

# CNC Machines 2 eLearning Courseware | Denford Micromill

**CNC Mill Canned Cycles - WB706D-DB02UEN-E2**

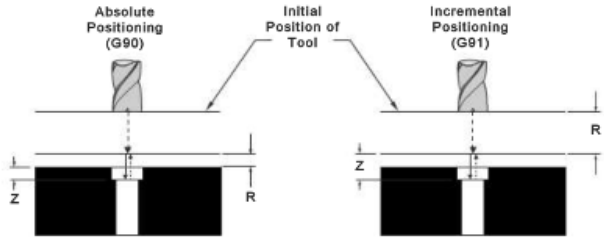
Objective 4: Explain the Use of the Counterboring Cycle G-Code (G82)

### Counterboring Cycle G-Code

The G82 counterboring cycle is used to create a counterbore hole on a part.

Its operation is similar to the spot boring cycle (G81).

The only difference is that the G82 code causes the cutting tool to dwell at the bottom of the hole for a specified length of time, which creates a smoother, more level surface.



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## eLearning Course: MB706D

Amatrol's CNC Machines 2 - Denford Micromill eLearning course (MB706D) explores the topics of speeds and feeds, CNC Mill canned cycles, and CNC Mill cutter compensation. It explains the importance and effects of spindle speed, feed rate and cycle time optimization, the drilling cycle, alternate drilling cycles which teaches users the skills to design CNC programs that use counter-boring, pecking, and boring cycles, and subprograms. Also explained in this course is cutter compensation left, cutter compensation right, scaling and mirroring.

## Teach CNC Mill Programming

### Spindle Speed & Feed Rate Calculation

In this course, learners will practice with given formulas to calculate spindle speed and feed rate in both US Customary and SI metric measurements. This includes calculating spindle speed for reaming, countersinking, and counterboring.

### G-Code Syntax

Users will also learn about G-code syntax for canned cycles and why this type of coding helps with programming efficiency. Examples provided for cycle G-Code include counterboring, pecking, and boring. Subprograms, which use M-Code, are also explained in this context.

## Interactive eLearning

### CNC Machines 2 eLearning Curriculum Focuses on Industry-Relevant Skills

Amatrol's peerless [interactive multimedia curriculum](#) utilizes text with voiceovers, pictures, videos, stunning 3D animations, and interactive quizzes and reviews that engage learners in theoretical knowledge and concepts. This thorough, detailed curriculum begins with the basics and advances to complex concepts. Through partnerships with key industry leaders and leading educators, Amatrol developed the right balance of knowledge to train learners to work in their chosen field.

## Additional Info

**Requires:**

- Computer ([see Computer Requirements](#))

**Options:**

- CNC Machines 2 Learning System - Denford Micromill ([96-CNC2D](#))
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