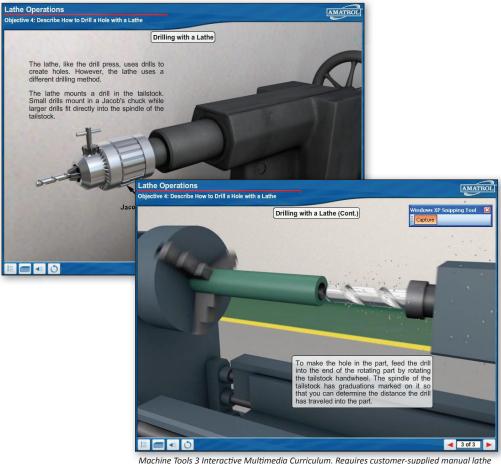
## **Machine Tools 3 Learning System**

96-MP3







Student Reference Guide

#### **Learning Topics:**

- Lathe Components
- Lathe Safety
- Facing Operation
- Turning Operations
- Lathe Control
- Roughing and Finishing **Operations**
- Automatic Operation
- Lathe Operations
- Cutting Chamfers
- Grooving Operation
- Threading Operations
- Drilling Operations

Amatrol's Machine Tools 3 Learning System (96-MP3) focusses on the components, function, and operation of the manual lathe. The lathe is a machine tool used for machining round parts and is found in almost all manufacturing facilities and machine shops. Machine Tools 3 requires the Machine Tools 1 Learning System (96-MP1), a computer, and a customer-supplied manual lathe.

Machine Tools 3 includes multimedia curriculum, an instructor's guide, an installation guide, and a student reference guide. The curriculum covers basic lathe setup and safety before moving on to industryapplicable functions like cutting chamfers, roughing, finishing, threading, and grooving. Amatrol's curriculum is designed to allow learners the maximum amount of opportunities to build hands-on competencies that best prepare them for real-world job opportunities.

The 96-MP3 is part of Amatrol's Maching program. Amatrol's Machining program brings a highly focused, streamlined set of skills to this program area. In addition to the three Machine Tools learning systems, Amatrol also offers CNC Machines 1 through 3 for high school learners. These CNC courses utilize a Denford Micromill to teach valuable CNC skills.



#### **Technical Data**

Complete technical specifications available upon request.

Multimedia Curriculum (M12243)
Instructor's Guide (C12243)
Installation Guide (D12243)
Student Reference Guide (H12243)
Additional Requirements:
Machine Tools 1 (96-MP1)
Manual Lathe Machine
Computer: See requirements: http://www.
amatrol.com/support/computer-requirements

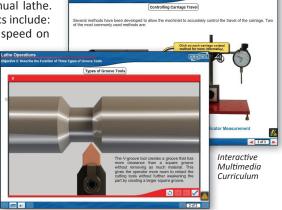
#### Practice Creating an External Chamfer, a Square Groove, and Threads

Amatrol's Machine Tools 3 allows learners to build basic lathe skills like safety checks, mounting a tool in the lathe, and facing a part before moving on to more advanced operations. Some of the advanced skills offered by this system include: performing roughing and finishing cuts; creating an external chamfer; creating a square groove on a part; cutting internal threads into a blind hole; and creating external threads on a part. Practicing these skills will build both competency and confidence and allow learners to see how the skills that they're gaining are applied in real-world environments.

## Explore Safety Rules, Setup, and Operation of a Manual Lathe with Stunning Multimedia Curriculum

Machine Tools 3's curriculum covers the basic safety rules, setup, and operation of a manual lathe. As more specific examples, learning topics include: three methods used to set the spindle speed on

a lathe; methods for controlling the length of a horizontal cut; the function of various types of groove tools; and the function and operation of a combination drill/countersink. This vibrant interactive multimedia curriculum features all of the depth of subject for which Amatrol is famous with the addition of stunning 3D animations, videos, interactive quizzes and exercises, and text voiceovers.



# Amatrol's Project Based Learning: Building Problem-Solving, Teamwork, and STEM Skills



Automated Can Crusher Project Kit (96-PK-MF2)

The Machine Tools Learning Systems are part of Amatrol's Project Based Learning program. The Project Based Learning program allows learners to study industrial concepts and practice hands-on skills in teams across a wide range of learning systems, which culminates with the learners solving a variety of project kits like a hovercraft, automated can crusher, and automated drawbridge. This program was designed for high schools to teach valuable problem-solving, teamwork, and STEM skills and provide a strong base to build toward careers in engineering, manufacturing, and many more.

#### **Student Reference Guide**

A sample copy of the Machine Tools 3 Student Reference Guide is also included with the system for your evaluation. Sourced from the system's curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-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.



