



Australian Government

MEM07022 Program CNC wire cut machines

Release: 2

MEM07022 Program CNC wire cut machines

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM07022 Program CNC wire cut machines (Release 1).

Release 1. Supersedes and is equivalent to MEM07022C Program CNC wire cut machines.

Application

This unit of competency defines the skills and knowledge required to write and trial a program for computer numerically controlled (CNC) wire cut machines. Technical difficulties are resolved in consultation with appropriate technical advisers.

Where the selection and use of power tools/hand held operations is required unit MEM18002 Use power tools/hand held operations should also be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: B

Unit Weight: 2

Pre-requisite Unit

MEM07015	Set computer controlled machines and processes
MEM07016	Set and edit computer controlled machines and processes
MEM07018	Write basic NC and CNC programs
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools

Plus, one or more of the following including their prerequisites:

MEM07005	Perform general machining
MEM07028	Operate computer controlled machines and processes

Competency Field

Machine and process operations

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Determine job requirements	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs 1.4 Identify job requirements from specifications, drawings, job sheets or work instructions
2 Write CNC wire cut program	2.1 Interpret engineering drawings to define optimum tool path geometry 2.2 Program tool path using advanced operations, canned cycles and sub-routines or other appropriate sub-routines within system 2.3 Write program in standard code format, and confirm and edit, as necessary 2.4 Store program in accordance with SOPs 2.5 Produce operation sheets to specification in accordance with SOPs which includes appropriate Australian Standards, where required
3 Trial CNC wire	3.1 Download program and select machining parameters

Elements describe the essential outcomes.

cut program

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 3.2 Prepare machine, load and align work piece, establish datum and reference points
- 3.3 Operate machine in appropriate mode to test and prove program and work piece positioning
- 3.4 Check finished components for conformance with specifications

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, accessibility of the item, and local industry and regional contexts) are included.

Programming includes one (1) or more of the following:

- 2 axis tool paths
- 4 axis conical cutting
- auto multi-cavity work pieces

Program includes setting of one (1) or more of the following:

- speeds
- tolerances
- taper angles
- macros
- nesting tool paths
- chained linear tool paths
- differential profiles

Machining parameters include one (1) or more of the following:

- wire offset
- wire speed
- power settings

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM07022 Program CNC wire cut machines (Release 1).

Release 1. Supersedes and is equivalent to MEM07022C Program CNC wire cut machines.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>