


ForestValleyCare

The Fire Wall




Wildfires are an increasing problem in many parts of the world, often with fatal consequences. TheFireWall is designed to help reduce these impacts. The system is based on three key factors — mobility, emergency crew efficiency, and water consumption. enforce the overall containment effort.

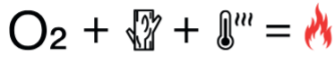
When a wildfire threatens to move toward populated areas, the following steps are taken: Based on a pre-defined action plan, TheFireWall is deployed along the section where it will have the greatest impact. If multiple units are available, they can be used in other critical areas to reinforce the overall containment effort.

Water supply is connected according to the emergency response plan. TheFireWall is typically supplied with water from nearby lakes or streams using fuel-powered water pumps. Alternatively, water can be drawn from private sources.

TheFireWall then creates an effective barrier against the advancing flames. To ensure maximum efficiency, the system should be activated 6 hours before the fire is expected to reach the area.



The Fire Wall



Extinguishing Principles:

Fire can only spread when three elements are present:

Oxygen: Outdoors, fire has unlimited access to oxygen from the open air.

Fuel: When the forest is extremely dry, combustible material is available in nearly unlimited quantities.

Heat: High temperatures allow materials to ignite that normally wouldn't under standard conditions.

To limit the spread of fire, we must address one or more of these elements.

Since it is obviously not feasible to remove fuel from forests, fire control equipment must reduce either heat, oxygen, or both.

TheFireWall does both. However, oxygen reduction only occurs upon direct contact with the flames.

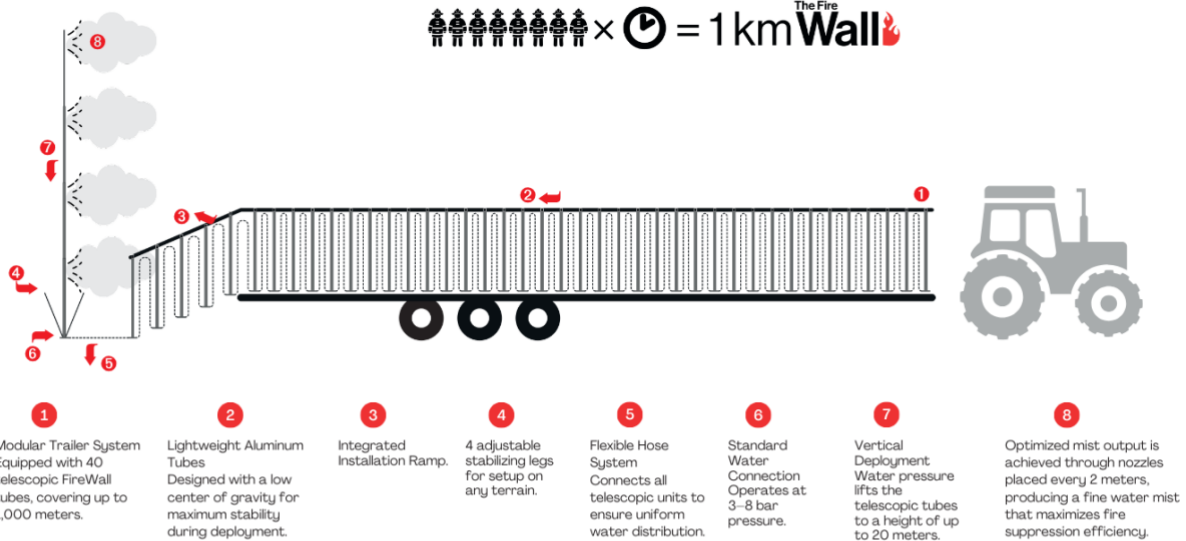


In general, wildfires can be controlled using two main strategies:

- Direct attack – actively fighting the fire where it burns
- Containment – preventing the fire from spreading further

Where TheFireWall can be used:

While the system is not designed to extinguish wildfires, it can effectively prevent the fire from spreading into critical areas — such as residential zones or vital infrastructure.



Water Consumption

Water usage in wildfire response is a critical parameter. Depending on the chosen setup, water consumption under optimal conditions (3–8 bar) ranges from 200 to 300 liters per hour per linear meter of deployed system.

All system sizes include a tailored water supply plan. A system of the above scale can include up to 9,000 nozzles.

Personnel Requirements

Personnel demand is another key factor for emergency services. With a trained crew familiar with TheFireWall setup, it takes 8 people approximately 1–2 hours to make the system operational across a stretch of up to 1 kilometer — depending on local conditions. After deployment, only 1–2 personnel are needed to monitor the system.

Creates a wall against the flames

TheFireWall is deployed along predefined sections outlined in the area's emergency response plan, creating an effective barrier against advancing flames.



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