



Australian Government

MSFFM4002 Construct joints for custom furniture

Release: 1

MSFFM4002 Construct joints for custom furniture

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers joining timber by constructing joints using hand and portable power tools. It includes adapting/designing joints that are compatible with the product material, purpose and style of the furniture and supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furnishing maker operations. The competency applies to a work room and on-site environment and involves application of skills and knowledge at a highly skilled craftsman or artisan level.

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

Pre-requisite Unit

Competency Field

Unit Sector

Furniture Making

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.										
1 Plan and prepare for work	<table><tr><td>1.1</td><td>Applicable work health and safety (WHS), legislative and organisational requirements relevant to constructing joints for custom furniture are verified and complied with</td></tr><tr><td>1.2</td><td>Instructions, plans and/or design briefs are read and interpreted to identify furniture joint requirements</td></tr><tr><td>1.3</td><td>Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</td></tr><tr><td>1.4</td><td>Product purpose, furniture style and construction material are identified</td></tr><tr><td>1.5</td><td>Joints are identified and type of joint to be used is selected</td></tr></table>	1.1	Applicable work health and safety (WHS), legislative and organisational requirements relevant to constructing joints for custom furniture are verified and complied with	1.2	Instructions, plans and/or design briefs are read and interpreted to identify furniture joint requirements	1.3	Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition	1.4	Product purpose, furniture style and construction material are identified	1.5	Joints are identified and type of joint to be used is selected
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		and adapted/designed as necessary
	1.6	Tools, adhesives and fasteners are selected to match the joint type
	1.7	Quality checking procedures are developed and documented for each step in the joint construction process
2	Make joint	
	2.1	Cutting and joining lines are marked out to suit joint type
	2.2	Measurements and calculations are checked for accuracy to ensure quality outcomes
	2.3	Timber features are identified and optimal usage criteria are observed
	2.4	Timber is cut to specification, inspected and prepared for joining
	2.5	Timber is joined in accordance with the job specifications
	2.6	Fasteners and adhesives are used to make joints firm where required
	2.7	Finished joint is checked against quality requirements
3	Finalise the work sequence	
	3.1	The product is prepared for finishing in accordance with the design specification
	3.2	Carving tools are cleaned, maintained and stored in accordance with manufacturer specification
	3.3	Work area is cleared and waste removed
	3.4	Workplace documentation and/or reports are completed

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential

operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

Joints for custom furniture include:

- dowel
- mortise and tenon
- dovetail
- lap joint
- biscuit joint
- finger joint
- housing joint
- mitre or bridle joints

Tools and equipment include:

- chisels
- mallets
- mortise gauges
- vernier callipers
- vices
- dovetail saws
- tenon saws
- coping saws
- planes
- files
- hand and power drills
- dowel jigs
- power routers
- portable biscuit machines
- power planers
- power saws
- power sanders

Materials include:

- timber (both indigenous and overseas)
- adhesives
- fasteners

Adhesives include:

- resorcinol formaldehyde
- polyurethane
- epoxy
- cyanoacrylate

WHS requirements include:

- Commonwealth, state or territory legislation and regulations
- organisational safety policies and procedures
- the use of personal protective equipment and clothing
- firefighting equipment
- first aid equipment
- hazard and risk control and elimination of hazardous

- materials and substances
- manual handling, including lifting and carrying
- Procedures include:**
 - work instructions
 - standard operating procedures
 - written, verbal or computer-based procedures
- Organisational requirements include:**
 - legal, organisational and site guidelines, policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - ethical standards
 - recording and reporting
 - access and equity principles and practices
 - equipment use, maintenance and storage
 - environmental management (waste disposal, recycling and re-use guidelines)

Unit Mapping Information

Supersedes and is equivalent to LMFFM4006A 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 MSFFM4002 Construct joints for custom furniture

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Performance Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Select appropriate joint types for the furniture item and produce a minimum of four (4) different joint types in accordance with industry standards and tolerances with at least two (2) produced substantially by hand operations
- Utilise at least three (3) different adhesive types
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Minimise wastage of resources, including materials, time and money
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- State or territory WHS legislation, regulations, standards and codes of practice relevant to constructing joints for custom furniture moisture suppressants and barrier systems
- Organisational and site standards, requirements, policies and procedures for the creation of joints
- Types of tools and equipment used in joint construction and procedures for their safe use, operation and maintenance
- Characteristics and properties of timber being used
- Characteristics, properties and selection criteria of adhesives used
- Matching requirements of adhesives and fasteners to timbers/materials used
- Environmental protection requirements
- Established communication channels and protocols
- Relevant problem identification and resolution
- Work flow in relation to the furniture items being made or repaired

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to materials and equipment relevant to the design and application of jointing techniques, and specifications and work instructions.

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