



Australian Government

FWPCOT3331 Cut material using CNC sizing machines

Release: 1

FWPCOT3331 Cut material using CNC sizing machines

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to set up and operate computer numerical control (CNC) sizing machines to achieve accurate dimensional cuts of engineered wood products and timber components in a manufacturing facility. Work also involves operator maintenance.

The unit applies to individuals who work as production workers, engineered timber products technicians, machine operators or timber fabricators. Operators generally work under broad or limited direction to complete routine activities related to their own work and take responsibility for their work.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for cutting engineered wood product	1.1 Review work order, specifications, workplace health and safety requirements, environmental protection practices and emergency procedures for CNC cutting operations and, where required, check

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
or timber	with appropriate personnel 1.2 Identify and report hazards and use personal protective equipment according to workplace requirements and health and safety legislation to maintain safe work practices 1.3 Obtain the type and quantity of material to be cut from a storage location
2. Set up the CNC sizing machine	2.1 Set CNC optimising program to meet work specifications 2.2 Check the CNC cutting machine mechanisms, emergency stops, gauges, guards and controls for safe and effective operation 2.3 Adjust the CNC cutting machine settings according to work specifications 2.4 Complete trial run to check system and machine operation for accuracy, quality and dimensions of finished work 2.5 Accept or reject trialled material and dispose of according to environmental protection practices 2.6 Complete final adjustments to CNC optimising program, cutting tools and equipment
3. Operate the CNC sizing machine	3.1 Use the CNC sizing machine, cutting tools and equipment according to workplace health and safety procedures, manufacturer instructions, operating capacity and purpose and environmental protection practices 3.2 Feed engineered wood product or timber into the CNC machine, operate cutting tools according to tooling requirements and regularly monitor to minimise waste and ensure correct dimensions are produced 3.3 Repair or dispose of incorrect cuts, off-cuts and material with defects according to environmental protection practices 3.4 Identify routine processing problems and resolve or report to appropriate personnel
4. Complete operator maintenance	4.1 Lock out the CNC sizing machine according to workplace health and safety procedures 4.2 Check blades for bluntness or damage 4.3 Remove and replace blades according to manufacturer recommendations 4.4 Dispose of used blades according to environmental protection

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	practices 4.5 Keep machine clear of dust and debris according to organisational safety procedures 4.6 Record and report production outcomes, machine and equipment faults and maintenance requirements to appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Read routine, familiar workplace documents, including workplace health and safety procedures, work plans and manufacturer manuals
Writing	Complete basic written reports on CNC cutting operation and equipment faults
Oral communication	- Ask questions and apply active listening skills to clarify contents of work order - Make accurate verbal reports on processing and equipment faults
Numeracy	- Identify quantities of required material within work orders, and count numbers to be cut - Set numerical data on CNC optimising program according to sizing specifications - Calculate the feed rate to optimise quality and quantity of production output - Measure finished dimensions against specifications and allowable tolerances

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

FWPCOT3331 Cut material using CNC sizing machines	FWPCOT3234 Cut material using CNC sizing machines	Updated Performance Evidence	Equivalent
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3331 Cut material using CNC sizing machines

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, during at least one operational interval, the individual has cut one or more of the following types of engineered wood product or timber according to work specifications and within prescribed organisational tolerances:

- glued laminated beams (glulam)
- cross-laminated timber (CLT)
- laminated veneer
- chipboard
- medium density fibreboard
- dressed timber
- preservative treated timber.

In performing this work, there must be evidence that the individual has:

- used one or more of the following types of computer numerical control (CNC) sizing machines:
 - CNC beam saw
 - CNC double end profiling machine
 - CNC controlled docking saws
 - CNC controlled length and angle saws
 - CNC controlled single end profiling machines
 - CNC controlled routing machines
 - CNC controlled moulders
 - CNC controlled sharpening machines
- set computer programs for the CNC sizing machines according to work specifications
- conducted operator maintenance on the CNC sizing machines, cutting tools and equipment

- followed workplace health and safety requirements, including the use of personal protective equipment (PPE).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards or risks related to operating CNC sizing machines for cutting engineered wood products or timber as identified through risk assessments, manufacturer technical information, regulations and industry health and safety guides
- workplace policies and procedures specific to cutting material using CNC sizing machines:
 - health and safety, with particular emphasis on equipment lock-out and the use of PPE
 - use of CNC sizing machines, cutting tools and equipment
 - communication reporting lines
 - recording and reporting production outcomes, machine and equipment faults and maintenance requirements
- environmental protection practices for manufacturing facilities:
 - reducing water and energy use
 - cleaning plant, cutting tools and equipment
 - disposing of, recycling and reusing timber and other waste
- range of cutting patterns used with CNC sizing machines to achieve accurate dimensions and quality of the finished product
- characteristics of timber, timber products and timber defects
- system functions and capabilities of CNC software for sizing machines, including cutting patterns and sequences
- purpose, features and operation of CNC sizing machines used to cut engineered wood product or timber
- methods for assessing saw blade condition.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - CNC sizing machine
 - computer program for sizing machines
 - maintenance tools for CNC sizing operations
 - saw blades suitable for CNC sizing machines

- PPE suitable for cutting material using CNC sizing machines
- engineered wood product or timber suitable for cutting operations using CNC sizing machines
- CNC program suitable for the cutting operations
- specifications:
 - manufacturer instructions for use and maintenance of equipment
 - work order with specific instructions for cutting material using CNC sizing machines
 - workplace policies and procedures for cutting material using CNC sizing machines, including health and safety and emergency procedures and environmental protection procedures
 - template documents for recording production outcomes, equipment faults and maintenance requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>