



Australian Government

MEM09217 Prepare plans for pipe and duct fabrication

Release: 1

MEM09217 Prepare plans for pipe and duct fabrication

Modification History

Release 1. Supersedes and is equivalent to MEM09217A Prepare plans for pipe and duct fabrication.

Application

This unit of competency defines the skills and knowledge required to prepare drawings and plans for pipe and duct fabrication and installation to Australian Standard (AS) 1100.101 Technical drawing - General principles and is primarily for those performing drafting work within the air conditioning industry.

Critical dimensions and specifications are predetermined and drawings are prepared with or without the use of computer-aided design (CAD) systems.

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

Pre-requisite Unit

MEM09229 Read and interpret technical engineering drawings

Competency Field

Drawing, drafting and design

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. Access and interpret specifications	1.1 Follow standard operating procedures (SOPs) and comply with work health and safety (WHS) requirements at all times 1.2 Interpret project specifications and requirements for pipework, including layout, sizing and type of pipe and duct required 1.3 Determine implications and requirements for pipe fabrication and support 1.4 Access and interpret organisational and industry standards, information and catalogues to obtain required product specifications
2. Document pipe fabrication	2.1 Determine appropriate methods of joining and cutting pipe materials being used

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.2 Determine appropriate methods for supporting pipework materials being used 2.3 Document pipe fabrication requirements on plans 2.4 Document pipe support requirements on plans 2.5 Include instructions for electrolysis of dissimilar materials on plans
3. Document duct fabrication	3.1 Determine appropriate methods of joining and cutting duct materials being used 3.2 Determine appropriate methods for supporting duct work materials being used 3.3 Document duct fabrication requirements on plans 3.4 Document duct support requirements on plans 3.5 Include instructions for electrolysis of dissimilar materials on plans
4. Complete and store drawings	4.1 Complete drawings and associated technical information in accordance with project requirements and SOPs 4.2 Process drawings and associated documentation for approval in accordance with organisational requirements 4.3 Store drawings and associated documentation in accordance with SOPs

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

Range of Conditions

This field allows for 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.

Types of duct include one or more of the following:	• supply air (S/A) • return air (R/A)
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	• toilet exhaust • kitchen exhaust • smoke spill • fire rated • textile duct • sub-ducts • filter plenums.
Types of duct insulation (materials and facings) include one or more of the following:	• foil face • perf face • black matt • Melinex lining • Galvabond • polyester • fibreglass • jointing • flanges • seams • polystyrene • nitrile rubber.
Methods of joining include one or more of the following:	• spigots • flanges • mild steel angles • weld • braze • solder • seal • bolt.
Materials include one or more of the following:	• copper • mild steel • stainless steel • plastic • acrylonitrile butadiene styrene (ABS) • polyvinyl chloride (PVC).
Methods for supporting include one or more of the following:	• clamping • hanging • steel profile types.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM09217A Prepare plans for pipe and duct fabrication.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>