



Fire Detection



Occupant Warning



Exit & Emergency Lighting



Fire Extinguishers



Fire Doors



Fire Hose Reels



Fire Hydrants



Fire Pumps



Gas Suppression



Sprinkler Systems



FIRE HOSE REELS



Fire Hose Reels

What Is A Fire Hose Reel?

When a fire starts action must be taken to quickly minimise damage and prevent injuries or fatalities. For larger fires a fire extinguisher may not be enough.

Fire hose reels are provided for the occupants of a building to take first response action. As a part of the fire safety system, they provide occupants with access to an unlimited water supply for extinguishing fires and for protecting themselves from radiant heat.

A compliant fire hose can reach flames from a safe distance using pressurised water. The amount of water can quickly put dangerous flames under control and help to create a barrier preventing the spread of the fire.

The stream from fire hose reels allow their use to be at least 4 metres from the seat of the fire compared with 2 metres for fire extinguishers.

Why Do Buildings Have Fire Hose Reels?

The Building Code of Australia volume 1 parts EP1.1 and E1.4, H3.10 and G4.8 detail the mandatory requirement for fire hose reels to be provided in various classes of buildings.

Types Of Fire Hose Reels

Manufacturing specifications for fire hose reels are set out in Australian Standard AS1221. The typical configuration is a 19mm diameter hose with a fully extended length of 36 metres. 25mm diameter hose and 50 metre hose lengths are options.

Stainless steel versions are also available for severe environmental applications such as marinas.

Typically fire hose reels are mounted on the wall or in dedicated cabinets. Swing arm models allow the hose to run out at various angles.

Where Should Fire Hose Reels Be Located?

Australian Standard AS2441 specifies requirements for the distribution, location and installation of fire hose reels.

The standard defines the concept "system coverage". Fire hose reels need to be located within a design such that the occupant can reach a fire in any part of the building. It is system coverage that will determine if internal hydrants are required.

Where Should Fire Hose Reels Be Located?

Where fire hose reels are required they must be located within 4m of an exit. Sometimes it is not possible to provide the system coverage with hose reels located near exits, in these cases, it is permissible to locate extra fire hose reels "in the paths of travel to an exit".

Generally, separate hose reels are to be provided for each storey of the building. In some restricted cases a multistorey sole occupancy unit may be served by a single fire hose reel located at the entrance/exit level.

A fire hose reel should not be located such that it is required to take the hose through a fire or smoke door to fight a fire.

Fire hose reels need to be clearly marked with white letters on a red sign located 2m or more above the floor. Operating signage needs to be visible within 2m of the reel. As part of your fire emergency training the fire hose reel installation requirements and operating instructions should be covered.

The hose needs to be accessible and not obstructed by furniture. Maintain at least 2m clearance around the spindle and 100mm from the handwheel. The design needs to consider how the hose will be unreeled and the height of the reel needs to be within regulated limits (1.4-2.4m).

Fire hose reels need to be mounted robustly. The mounting must not only support the weight of the apparatus but also the forces applied by the fire-fighting occupant pulling on the hose. External fire hose reels need to be protected by a cabinet.

Water discharge should be at 0.45 litres per second when attached to an inlet with pressure of approximately 220 kPa. If there is insufficient pressure available a water storage tank and/or a pump must be installed.





Fire Hose Reels

How Do I Operate A Hose Reel?

Training on the use of fire hose reels prior to using one is imperative. There are 4 steps to operating a manual fire hose reel. Automatic versions operate the water valve when the hose is pulled.

1	Open valve fully by turning anti-clockwise before running out hose.	
2	Pull out hose towards fire.	
3	Open nozzle clockwise to obtain spray. Continue turning if jet of water is required.	
4	Aim jet at base of fire.	
	Do not use on live electrical equipment	

System Components

Water Supply & Storage

A water supply for a fire hose reel system can be derived from a reliable source of water such as; street mains, static water supply such as a tank or dam. Water storage must also include a facility for automatic replenishment.

Pipework & Valves

To direct the water from its point of origin (supply) to its destination (hose reel) requires a series of interconnected pipes at defined sizes. Control valves are used in combination with the pipework to control and direct the flow of water.

Booster Pumpset

In some circumstances where the hydraulic analysis has determined that the water supply is insufficient for the building requirements, one or more booster pumpsets may be required. A pumpset may comprise a combination of electric or diesel motors.

Hose Reels

The end point of the system is one or more hose reels.

Maintenance, Inspection & Testing

Western Australia's building legislation requires owners of Class 2 to Class 9 buildings (which includes residential apartments) to ensure the building's firefighting services and equipment are maintained. This is to ensure that safety systems remain capable of performing to a standard not less than they were originally required and commissioned to achieve.

There is a financial penalty for noncompliance with the building legislation.

The Building Commission considers the adoption of Australian Standard AS1851-2012 Routine service of fire protection systems and equipment as good practice and a means for owners to ensure fire safety measures are serviced at regular frequencies to demonstrate suitable operation, and rectified or repaired if necessary to meet their regulatory obligation on maintenance.

AS1851 requires fire hose reels to be inspected every six months. There is an additional inspection and test checklist required to be undertaken yearly.

ROUTINE SERVICE FREQUENCIES	Monthly	Three Monthly	Six Monthly	Yearly	Five Yearly	Ten Yearly	Twenty Five Yearly	Thirty Yearly
 Fire Detection	✓		✓	✓	✓			
 Occupant Warning	✓			✓	✓			
 Exit & Emergency Lighting			✓	✓				
 Fire Extinguishers			✓	✓	✓			
 Fire Doors		✓ <small>Horizontal Sliding Doors</small>	✓	✓				
 Fire Hose Reels			✓	✓				
 Fire Hydrants	✓ <small>Where Pumpsets Fitted</small>		✓	✓	✓			
 Fire Pumps	✓		✓	✓	✓			
 Gas Suppression	✓		✓	✓		✓		
 Sprinkler Systems	✓		✓	✓	✓	✓	✓	✓



Design

We design solutions, tailored to your building.



Installation

Our installation teams are focused on delivering on time and on budget projects.



Service & Maintenance

We offer regular servicing and maintenance to ensure that your systems are working at their optimum level.



Emergency Call Out

The Emergency Call Out Service ensures that you are covered 24 hours, 7 days a week for fault and emergency.



Fire Safety Training

We deliver training courses to ensure your team has the knowledge to act competently during an emergency.



The information provided in this document is general in nature, every installation is different and requires site specific professional guidance. Westside Fire Services assumes no responsibility or liability for any errors or omissions in the content of this document. The information contained in this document is provided on an "as is" basis with no guarantees of completeness, accuracy, usefulness or timeliness.

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