



FireSAFE

DOMESTIC RANGE

A compact, integrated, BS9251:2014 compliant fire suppression set especially designed for domestic properties.

Comprises controller, pump, dual pressure switches, pressure gauge and non-return valve within a robust, tamper resistant casing.

The Grundfos FireSAFE Domestic Range provides a compact, consumer and installer friendly response to the growing demand for domestic fire suppression systems and recent related legislative changes.

To deliver this, Grundfos has brought together almost 70 years experience in producing dependable, low maintenance domestic pumps, its extensive expertise in commercial fire suppression systems and the reliability engineering and manufacturing knowledge that has made it the supplier of choice for many critical industrial processes.

Designed for flexibility of installation and easy maintenance, each model in the Grundfos FireSAFE domestic range complies with BS9251:2014 and incorporates a specially designed controller. For peace of mind, the controller's programme is fixed and operational settings can only be changed by opening the tamper resistant metal outer casing.

Applications

The Grundfos FireSAFE Domestic Range can be used in a variety of domestic installations including:

- Apartments
- Houses (up to 4 storeys)
- Homes with multiple occupancy
- Sheltered accommodation
- Student accommodation
- Single room protection
- Small hotels*
- Care homes*

*subject to sizing calculations. A range of larger FireSAFE Residential products is also available.

Scope

Each Grundfos FireSAFE Domestic model comprises a dedicated controller and Grundfos CM pump mounted in a tamper resistant metal enclosure. The enclosure comes in two sizes, both of which are dimensioned for easy installation in domestic environments.

Completing the package are:

- Two discharge pressure switches (ensuring redundancy in the event of a failure and BS9251:2014 compliance)
- Inlet and outlet ports
- Non return valve (discharge)
- Pressure gauge
- 1" test line connection
- System drain point

IMPORTANT NOTE: Grundfos FireSAFE products are not complete fire suppression systems. Additional non-Grundfos components such as sprinkler heads and pipework are required. For compliance with BS9251:2014, lockable inlet and outlet isolation valves and an external flow switch must also be fitted. If the unit is fitted in a location that is not easily visible, additional remote fault indication must be provided, for example through connection to a repeater beacon or fire alarm panel (not supplied). System design, installation and maintenance of domestic fire suppression systems must only be carried out by engineers holding UKAS accredited certification (FIRAS/LPCB/IFCC).



Features

- Simple to install and commission.
- Compact, unobtrusive footprint.
- Minimal maintenance design.
- Reliable, quiet Grundfos pumps.
- Advanced system controller.
- Automatic top up and self test.
- Digital contacts for remote monitoring.
- Digital inputs for tank low water switch and external flow activation switch (not supplied).
- Power output for external switches, simplifying wiring.



Advanced System Condition Monitoring

The advanced controller continuously monitors system pressure and automatically performs a weekly test. Minor pressure drops are automatically and quietly topped up and pump health checked against learned parameters, maximising confidence in availability for duty whilst minimising erroneous fault indications.



Fault and Power Outage Notification

In addition to an LED on the control panel, and in compliance with BS 9251:2014, the unit includes an NC volt-free relay to communicate faults and power outage. To provide notification of long term power outage, the system also features a battery powered audible alarm that will sound periodically if power loss exceeds 2 hours.



Dual Pressure Switches

There are two pressure switches fitted within the unit. These are connected to prevent a single pressure switch failure compromising the protection of the property.



Enclosure

The enclosure is designed to be appealing to the eye whilst at the same time preventing unauthorised post-installation tampering that might compromise the protection of the property.


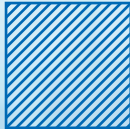



BS 9251:2014 Compliant

FireSAFE Domestic Range units have been engineered specifically to comply with the requirements of BS 9251:2014. This includes functional characteristics such as latching into continuous running with an audible alarm in the event of a fire until manually stopped / reset.

Sizing guide

Grundfos FireSAFE domestic models are compact fire suppression units specifically engineered for domestic applications. They have been designed to be easily installed and self-managing with minimum interaction with installers/users. The range consists of six models, based on six different pump sizes and two enclosure sizes. To select the correct model please see the suggested sizing guide below. (All tables are for guidance only – systems must always be correctly sized in accordance with BS9251:2014)

SYSTEM TYPE			Max. number of sprinkler heads in operation	Max. number of floors	MAX. COVERAGE AREA PER HEAD		
Category 1	Category 2	Category 3			<9m ²	9.1 m ² - 16 m ²	16.1 m ² - 25 m ²
●			1	4			
●			2	4	CM3-3	CM5-3	CM5-3
	●		1	4	CM3-3	CM5-3	CM10-2
	●	●	2	4	CM5-3	CM5-4	CM10-2
	●	●	3	4	CM5-4	CM10-2	CM10-3
	●	●	4	4	CM10-2	CM10-2	Consult Grundfos

Mechanical Installation

Grundfos FireSAFE domestic models are suitable for indoor installation only.

Place the set in such a way that there is sufficient clearance around it to allow access for commissioning and maintenance.

The mechanical arrangements should be as per the parameters set within BS 9251:2014.

Pipework

The pipes connected to the set must be of adequate size and fitted with lockable isolation valves.

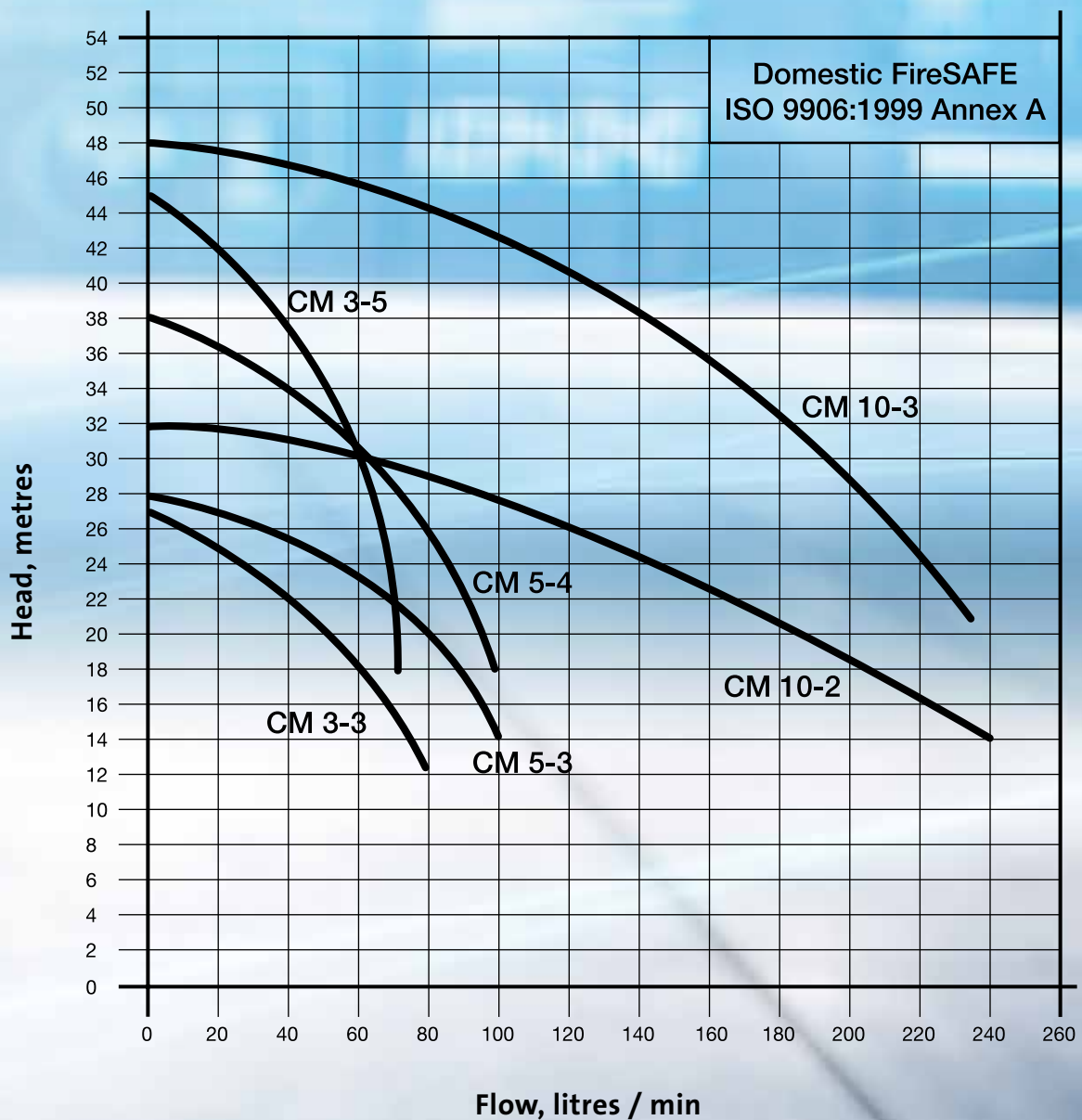
The set should be positioned on an even and solid surface or alternatively CM3 and CM5 series models can be wall mounted (subject to wall loading strength). Weights and dimensions are shown overleaf.



Electrical installation

The electrical connection and protection should be carried out in accordance with local regulations.

- The FireSAFE must be correctly earthed.
- The pump requires no external motor protection.
- In the event of activation, the pumps should run to destruction with no compromise.
- Excluding automatic self tests, the number of starts and stops via the power supply must not exceed ten per week.



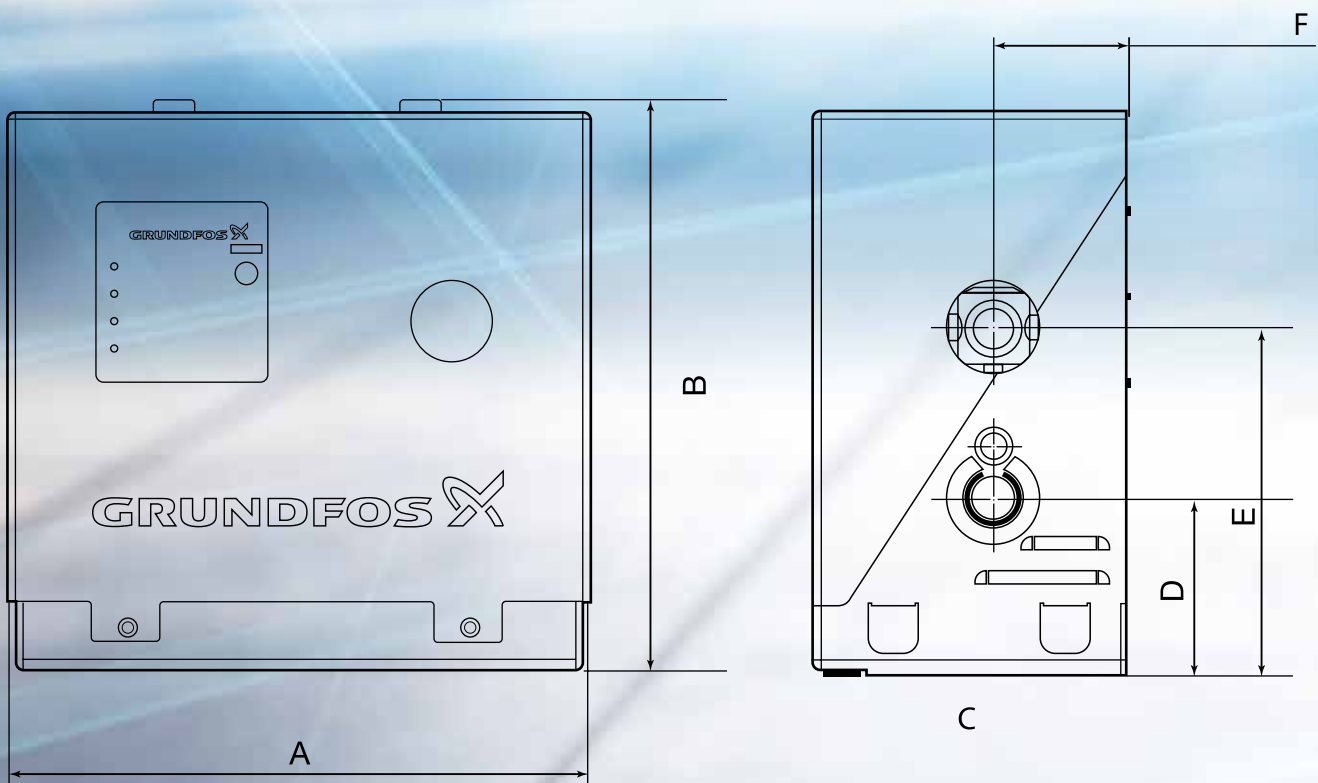
Performance Range and Product Codes

Model (All 240V 1ph 50 Hz)	Product Code	Minimum Performance		Maximum Performance		Closed Valve
		Flow, l/min	Pressure, Bar	Flow, l/min	Pressure, Bar	Pressure, Bar
FireSAFE CM3-3	98916439	10	2.6	70	1.2	2.68
FireSAFE CM3-5	98916440	10	4.3	70	1.7	4.50
FireSAFE CM5-3	98916461	20	2.7	100	1.3	2.74
FireSAFE CM5-4	98916462	20	3.5	100	1.5	3.66
FireSAFE CM10-2	98916463	45	3.1	235	1.4	3.04
FireSAFE CM10-3	98916464	45	4.4	235	2.1	4.57

Technical Data and Dimensions

FireSAFE Model	Motor (kW)	Current (Amps)		Connections (")		Dimensions (mm)						Net Weight (Kg)
		Full Load	Starting	Suction	Discharge	A	B	C	D	E	F	
CM3-3	0.5	2.8	14.8	Rp 1"	G 1"	421.0	412.5	232.5	127.6	251.2	97.2	25
CM3-5	0.5	2.8	14.8	Rp 1"	G 1"	421.0	412.5	232.5	127.6	251.2	97.2	26
CM5-3	0.5	2.8	14.8	Rp 1½"	G 1"	421.0	412.5	232.5	127.6	251.2	97.2	27
CM5-4	0.67	4.0	15.6	Rp 1½"	G 1"	432.5	412.5	232.5	127.6	251.2	97.2	27
CM10-2	1.3	8.0	27.2	Rp 1½"	G 1½"	521.0	440.0	308.0	153.3	317.5	149.6	44
CM10-3	1.9	10.0	37.0	Rp 1½"	G 1½"	521.0	440.0	308.0	153.3	317.5	149.6	46

All models are 230-240V 1ph 50Hz. Full load and starting current data above is based on 240V.



Operating Conditions

General recommendations

Cold water supply systems	Water quality should be maintained to current industry standards. Systems should be flushed to remove solids.
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Liquid temperature

Inlet temperature range	0°C to +60°C.
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Ambient conditions

Ambient temperature during operation	0°C to +50°C
Ambient temperature during storage and transport	0°C to +40°C
Relative air humidity	Maximum 95%

Maximum operating pressure

See pump performance curves

Inlet pressure

FireSAFE domestic models always require a positive inlet pressure, both during start up and operation.

Other Grundfos Products



FireSAFE Residential Range

Compact fire pump and controller package for residential sprinkler and water misting applications.



High Hazard Fire Sets

For sprinkler applications to protect commercial and industrial properties deemed as highly combustible.



FM/UL Fire Sets

FM / UL certified sets for use with sprinkler installations for a wide range of properties.



Hydrant or Wet Riser Pumps

Used to provide water at outlets around a building or site, enabling fire fighting away from a fire truck and in hard to access areas.



Ordinary Hazard Fire Sets

Used within sprinkler installations to protect smaller commercial or industrial properties.



Packaged Pump Houses

Complete, custom engineered-to-order solutions, constructed, tested and pre-wired prior to despatch.

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