



Australian Government

**MSFDN5001 Generate and transfer
complex computer-aided drawings and
specifications**

Release: 1

MSFDN5001 Generate and transfer complex computer-aided drawings and specifications

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers preparing complex drawings using computer-aided techniques and capabilities, including three-dimensional modelling, exploded assembly drawings and conversion of drawings for computer numerically controlled (CNC) applications.

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

Pre-requisite Unit

Competency Field

Unit Sector

Furnishing design

Elements and Performance Criteria

Elements describe the essential outcomes.

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

- | | | | |
|---|-----------------------------------|-----|---|
| 1 | Create exploded assembly drawings | 1.1 | Drawing preparations, including drawing name, labelling information, dimensions, specifications and information management requirements, are obtained/completed |
| | | 1.2 | Three-dimensional models are prepared for all components |
| | | 1.3 | Perspective view of the model is created and confirmed |
| | | 1.4 | Model is exploded so that all components are visible |
| | | 1.5 | All individual components are labelled in accordance with enterprise requirements |
| | | 1.6 | Quality checks are completed to ensure accuracy of outcomes |

- | | | | |
|---|---------------------------------------|-----|---|
| | | 1.7 | Drawings are stored in accordance with enterprise requirements |
| 2 | Create job sheets | 2.1 | Preparations, including file storage, product coding, inventory information and drawing management requirements, are identified and completed |
| | | 2.2 | Job sheet template is set up in accordance with enterprise requirements and practices |
| | | 2.3 | Necessary orthographic views are created and dimensioned |
| | | 2.4 | Sequencing of machine operations and operator requirements, including work health and safety (WHS) are identified and listed |
| | | 2.5 | Draft job sheets are prepared, reviewed, tested and amended to enterprise requirements |
| | | 2.6 | Job sheets are stored in accordance with enterprise requirements |
| 3 | Convert drawings for CNC applications | 3.1 | Conversion requirements are identified and confirmed from the CNC machine specifications |
| | | 3.2 | Layers and additional information required for final conversion are created |
| | | 3.3 | Drawing entities are assigned to the relevant layers |
| | | 3.4 | Conversion to the required file type is completed |
| | | 3.5 | Converted file is stored in accordance with enterprise 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
- work requires individuals to demonstrate conceptual, analytical and organisational ability, judgement and problem-solving applied under broad guidance within routine and non-routine situations
- work involves enterprise and client-initiated ideas or requests

Preparing complex drawings includes:

- identification, selection and use of computer-aided techniques and capabilities, including three-dimensional modelling, exploded assembly drawings and conversion of drawings for CNC applications
- researching software trends and developments
- generating and presenting ideas
- liaising with client and/or other functional areas
- compiling information

Personal protective equipment includes:

- that prescribed under legislation, regulations and enterprise policies and practices

Information and procedures include:

- customer requirements
- work specifications
- product catalogues and style manuals or equivalent
- inventory systems and records
- organisation work procedures and sequencing arrangements
- legislation/regulations/national and industry codes and practices relevant to the product
- quality and Australian Standards and procedures

Unit Mapping Information

Supersedes and is equivalent to LMF DN5001B Generate and transfer complex computer-aided drawings and specifications

Links

Companion Volume implementation guides are found in VETNet -

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