



Australian Government

MSFFDM4004 Construct joints for custom furniture

Release: 1

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Modification History

Release 1. Unit code and Application changed. Elements and Performance Criteria changed to active voice. Range of Conditions removed and relevant content moved to Assessment Requirements. Assessment Requirements changed to remove duplication with Performance Criteria. Supersedes and is equivalent to MSFFM4002 Construct joints for custom furniture.

Application

This unit describes the skills and knowledge to join timber by constructing joints using hand and portable power tools. It includes adapting or designing joints that are compatible with the product material, purpose and style of the product being made.

This unit applies to individuals working in a manufacturing or design studio environment who make and adapt joints to join timber, either alone or as part of an internal or external team.

No licensing or certification requirements apply to this unit at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Competency Field

Workshop Practice

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 work	1.1 Verify and comply with relevant legislative, work health and safety and workplace requirements related to constructing joints 1.2 Read and interpret product specifications and other relevant documentation to identify furniture joint requirements 1.3 Identify product purpose, furniture style and construction material required from supplied documentation 1.4 Identify joint requirements and select appropriate joint type for design, construction or adaption 1.5 Select tools, adhesives and fasteners to match joint type 1.6 Check tools, equipment and materials for serviceability and safety in accordance with workplace procedures 1.7 Develop and document quality-checking procedures for each step in

Elements	Performance Criteria
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	joint construction process
2. Make joint	2.1 Mark out cutting and joining lines to suit joint type 2.2 Check measurements and calculations for accuracy and to ensure quality outcomes 2.3 Identify timber features and observe optimal usage criteria 2.4 Cut timber to specification, and inspect and prepare for joining 2.5 Join timber in accordance with job specifications 2.6 Use fasteners and adhesives to ensure that, based on specification, required joints are firm 2.7 Check finished joint against quality requirements
3. Finalise the work sequence	3.1 Prepare product for finishing in accordance with design specification 3.2 Clean, maintain and store carving tools in accordance with manufacturer specifications 3.3 Clean and clear work area in accordance with workplace procedures 3.4 Complete required workplace documentation

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Numeracy skills to interpret technical information and perform basic calculations including measurements.
- Reading skills to interpret job specifications.
- Writing and oral communication skills to document quality standards and procedures and record and report on joint construction.

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

Unit Mapping Information

Release 1. Supersedes and not equivalent to MSFFM4002 Construct joints for custom furniture.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFDM4004 Construct joints for custom furniture

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- produce a minimum of four different joint types that meet industry standards and tolerances, with at least two produced substantially by hand operations, and in doing so:
 - utilise at least three different adhesive types across the different joint types
 - match requirements of adhesives and fasteners to the timbers/materials used.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- types of joints used, including:
 - dowel
 - mortise and tenon
 - dovetail
 - lap joint
 - biscuit joint
 - finger joint
 - housing joint
 - mitre or bridle joints
- types of tools and equipment used in joint construction and procedures for their safe use, operation and maintenance, including:
 - chisels
 - mallets
 - mortise gauges
 - vernier callipers
 - vices
 - dovetail, tenon and coping saws
 - planes
 - files

- hand and power drills
- dowel jigs
- portable biscuit machines
- power routers, planers, saws and sanders
- characteristics and properties of timber being used for joint
- characteristics, properties and selection criteria of adhesives used, including:
 - resorcinol formaldehyde
 - polyurethane
 - epoxy
 - cyanoacrylate
- moisture suppressants and barrier systems relevant to joint construction and finishes
- workflow in relation to the products being made or repaired
- equipment safety features and serviceability criteria
- applicable work health and safety, legislative and workplace requirements relevant to constructing joints for custom.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - a selection of products requiring joints
 - a full suite of tools and adhesives for potential selection and use.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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