

What is Fire Protection work?

A guide to read before you apply for registration

Do you have the **skills, knowledge and experience** to apply for registration as a plumbing practitioner in Fire Protection work? To help you, this guide explains some of the typical tasks of Fire Protection work. If you are asked to an assessment interview, some of your interview questions will be based on this information.

Get to know the regulation

Under Part 4 of the *Plumbing Regulations 2018*, Fire Protection work is:

(1) (a) the construction, installation, replacement, repair, alteration, routine servicing, maintenance, testing or commissioning of any part of a water service used for firefighting, from the point of connection of the service to the water supply up to and including any fire protection equipment forming part of that service

(b) any design work that is incidental to, or associated with, any work described in the paragraph above.

Fire Protection work **does not include** the commissioning of a fire system pumpset.

Typical Fire Protection work

Fire protection systems are designed, installed, tested and maintained to ensure water – which may come from water tanks, mains water connections, dams or reservoirs – can be reliably used to control fire until emergency services personnel arrive. The existence and correct design and installation of fire protection systems are critical for protecting people, buildings and assets in a fire.

Fire protection plumbing work relates to:

- hydrants and hose reels
- residential and domestic fire sprinkler systems
- commercial and industrial fire sprinkler systems
- fire system pumpsets.

In each of these areas, experienced Fire Protection plumbers typically do the following work (although it can differ):

Hydrants and hose reels

- Fabricating and installing fire hydrant and hose reel systems
- Testing fire hydrant and hose reel installations

Residential and domestic fire sprinkler systems

- Identifying and analysing faults and maintenance issues in residential and domestic fire sprinkler systems
- Installing, testing and maintaining residential and domestic fire sprinkler systems, including basic and annual system testing
- Installing sprinkler control valves
- Installing, testing and maintaining fire alarms

Commercial and industrial fire sprinkler systems

- Identifying and analysing faults and routine servicing and maintenance issues in commercial and industrial fire sprinkler systems
- Installing, testing and maintaining commercial and industrial fire sprinkler systems, including basic and annual system testing
- Installing sprinkler control valves
- Installing, testing and maintaining fire alarms

Fire system pumpsets

- Installing and connecting water pumpsets
- Inspecting and testing fire pumpsets, including conducting water flow tests.

What do Fire Protection plumbers need to know and do?

A plumber's work affects the supply of water to and from a building. So, plumbers need critical knowledge and skills to ensure the correct type of fire system protection is in place, installed correctly, tested regularly and maintained in good working order. What does this mean for you?

As a registered practitioner, you must be able to understand and apply the compliance requirements of Fire Protection plumbing work. These requirements include:

- AS1851 Routine service of fire protection systems and equipment
- AS2118 Automatic fire sprinkler systems
- AS2419 Fire hydrant installations
- aspects of the National Construction Code that relate to fire protection plumbing.

To undertake Fire Protection work to a safe and competent standard, you must also be able to:

- Work safely at heights, which may involve working with scissor lifts or knuckle booms, mobile scaffolding and other access equipment such as ladders
- Read plans and understand the design and layout of a building's fire protection system, and the requirements of that layout
- Read, interpret and apply a range of complex information, including the relevant Australian Standards and manufacturer specifications for different components of the fire protection system
- Do oxy-acetylene and arc welding, and know how to weld safely
- Understand the impact of different building occupancy codes on installation requirements for fire protection systems
- Know the processes for isolating system interfaces correctly, and know the functionality of a wide range of system interfaces
- Install and join pipe work and work with different materials, including plastic, copper and steel.

And you must have:

- Good numeracy skills, so you can read gauges and make calculations for installing, testing and maintaining fire protection systems – for example, you must be able to calculate flow and pressure rates using appropriate conversion charts
- Good literacy skills, so you can complete service reports that are accurate and legible

What competencies and experience do you need?

The VBA publishes a set of units of competency for each class of plumbing work. Each unit of competency describes a work outcome, all the knowledge and skills needed to do the work to the expected standard, and how they should be assessed.

The Victorian Building Authority (VBA) uses the units of competency to assess your skills and experience if you apply to register in a class of plumbing work.

Before applying for registration, please read the current approved units of competency for Fire Protection.

Units of Competency for Fire Protection work

- Carry out interactive workplace communication (CPCPCM2039A)
- Read plans and calculate plumbing quantities (CPCPCM2040A)
- Work effectively in the plumbing and services sector (CPCPCM2041A)
- Carry out WHS requirements (CPCPCM2043A)
- Handle and store plumbing materials (CPCPCM2045A)
- Use plumbing hand and power tools (CPCPCM2046A)
- Carry out levelling (CPCPCM2047A)
- Provide basic emergency life support (HLTFA211AP)

- Connect static storage tanks for fixed fire protection systems (CPCPFS2021A)
- Install control valve assemblies, actuating devices and local alarms (CPCPFS3034A)
- Install special hazard systems (CPCPFS3036A)
- Test and maintain fire hydrant and hose reel installations (CPCPFS3038A)
- Test and maintain automatic fire sprinklers (CPCPFS3039A)
- Design pre-calculated fire sprinkler systems (CPCPFS3030A)
- Install distribution and range pipes (CPCPFS3044A)
- Fit-off sprinkler heads, controls and ancillary equipment (CPCPFS3045A)
- Test the integrity of water-based fire protection systems using pressure (CPCPFS3046A)
- Inspect, test and maintain gaseous fire suppression systems (CPPFES2025A)
- Inspect and test control and indicating equipment (CPPFES2047A)
- Prevent ozone depleting substance and synthetic greenhouse gas emissions (CPPFES2043A)
- Conduct basic functional testing of water-based fire suppression systems (CPCPFS3040A)
- Inspect and test fire pumpsets (CPCPFS3041A)
- Conduct annual functional testing of complex water-based fire suppression systems (CPCPFS3042A)
- Conduct functional water flow testing (CPCPFS3043A)
- Connect static storage tanks for fixed fire protection systems (CPCPFS2021A)
- Install fixed fire pumpsets (CPCPFS3048A).

Your next step

If you think you have the required skills, knowledge and experience in Fire Protection work, then go to the [VBA website](#) to learn how to apply for registration in this work class.