



Australian Government

CPCPFS4024 Design residential fire sprinkler systems

Release: 2

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Modification History

- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.
Changes to Pre-requisite unit.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCPFS4024A Design residential and domestic fire sprinkler systems. Updated to meet the Standards for Training Packages 2012.

Application

This unit specifies the skills and knowledge required to design domestic and residential fire sprinkler systems using hydraulic calculations.

It includes determination of system requirements, detailed design and recording of system plans.

In some jurisdictions this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-requisite Unit

CPCPFS3037 Install residential life safety sprinkler systems

Unit Sector

Plumbing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

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| 1 Prepare for design process. | 1.1 Identify and confirm the nature and scope of design task from relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements. |
| | 1.2 Identify and apply workplace policies and procedures, |

- work health and safety (WHS) and environmental requirements.
- 1.3 Consult with stakeholders as required.
 - 1.4 Select and check the serviceability of appropriate tools, equipment and personal protective equipment (PPE).
 - 1.5 Prepare the work area in which the design process is to be conducted.
- 2 Determine system requirements.
- 2.1 Obtain and confirm information specifications for the required work.
 - 2.2 Specify regulations and standards relevant to the work.
 - 2.3 Identify and extract relevant data from relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements.
 - 2.4 Identify and establish building classification and hazard ratings according to standards and other relevant regulations.
- 3 Design sprinkler system.
- 3.1 Establish water supply needs and draw graphs for the automatic fire sprinkler system.
 - 3.2 Size pipework to manufacturer specifications and standards using hydraulic calculations.
 - 3.3 Design sprinkler system to meet plan specifications, standards, manufacturer's recommendations and water supply data.
 - 3.4 Select sprinkler heads of appropriate size, spray pattern, temperature and finish.
 - 3.5 Plot sprinkler spacing according to manufacturer's specifications, standards and relevant statutory and regulatory authority regulations.
 - 3.6 Create pipe layout drawings according to standards and workplace requirements.

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| 4 Finalise work. | 4.1 Document calculations and other supporting evidence to support design. |
| | 4.2 Optimise material specifications according to standards from the proposed design. |
| | 4.3 Prepare fabrication sheets and material lists. |
| | 4.4 Record plans according to regulatory authorities' and workplace requirements. |

Foundation Skills

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

Unit Mapping Information

Supersedes and is equivalent to CPCPFS4024A Design residential and domestic fire sprinkler systems.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>