



Australian Government

MSFGG2007 Process glass by basic machines

Release: 1

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Modification History

Release 1 - New unit of competency

Application

This unit of competency covers cutting, shaping, drilling and edging annealed glass up to, and including, 6 mm thick, and laminated glass up to 7 mm thick by basic machines.

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

Pre-requisite Unit

Competency Field

Unit Sector

Glass and Glazing

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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|-------------------------------------|---|
| 1 Identify work requirements | <div style="margin-left: 20px;">1.1 Work requirements, including materials, types of cuts, shapes and edges, processes and quantities required, are identified from work instructions or job order in accordance with workplace procedures</div> <div style="margin-left: 20px;">1.2 Work health and safety (WHS) requirements, including personal protective equipment, are observed throughout the work</div> <div style="margin-left: 20px;">1.3 Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, of the appropriate quality, serviceable and in a safe condition</div> <div style="margin-left: 20px;">1.4 Cutting list and quality standards are determined and procedures for operation of basic cutting machines identified in accordance with workplace requirements and industry standards</div> |
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- 1.5 Glass to be cut, shaped, drilled or edged is selected using information from the work order, including type of glass, thickness, colour and dimensions
 - 1.6 Machines, equipment and settings required to perform the work are identified
- 2 Prepare for work
 - 2.1 Technique and sequence of work are planned to ensure glass processing is conducted in a logical order
 - 2.2 Procedures for monitoring quality of materials, work in progress and finished items are identified in accordance with workplace requirements and industry practice
 - 2.3 Suitable cutting, shaping, drilling and edging machines are selected
 - 2.4 Glass processing table is selected and work surface is cleared of debris and dust
 - 2.5 Components and controls of machines, including emergency stops and guards, are identified and tested, and appropriate action taken if not in working order
 - 2.6 Work area is cleared of obstructions and potential hazards
 - 2.7 Glass to be processed is located in the work area using appropriate handling techniques
 - 2.8 Glass is measured accurately to minimise waste and within specified tolerances according to enterprise standards
 - 2.9 Glass is checked for imperfections and damage prior to handling
- 3 Conduct processing operations
 - 3.1 Tools and equipment are operated and monitored in accordance with manufacturer instructions and workplace procedures to ensure correct product quality and output
 - 3.2 Glass is processed to required standard in accordance with job order, work instructions and procedures, including the performance of routine lubrication and adjustments of machines/equipment, if required
 - 3.3 Problems occurring during work operations are identified and reported to appropriate persons in accordance with enterprise procedures
 - 3.4 Authorised changes in working procedures are followed

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| | 3.5 | Completed product is inspected for quality of work and repaired, reprocessed or discarded in accordance with workplace procedures |
| 4 | Complete work | |
| | 4.1 | Processed glass is labelled and stored following workplace procedures ensuring there are no projections |
| | 4.2 | Scraps and off-cuts are removed for disposal or recycling, as required |
| | 4.3 | Work area clean-up is completed following workplace procedures |
| | 4.4 | Equipment is cleaned and stored according to workplace requirements |
| | 4.5 | Tools, equipment and unused materials are removed and stored appropriately |
| | 4.6 | Workplace documentation is completed in accordance with workplace requirements |

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.

Unit context includes:

- WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent
- work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Materials include:	• work requires individuals to demonstrate some discretion, judgement and problem solving • annealed and laminated glass for residential and commercial glazing and furniture applications
Tools and equipment include:	• flat felt covered cutting tables • tungsten wheel glass cutters • L-squares and straight edges • tape measures • glass handling gloves • safety glasses • gauntlets • aprons • marking pens • chinagraph pencils • templates • lubricants
Basic cutting machines include:	• portable diamond saw • circle cutters • speed cutters
Drilling equipment includes:	• portable diamond drill • wall-mounted and free-standing diamond drill presses
Edging includes:	• arrising • flat • round and mitre grinding • round and mitre polishing and bevelling
Glass processing includes:	• straight cutting • circle cutting • freehand cutting • drilling and edging
Edging machines include:	• finishing or belt machines • diamond or pencil edgers • pumice or cork polishers • horizontal wheels • finger slotters • hand tools
Tables appropriate for cutting large glass sheets include:	• air flotation tables • roller castor tables or tilt tables with air flotation • breaker bars or roller castors
Personal protective equipment includes:	• that prescribed under legislation, regulation and enterprise policies and practices:

Information and procedures include:

- gauntlets
 - gloves
 - safety glasses
 - hard hats
 - safety footwear
 - aprons and overalls
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- workplace procedures relating to the use of tools and equipment and personal protective equipment
 - work instructions, including job sheets, cutting lists, plans, drawings and designs
 - workplace procedures relating to reporting and communication
 - manufacturer specifications and operational procedures
 - AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass

Unit Mapping Information

Supersedes and is equivalent to LMFGG2007C Process glass by basic machines.

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 MSFGG2007 Process glass by basic machines

Modification History

Release 1 - New unit of competency

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
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Apply AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass
- Set up for and prepare to process glass identifying and using AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass
- Complete straight cuts, truncated and radius corners, circles and fan holes, and pay holes by basic cutting machine in glass up to 7 mm in annealed, and laminated glass up to 1.0 m²
- Cut up to 7 mm annealed and laminated glass using a diamond saw
- Arrise, grind and polish flat, round and mitre edges on up to 7 mm annealed, and laminated glass up to 0.5 m²
- Drill holes with tungsten or diamond drill bits in up to 7 mm annealed, and laminated glass up to 0.5 m²
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate 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
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- Qualities and characteristics of glass, including hazards and handling requirements
- Workplace safety system requirements related to glass processing by basic machines
- Identification of glass processing equipment, including functions and procedures
- Set-up and operation of glass processing equipment, including procedures for reporting machine/product defects or equipment faults

- Work flow requirements in relation to glass processing

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 glass sheet/product up to 7 mm thick, processing facilities/equipment (such as basic cutting and edging machines), table, work area, work orders and appropriate safety and personal protection equipment.

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