



Australian Government

CPCPFS3030 Design fire sprinkler systems using pre-calculated charts and tables

Release: 3

CPCPFS3030 Design fire sprinkler systems using pre-calculated charts and tables

Modification History

- Release 3 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.5.
Amended Performance Criteria and Knowledge Evidence.
- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.
Performance Evidence formatted for clarity.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCPFS3030A Design pre-calculated fire sprinkler systems. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to design fire sprinkler systems using pre-calculated tables and charts.

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

Pre-requisite Unit

Nil.

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 work. | 1.1 Obtain scope of work requirements from information and quality requirements, including relevant job plans and specifications, codes, Australian Standards, |
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- 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 Set up work area to enable sprinkler system to be designed efficiently.
- 2 Identify design requirements.
- 2.1 Obtain data from relevant job specifications required to prepare design.
 - 2.2 Identify building classification and hazard ratings that apply to the fire sprinkler system being designed.
 - 2.3 Identify ceiling type and constructions material.
 - 2.4 Identify all features of that building that might obstruct the spray pattern of the sprinkler, i.e. bulkheads, beams, columns, etc.
 - 2.5 Identify sprinkler head type from relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements.
 - 2.6 Identify the requirement for concealed space sprinklers.
 - 2.7 Water supply needs are established and graphs are drawn for the automatic fire sprinkler system.
- 3 Design sprinkler system.
- 3.1 Identify and locate the control valves.
 - 3.2 Lay out sprinkler locations according to AS 2118.1 Automatic fire sprinkler systems – General systems and manufacturer data sheets.
 - 3.3 Lay out the range and distribution pipework in an economical manner.
 - 3.4 Determine the most remote last range type.
 - 3.5 Locate the design points.
 - 3.6 Size all range pipes in the installation using the

pre-calculated tables.

- 3.7 Size the distribution pipework up to the design point using the pre-calculated tables.
 - 3.8 Size the distribution pipework from the design point to the control valve using hydraulic calculations.
 - 3.9 Prepare fabrication design sheets and material lists.
- 4 Finalise work.
- 4.1 Clear the work area, and dispose of, reuse or recycle materials in accordance with state and territory legislation and workplace policies and procedures.
 - 4.2 Apply workplace recording and reporting procedures where required.

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 CPCPFS3030A Design pre-calculated 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>