



Australian Government

MSFFM3033 Set up, operate and maintain drilling machines

Release: 1

MSFFM3033 Set up, operate and maintain drilling machines

Modification History

Release 1. Changes to code, application, elements, performance criteria, assessment requirements. Foundation skills added. Range of conditions removed. Assessment requirements changed.

Application

This unit describes the skills and knowledge required to set up, operate and maintain drilling machines (including multi boring machines) using their full technical potential and capacities. It includes fitting cutters, selecting appropriate drilling pattern and drilling holes both vertically and horizontally.

Workers with this competency follow established procedures in timber technology industries using discretion, judgement and problem solving to identify and troubleshoot product and machine issues.

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

Competency Field

Wood machining

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare for task	1.1 Determine task requirements and drilling specifications from work documentation 1.2 Identify and follow work health and safety requirements 1.3 Select material for machining and check it meets task quality requirements 1.4 Check that cutting tools, jigs and other required tools and equipment are available, safe and functional 1.5 Identify procedures for waste minimisation and energy efficiency while completing task

2 Set up machines	2.1 Check that emergency stops, gauges, guards, controls and safety equipment are functional prior to machine start-up 2.2 Complete drill settings and adjust to meet task requirements in compliance with manufacturer instructions 2.3 Complete trial runs to check that drill is fully functional and that finished work meets task accuracy and quality requirements 2.4 Make adjustments to drill settings to meet task quality and efficiency requirements
3 Operate machines	3.1 Follow drill start-up procedures in accordance with manufacturer instructions 3.2 Position material to be drilled in accordance with manufacturer instructions, tooling requirements, and safe handling and workplace procedures 3.3 Operate drill in accordance with its designed capacity and purpose, and to manufacturer recommendations 3.4 Monitor drill operation to ensure product quality and output 3.5 Check waste quantities and make adjustments to minimise waste 3.6 Identify items that do not meet quality requirements and recycle or discard in accordance with workplace procedures 3.7 Recognise problems with product or drill operation and resolve or report to appropriate persons in accordance with workplace procedures
4 Finalise task	4.1 Clean work area, safely dispose of waste and identify items for recycling in accordance with workplace procedures and environmental standards 4.2 Clean machinery, complete routine maintenance and leave in safe mode in accordance with workplace procedures 4.3 Identify, tag and report faulty equipment in accordance with workplace procedures 4.4 Complete task documentation in accordance with workplace procedures

Foundation Skills

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

- Reading skills to interpret familiar workplace procedures, work documentation including drawings, and product specifications
- Writing skills to communicate information in familiar workplace documents
- Numeracy skills to measure and calculate lengths, degrees and areas and estimate material requirements

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

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSFFM3013 Set up, operate and maintain drilling 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 MSFFM3033 Set up, operate and maintain drilling machines

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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:

- set up and operate at least 2 of the following types of drilling machines to complete task requirements in accordance with workplace procedures
 - single-head multi-spindle machine
 - single-spindle vertical and horizontal machine
 - multi-head multi-spindle machine
- complete operator maintenance on each of the 2 machines at least once, including:
 - checking that guards, safety switches, and machine jigs and attachments are functioning correctly
 - servicing machine lubrication points
 - identifying tooling needing sharpening and repair
 - checking that drive belts are undamaged and correctly tensioned
 - cleaning machine at the end of a production run
 - checking that electrical systems are functioning correctly, and identifying issues for referral to qualified electrician
 - completing maintenance documentation.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- workplace procedures for:
 - work health and safety
 - quality assurance and tolerance levels
 - reporting of machinery faults and material defects
- functions and characteristics of types of drilling machine:
 - single-head multi-spindle machines
 - single-spindle vertical and horizontal machines
 - multi-head multi-spindle machines
- drilling processes and techniques

- characteristics and response to the drilling process of materials commonly used:
 - solid timber
 - manufactured board
 - metal
 - glass
- the function of other tools and materials typically used in the drilling process:
 - machine-specific tools
 - jigs and fixtures
 - machine consumables
 - oils and lubricants and trial materials
- personal protective equipment (PPE) required when operating drilling machines.
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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:
 - work documentation
 - unprocessed materials for drilling
 - drilling machines (2 different types) **required for performance evidence**
 - PPE
 - workplace procedures.

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

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