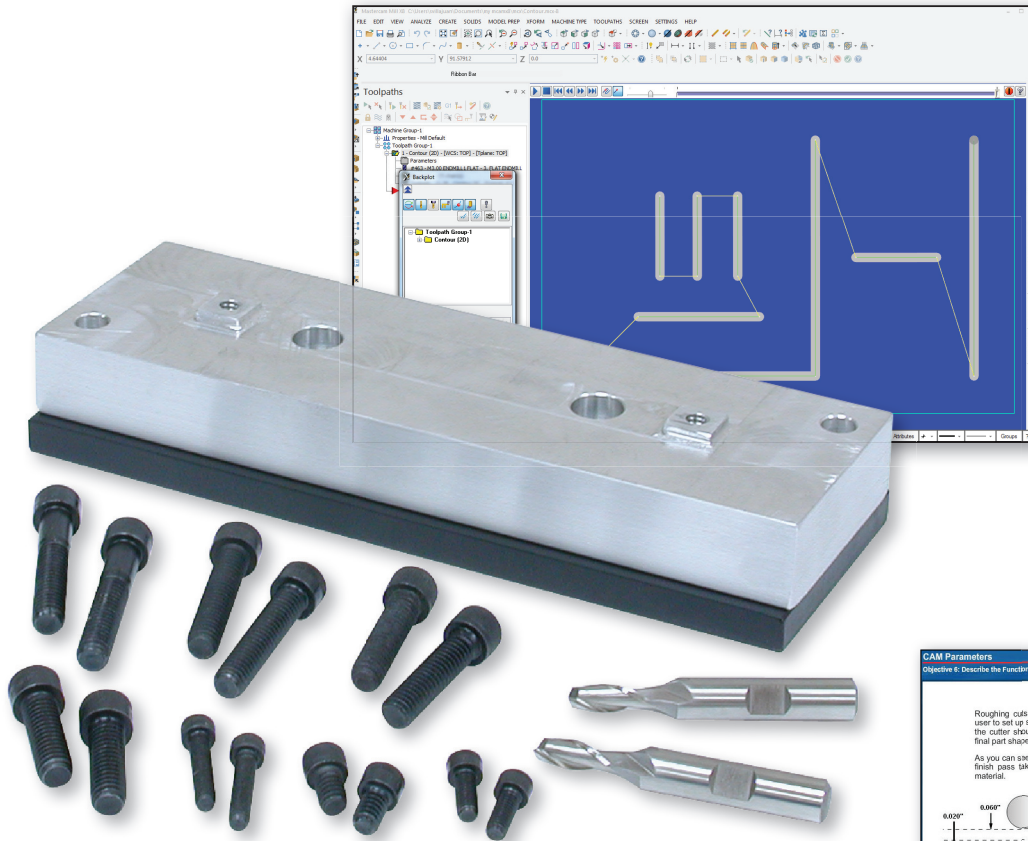


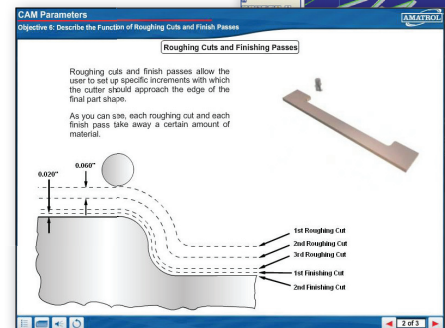
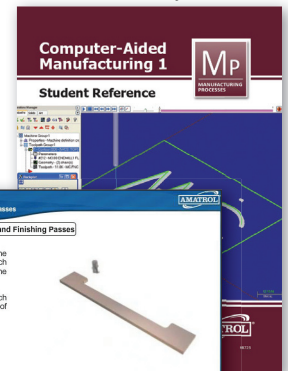
Computer-Aided Manufacturing 1 Learning System

96-CAM1



96-CAM1 with Mastercam

Student Reference Guide



Interactive Multimedia

Learning Topics:

- Introduction to CAD/CAM
- CAD/CAM Part Geometry
- Contour CAM Toolpath
- Cycle Time Estimation
- Tool and Material Selection
- CAM Parameters
- Cutter Compensation
- Parameter Pages
- Roughing and Finishing
- Making Parts with CAD/CAM
- Contour Applications
- Drill Toolpath
- Pocket Toolpath

Amatrol's Computer-Aided Manufacturing 1 Learning System (96-CAM1) teaches learners the fundamentals of part design and development using Mastercam software. Mastercam allows learners to design and draw complex shapes and parts on a computer. These drawings can then be utilized to generate a program to produce learner-designed parts using the CNC Machines 1 (96-CNC1) Learning System. Major topic areas covered by this course include the CAM (computer-aided manufacturing)-Mill process, tool and material selection, CAM parameters, contour toolpaths, and much more!

The 96-CAM1 includes Windows-based Mastercam software, a custom tensile specimen fixture kit featuring an adapter plate, 1/4 inch and 3/8 inch end mills, and a supplemental disc containing various CAM design files. This system's interactive multimedia curriculum covers major CAM topics and theory, which learners can then use to practice various hands-on skills that can then be used in real-world applications. This curriculum is full of incredible graphics, 3D animations, and interactions.



Technical Data

Complete technical specifications available upon request.

MasterCAM Cam Software, Version X8 CAM/CAD Supplemental Disk Adapter Plate

Tensile Specimen Fixture Kit

- 5/16-18 x 1-1/2 socket head cap screw (2)
- 1/4-20 x 3/8 socket head cap screw (2)
- 5/16-18 x 1-1/4 socket head cap screw (2)
- 5/16-18 x 1-3/4 socket head cap screw (2)
- 5/16-18 x 1 socket head cap screw (2)
- #10-32 x 7/8 socket head cap screw (2)
- #10-32 x 1/2 socket head cap screw (2)

1/4" End Mill, 3/8" Shank

Interactive Multimedia (MB723)

Teacher's Assessment Guide (CB733)

Installation Guide (DB723)

Student Reference Guide (HB723)

Additional Requirements:

- CNC Machines 1 (96-CNC1)
- Raw Materials (94-RM14)
- Personal Computer: <http://www.amatrol.com/support/computer-requirements/>

Utilities

- Electricity

Other Options:

- Mobile Technology Workstation (82-610)

Create Efficient CAM Toolpaths!

Toolpaths are one of the most important aspects of the CAM process. A toolpath specifies the path that the cutting tool will follow to create a part. They are used in industries to automatically program cutting tool movements because without them each movement of the cutting tool would have to be programmed manually. CAM software makes generating toolpaths easy. However, it takes knowledge and skill to use the software properly to create efficient toolpaths. Learners will study about a variety of CAM toolpaths, such as contour 2D, pocket, letters and drill.

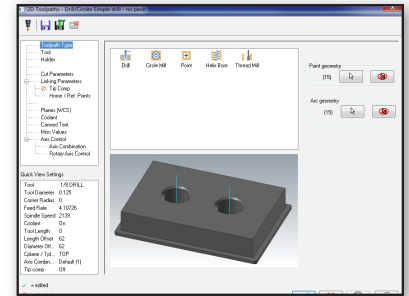
Practice Hands-On Skills with the Tensile Specimen Fixture Kit



Understanding the abilities of the available tools is essential in creating an efficient toolpath. The tools must be precisely identified to enable the best possible CNC program to be generated. The tensile specimen fixture kit is a custom fixture that securely holds the material being machined while allowing the CNC machine's end mill to cut along all four sides of the part.

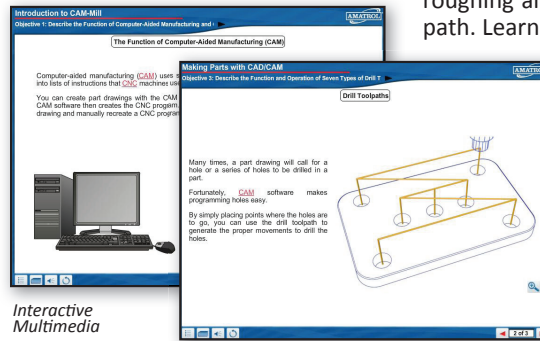
Create Tool Libraries with Mastercam

The 96-CAM1's curriculum allows learners to create tool libraries with Mastercam which catalogs the tools that will be used and includes information about the diameter, shape, number of flutes and the material that it is designed to cut. Tool libraries help designers to create a CNC program using the proper tools for the job and are used in industry because they make the process more efficient.



In-Depth Interactive Multimedia Curriculum

The 96-CAM1's curriculum covers major CAM-related topics like CAD/CAM geometry, contouring, cycle time estimation, tool and material selection, cutter compensation, parameter pages, roughing and finishing, drill toolpath, and pocket toolpath. Learners can use this knowledge to practice valuable hands-on skills such as using the CAM software to display and print a CNC program, creating a part program using a contour toolpath, and designing a CAM part with a 3D contour. This curriculum is presented as highly interactive multimedia that covers all of the topics and skills of the printed curriculum in an exciting format that includes extensive videos, 3D animations, audio, and colorful graphics.



Student Reference Guide

A sample copy of the Computer-Aided Manufacturing 1 Student Reference Guide is also included with the system for your evaluation. Sourced from the system's multimedia curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfect-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.

