

Electronic Interface

Controller Box
ISA computer interface card
Computer interface cable
Control software on 3.5" disks

System Interfaces

ISA bus to host computer
Robotic interface with TTL I/O
Optically isolated AC outputs

Safety Features

Transparent safety shield with interlock switch
Emergency Stop switch on front panel
Emergency Stop on keyboard
End of travel limit switches and stops on each axis
Keylock on electronic control box

Computer System Requirements

Pentium P120 or faster personal computer with:

- Minimum of 32 MB RAM
- Industry Standard Architecture (ISA) bus
- Hard drive with 5 MB RAM available space
- 3.5" floppy drive
- VGA graphics and monitor
- Mouse
- Windows® 95/98/NT™ 4.0
- Serial Port
- Parallel Port

Machine Options

proLIGHT 3000; 115V, 50 - 60 Hz
proLIGHT 3000 with Tailstock, 115V

proLIGHT 3000; 230V, 50 - 60 Hz
proLIGHT 3000 with Tailstock, 230V

Factory Installed Options

Pneumatic Shield Opener
Air Chuck Robotic Interface
Automatic Tool Turret w/Tool Turret Tooling Package

Accessories

Turning Center Collet Closer
Mobile Workstation w/Storage Cabinet
Machinable Wax Turning Stock
Portable Air Compressor
spectraCAM™ Turning (Windows® Edition) *
spectraCAM™ Milling & Turning (Windows® Edition) *
* Requires Windows® 95/98/NT™

Tooling

Quick Change Tooling Package for Turning Center
Quick Change Tool Post and Profiling Tool
Additional Tool Turret Tooling Package
5C Collet Set
5C 3" (76 mm) 3-jaw chuck