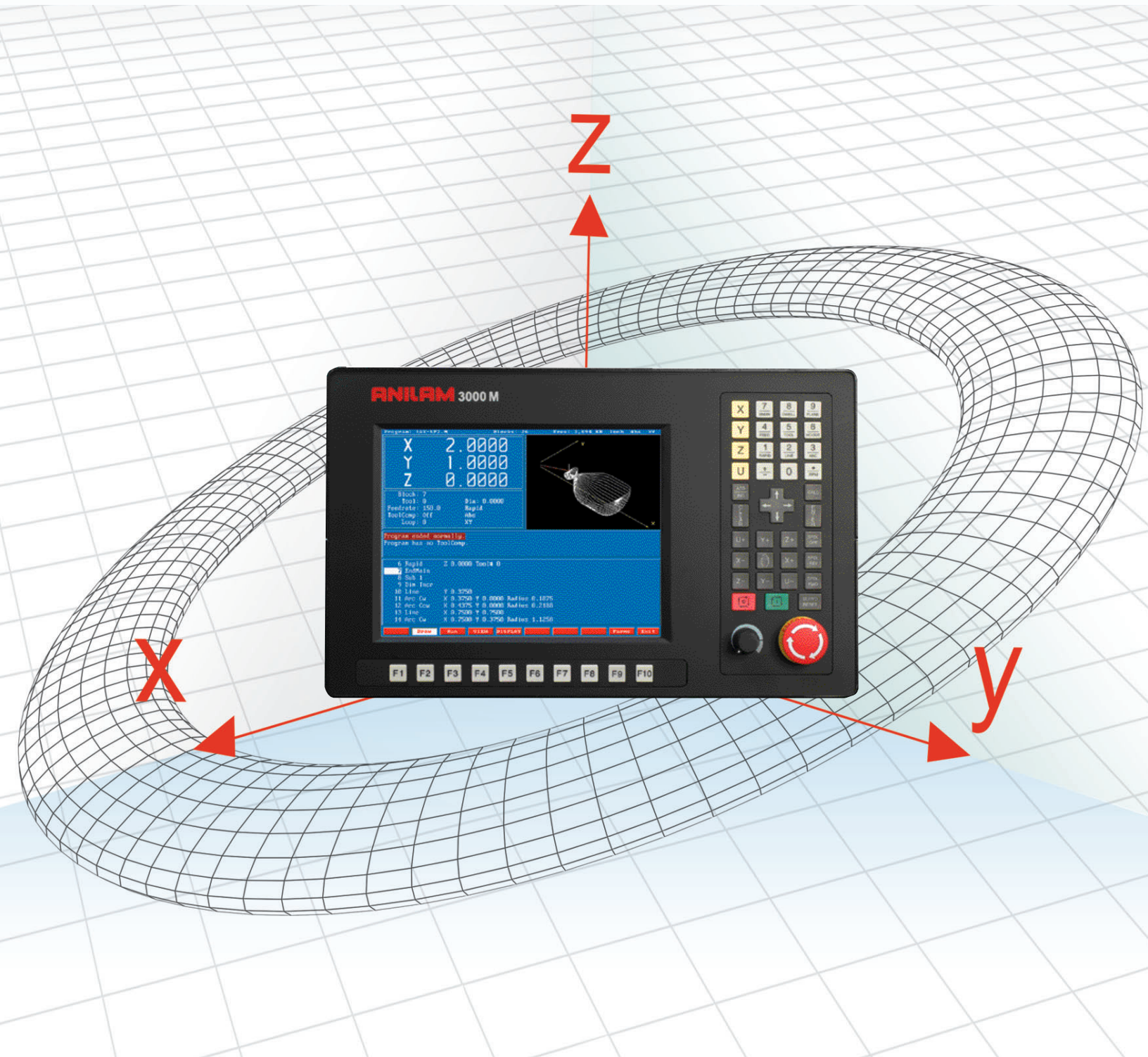# ANILAM®

3000M
CNC Controls

ANILAM is...

CNC Technology and People

ANILAM'S headquarters and manufacturing facilities are located in Jamestown, NY, U.S.A. ANILAM has been providing reliable, easy-to-learn control solutions for more than 25 years.

All ANILAM products, from software to hardware, are specified and designed by us. Our design team is continually working on innovative ways to improve our products based on market input from users and machine tool builders.

We make a complete range of CNC products, from simple-to-learn 2-axis retrofits for automating manual machines to 5-axis plus spindle digital solutions for production machines. And everything in between. All with the programming format the customer prefers.

ANILAM is an international company. Our offices are thoughtfully located throughout the world to maximize the support commitment required for today's manufacturing needs. All ANILAM offices are staffed with qualified sales engineers and technicians.

ANILAM people are prepared and experienced. We are trained to recognize and understand your application needs. We are eager to assist and support customers from the initial product specification through the build. Our job really starts during and after the sale—ending with support for the user for as long as they own the control.

ANILAM is thoroughly committed to excellent service. Our worldwide support is dedicated to ensuring that your control will be trouble-free, regardless of where you are or where your control was sourced. When you buy an ANILAM control... you buy ANILAM.

ANILAM 3000M
Z-axis drive assembly
shown on knee mill.
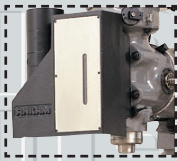
**ANILAM 3000M
2-axis control
(shown with optional equipment)**

Accuracy
Precision-ground ballscrews
with preloaded ball nut
assemblies.

Unequaled Performance
Finest, industrial grade processors
ensure outstanding performance
and operation in all areas of
program management.

Safety
Machine and software limits are
standard with every package.

Hardware Options
Autolube, precision linear
encoders, electronic handwheel,
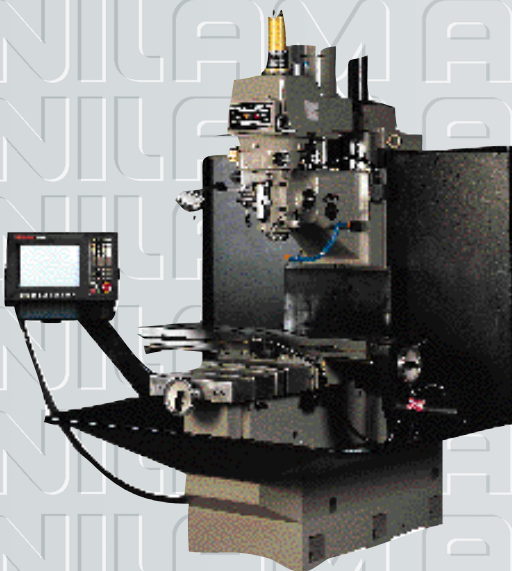remote start/stop and
networking.

Powerful Servo Motors
Maintains smooth operation and
precise positioning.

Handwheels
Provides all manual operations.
Ideal for set up and teach
modes and for machining the
simplest parts.

2- to 3-Axis Upgradable
Easily and quickly accomplished
when the need arises.

**Anilam 3000M 2-axis control
(shown with optional equipment)**

The ANILAM 3000M

ANILAM is changing the way machinists and engineers think about controls. The
3000M gives you more programming flexibility with hard drives that have storage
capabilities ranging from large CAM-generated programs to average size daily
functioning programs. These controls are configured to *your* needs: whether it's
2-axis or 3-axis.

The PC-based 3000M uses true conversational format -- real machinist's language
to prompt you for various movements and functions.

The addition of DSP^2, an enhanced motion control system, means greater increases
in productivity and much higher speed machining.

Installation has been made simple. More components have been built into the
console. There is only one cabinet. Electrical connections just snap in. In fact, the
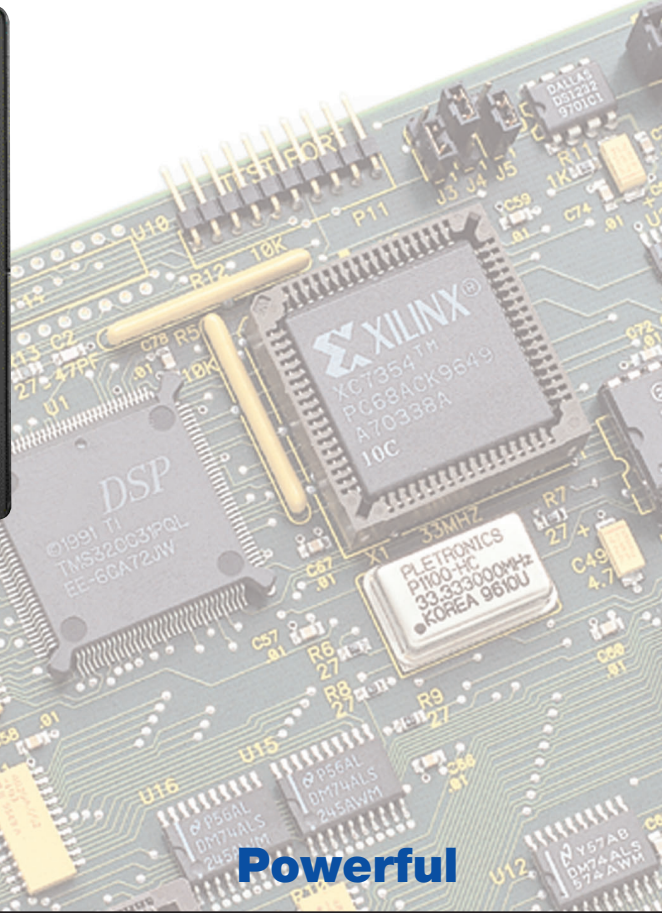total installation process is 40% faster than before.

The ANILAM 3000M Controls create the industry's new standard in combining power and ease of use!
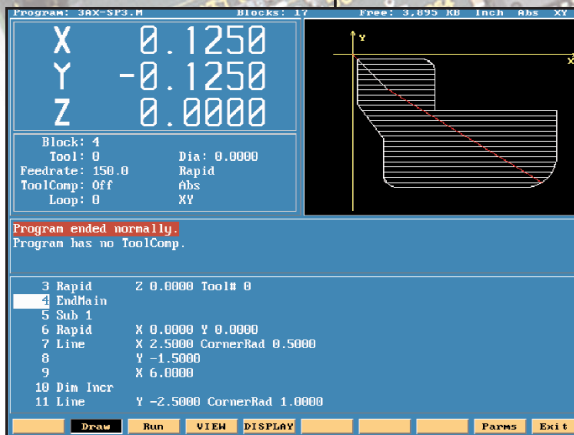
In the new design, the computer, motion control, floppy disk drive and 8.0GB hard drive are built into the console.

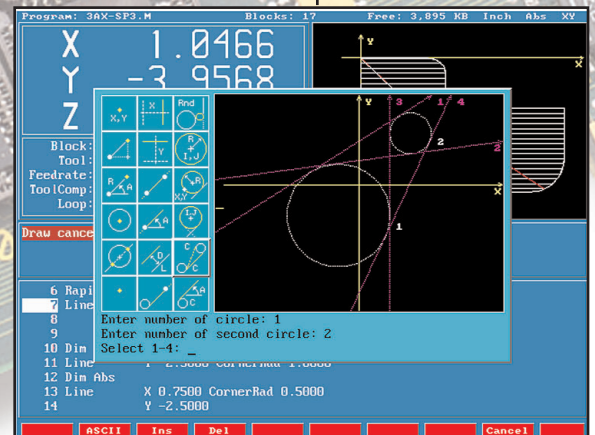**The new simplified look of the CNC control software includes the timer and parts counter.**

Powerful

Irregular Pocket

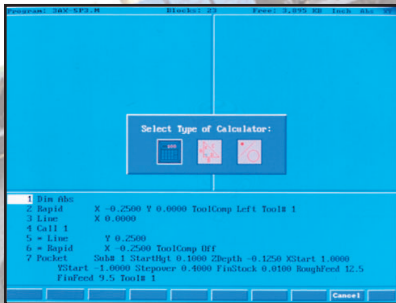Answer a few basic prompts to make clearance of any shape a simple routine.

Geometry

Use the geometry calculator for determining points, lines and circles, similar to a CAD/CAM system. The result automatically becomes part of the program.
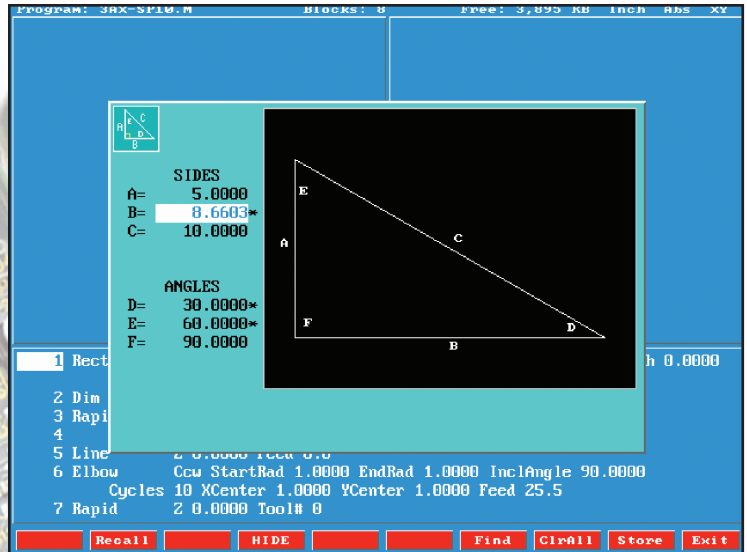
Easy to Use

3-Mode Calculator

The 3000M has three integral calculator modes: math with trigonometry functions, right triangle, and geometry, to provide CAM assistance.

Right Angle

The right triangle calculator allows the machinist to quickly find any side or angle of a right triangle, whenever two pieces of data are known. For more complex calculations, you can input points, lines and circles, then find intersections, centers or any other information related to the input geometry.
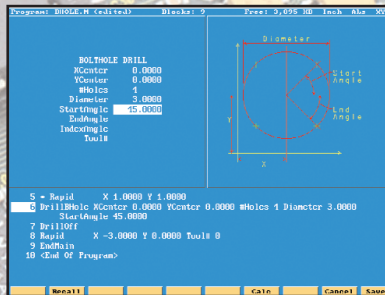
Bolt Hole Pattern

By answering only five simple questions, bolt hole patterns of any configuration can be easily produced.
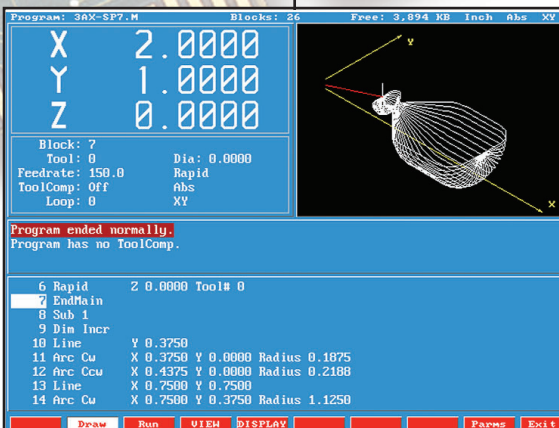
User-Friendly Draw Graphics Mode

Before the first chip is cut, the user-friendly draw graphics mode provides program verification. When the image, the program text and the CNC status are all displayed on one screen, program verification becomes a simple function.
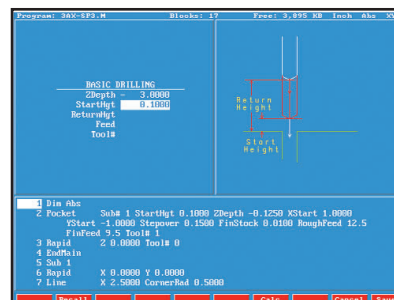
Drill Cycle

By answering a few questions, this will take you through simple drill, peck drill and boring routines.

The ANILAM 3000M: from complete kits to custom configurations

Our worldwide reputation for quality components ensures the precise, trouble-free operation of ANILAM controls. From drive assemblies to state-of-the-art circuit boards, each component has been engineered to ANILAM's standard-setting specifications. Suited to fit all your needs.

Quick, easy, snap-in connections.
Installation is 40% faster with these quick snap-in electrical connections.

Ball screws
Precision ground for high accuracy.

Quill Drive Assembly
(shown with cover removed)
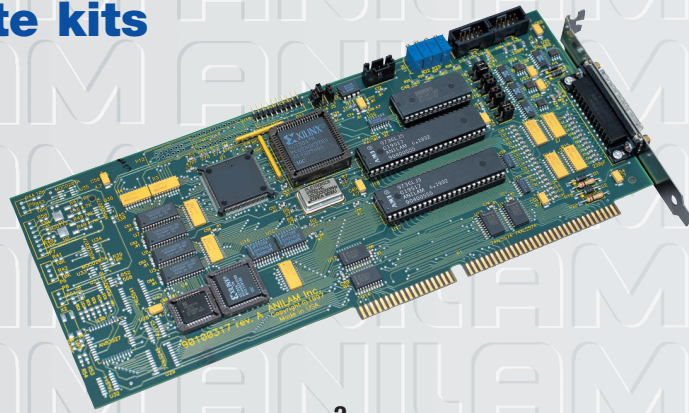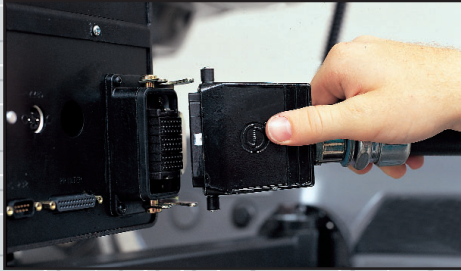This rugged, durable one-piece casting incorporates ANILAM's unique, time-tested and proven quill block drive design. This Z-axis downfeed assembly ensures accuracy, repeatability and can take real cuts for many years to come. The precision-ground ballscrew is driven by a powerful 31"/lb. (3.5 Nm) DC servo motor.

Y-Axis Drive Assembly
Driven by a powerful 31"/lb (3.5 Nm) DC servo motor, this assembly features a tough and extremely durable one-piece machined casting. ANILAM's extended length 45° design accommodates knees of any width.
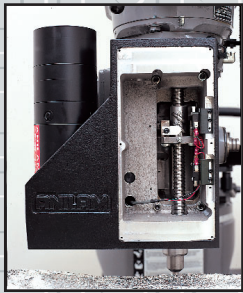

X-Axis Drive Assembly
A rugged one-piece machined casting guarantees years of reliable operation. ANILAM's high quality kit components finish the machine with both the appearance and performance of today's finest CNC equipment.

DSP^2: an enhanced motion control system

The 3000M control is equipped with DSP^2, an enhanced motion control system that provides significant increases in productivity by producing high speed machining.

The ANILAM offline software package

Specifications

General Operation	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
Automatic Mode	X	X	X	X
Single Step Mode	X	X	X	X
Manual Mode	X	X	X	X
Background Functions (Program, Edit, RS-232 etc.)	X	X	X	X
.010, .005 and .001, .0005 metric display res., .0005, .0002 and .00005, .0002 inch display res.	X	X	X	X
Feedrate display	X	X	X	X
Tool number, diameter and length offset display	X	X	X	X
Program/Distance to go Position Display	X	X	X	X
Loop counter and dwell time display	X	X	X	X
Timer and Parts counter display	X	X	X	X
Automatic and programmable homing	X	X	X	X
Integrated Motion Setup and Testing Software	X	X	X	X
User friendly parameter setup with security levels	X	X	X	X
Machine Position Display	X	X	X	X
DNC (Direct Numerical Control)	X	X	X	X
Teach-in mode		X	X	X
3rd Axis linear encoder	Optional	X		
Linear encoder feedback (controlled axis)	Optional	Optional	Optional	Optional
Remote Start/Stop	Optional	Optional	Optional	Optional
Remote MPG (Handwheel)	Optional	Optional	Optional	Optional
Analog spindle output	Optional	Optional	Optional	Optional
Programmable Spindle forward/reverse/off	Optional	X	Optional	X
Programmable Coolant On/Off	Optional	X	Optional	X

Specifications, con't.

Programming, Program Editing and Programming Tools	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
Programming Input -- MDI, RS232 and Floppy Disk	X	X	X	X
Networking	Optional	Optional	Optional	Optional
Inch/Metric Conversion	X	X	X	X
Absolute/Incremental Programming	X	X	X	X
Conversational Programming	X	X	X	X
Blueprint programming	X	X	X	X
Polar /Coordinate Programming	X	X	X	X
Help Graphics	X	X	X	X
Rotation	X	X	X	X
Mirroring	X	X	X	X
Scaling	X	X	X	X
G-Code to conversational converter	X	X	X	X
Triangle Calculator	X	X	X	X
Math Calculator	X	X	X	X
ICON Geometry Calculator	X	X	X	X
Plane Selection			X	X
Hot keys on numeric keyboard	X	X	X	X
Off-line software package (Windows 3.11, 95, and NT compatible)	Optional	Optional	Optional	Optional
Work coordinate offsets (with calib. Key)	9	9	9	9
Graphics	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
Isometric, XY, XZ and YZ View	X	X	X	X
Automatic Fit	X	X	X	X
Window Zoom	X	X	X	X
Real time draw graphics	X	X	X	X
Pan zoom	X	X	X	X
Tool Display	X	X	X	X
Simulate a section of or the entire program	X	X	X	X
Compensations	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
Number of Tools in Library	99	99	99	99
Diameter/Radius, Length Offsets	X	X	X	X
Length Offset Calibration (input to table)	X	X	X	X
Leadscrew Compensation (direct input from file)	X	X	X	X
Backlash Compensation	X	X	X	X
Linear Compensation	X	X	X	X
Computer, Motion Control and Interface	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
INTEL Pentium CPU, 166 MHZ	X	X	X	X
DRAM	8 MB	8 MB	8 MB	8 MB
DRAM upgrade to 64 MB	Optional	Optional	Optional	Optional
Floppy disk drive	X	X	X	X
RS-232 Port	X	X	X	X
Printer Port	X	X	X	X
Hard drive	8 GB	8 GB	8 GB	8 GB
32-bit 50Mhz (100 Mflops) DSP2 Motion Control Board w/CAN bus interface -- Surface Mount Design	X	X	X	X
Controlled Axes	2	2	3	3
Spindle Axis	0	0	1	1
DRO Axis (1)	1	1	1	1
Block Cycle Time	5 ms	5 ms	5 ms	5 ms
Block throughput	200	200	200	200
Standard I/O Available	10/6	10/6	10/6	10/6
Console	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
12.1" TFT Flat Screen	X	X	X	X
Jog Resolution Key (x1, x10, x100, Feed, Rapid)	X	X	X	X
Jog Keys for Controlled Axes	X	X	X	X
DB-25 Printer Port Access	X	X	X	X
DE-9 RS232 communications port access	X	X	X	X
DE-9 Handwheel port access	X	X	X	X
Mini DIN Connector for PC Keyboard	X	X	X	X
Compact, contamination-proof display and keypad enclosure	X	X	X	X
Console mounting arm	X	X	X	X
DE-9 Remote start/stop	X	X	X	X
Floppy Access in console	X	X	X	X
Canned Cycles	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
Ellipse	X	X	X	X
Elbow Milling			X	X
Frame Pocket Milling	X	X	X	X
Hole Milling	X	X	X	X
Circular Pocket Milling	X	X	X	X
Rectangular Pocket Milling	X	X	X	X
Full Bolt Hole Pattern	X	X	X	X
Partial Bolt Hole Pattern	X	X	X	X
Basic drilling	X	X	X	X
Irregular pocket	X	X	X	X
Boring			X	X
Peck drilling			X	X
Chipbreaker drilling			X	X
Rectangular Hole pattern	X	X	X	X
Spiral Helical			X	X
Mold Rotation about any axis			X	X
Tapping			X	X
Rectangular Profile (inside/outside)	X	X	X	X
Face milling	X	X	X	X
Circular Profile (inside/outside)	X	X	X	X
Kit Hardware Components	3000M-2X	3000M-2X DLX	3000M-3X	3000M-3X DLX
Servo enclosure complete-- populated and ready to bolt on	X	X	X	X
Servo cabinet mounting hardware	X	X	X	X
Prewired snap-in cable (console-to-servo cabinet)	X	X	X	X
Precision ground ballscrews	"X, Y"	"X, Y"	"X, Y, Z"	"X, Y, Z"
Solid one-piece machined-casting quill drive assembly			Z	Z
One-piece machined casting motor mounting assemblies	"X, Y"	"X, Y"	"X, Y, Z"	"X, Y, Z"
31 in/lb (3.5 Nm) DC servo motors	"X, Y"	"X, Y"	"X, Y, Z"	"X, Y, Z"
Upgrade to 41 in/lb (4.5 Nm) DC servo motors	Optional	Optional	Optional	Optional
Motor cables (motor-to-servo cabinet)	"X, Y"	"X, Y"	"X, Y, Z"	"X, Y, Z"
Linear encoder feedback (X , Y axes)	Optional	Optional	Optional	Optional
Ready-to-install limit switch assembly	"X, Y"	"X, Y"	"X, Y, Z"	"X, Y, Z"
Auto-lube	Optional	Optional	Optional	Optional
Upgrade from 2- to 3-axis	Optional	Optional	X	X

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