

A FireSAFE is a small compact and economical fire pump package, designed to operate within both sprinkler and water-misting applications. The unit comes as a plug 'n' play solution, reducing installation time. FireSAFE units are suitable for applications from 0-800 l/min and where pressures of 1-18 bar are required. Smaller units are available for either 230v / 1ph / 50Hz (domestic power supplies) or 400v / 3ph / 50Hz. Larger units available for 400v / 3ph / 50Hz only.

### When would I need a FireSAFE set?

This product is used in premises that have insufficient mains pressure to deliver water to their fire system. Sprinkler/misting heads require a minimum operating water pressure to work effectively. Consideration also needs to be given to pipe and pressure losses to ensure necessary pressure can be attained.

When activated in a fire development situation, it is critical that the pressure does not decrease at any point. This is because a decrease in pressure would prevent the sprinkler/misting head working effectively, causing the fire to continue to grow or re-ignite rapidly.



*Residential FireSAFE Set*

### Applications

#### Domestic:

- Individual flats and houses

#### Residential:

- Homes of multiple occupancy
- Care homes
- Sheltered accommodation
- Student accommodation
- Small hotels

#### Watermist:

- Industrial kitchens
- Hotels and residential properties
- Document storage
- Data centres

### A standard FireSAFE package would consist of the following:

- Grundfos CMI/CRI Pump (very reliable products from the Grundfos industrial range to meet the high pressure demands)
- Non-return valve (to prevent backflow of water)
- Expansion vessel (to hold pressure within the system)
- Main pressure switch (to enable activation in the event of a fire)
- Maintenance pressure switch (to maintain pressure within the system)
- Flow switch (to detect if there is a flow present through the pump/pipes)
- Control panel (programmed to typical fire philosophy)
- Isolating valves (preventing full draining/disconnecting from system during service)

## How to select a FireSAFE?

Please note that the exact duty requirements for any installations should be confirmed by the sprinkler design contractor.

### Domestic sprinkler installations:

In domestic sprinkler installations, there is a maximum of two sprinkler heads which could operate at one time. Each sprinkler head will require a flow of 50 l/min. This means a total demand at the pump of approx. 100 l/min. The pressure required is dependant on the installation location and the pressure requirement of the sprinkler heads. Generally, if the unit is installed on the ground floor, it will be required to overcome the height of the building, 0.5 bar of pressure losses and approximately 0.5-1.0 bar to the sprinkler head. For example, a 2 floor building of 6m would require  $0.6 (6m = 0.6 \text{ bar}) + 0.5 + 1.0 = 2.1 \text{ bar}$  pressure. If the unit is installed above the highest sprinkler head, the height of the building will no longer needed to be taken into consideration therefore you would require a lower pressure.

### Residential sprinkler installations:

In residential sprinkler installations, there is a maximum of four sprinkler heads which could operate at one time. Each sprinkler head will require a flow of 50 l/min. This means a total demand at the pump of approx. 200 l/min. The pressure required is dependant on the installation location and the pressure requirement of the sprinkler heads. Generally, if the unit is installed on the ground floor, it will be required to overcome the height of the building, 0.5 bar of pressure losses and approximately 0.5-1.0 bar to the sprinkler head. For example, a 2 floor building of 6m would require  $0.6 (6m = 0.6 \text{ bar}) + 0.5 + 1.0 = 2.1 \text{ bar}$  pressure. If the unit is however installed above the highest sprinkler head, the height of the building is no longer required to be taken into consideration therefore you would require a lower pressure.

### Water-misting applications:

Unlike sprinkler installations, water-mist requirements differentiate between the application and water-misting heads. Water-mist will usually require lower flow requirements per nozzle, but higher pressure demands. Misting systems must be properly tested to ensure they operate effectively.

## Benefits

- FireSAFE is a compact complete solution offering simple plug 'n' play installation
- The unit comes with volt-free contacts able to inform you remotely from the FireSAFE unit if the unit is running and/or if there is a power supply problem (hard-wired) offering the assurance and knowledge that your property is properly protected
- Basic and simple controls means ease of understanding, the automated design means it is easy to understand how the set operates
- A monthly self-test increases the lifespan of the equipment and saves money on service visits
- All wetted parts are provided to a minimum of 304 stainless steel. This ensures that only clean water is provided, and also prevents the chance of sprinkler heads being affected by debris, which could stop them working effectively
- Fail safe feature ensures you have the peace of mind that the equipment is working as intended

## What standards are associated with this equipment?

The FireSAFE is fully compliant with the following:

- BS 9251 2005 – Sprinkler systems for residential and domestic occupancies
- DD8458-1 2010 – Fixed fire protection systems, residential and domestic water-mist systems
- DD8489-1 2011 – Fixed fire protection systems, industrial and commercial water-mist systems

## What other equipment might I need?

- Break Tank
- Remote Alarm Panel
- Battery Backup/Backup Generators
- Priming Tank Arrangements