

Grundfos FireSAFE+ Domestic range

For use in Residential Fire Sprinkler and Water-Mist Installations



UKCA Marked



CE Marked



BS 9251: 2021 compliant



ISO 9001 approved company



BS 8458:2015 compliant



BS EN 16925:2018 compliant

GRUNDFOS 

Possibility in every drop

FireSAFE+ Domestic range

Grundfos FireSAFE+ Domestic range provides a compact, consumer and installer friendly response to the growing demand for domestic fire suppression systems and to current legislative changes.

Grundfos brings together more than 70 years of experience in producing dependable, low maintenance domestic pumps. Grundfos' extensive expertise in commercial fire suppression systems, best in class engineering and manufacturing knowledge has made Grundfos 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 BS 9251:2021, BS 8458:2015 and EN 16925:2019 and incorporates a specially designed controller.

Scope

The Grundfos FireSAFE+ range sets includes a dedicated controller and a Grundfos CM pump mounted in a tamper-resistant metal enclosure. The enclosure is available in two sizes depending on pump selection, both of which are dimensioned for easy installation in domestic environments.

FireSAFE+ Domestic fire set package includes:

- Grundfos CM pump
- Grundfos FireSAFE+ controller
- inlet and outlet ports
- non return valve (discharge)
- pressure gauge
- dual pressure switch
- 1" test line connection
- system drain point
- test solenoid and strainer

Applications

Grundfos FireSAFE+ Domestic range can be used in a variety of domestic sprinkler and water mist applications 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.

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 relevant BS and EN standards, monitored lockable 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, and maintenance of domestic fire suppression systems must only be carried out by engineers holding UKAS accredited certification (FIRAS/LPCB/IFCC).

Advanced system condition monitoring

The advanced controller continuously monitors system pressure and minor pressure drops are automatically and quietly topped up. On a weekly basis, the controller performs a self test, ensuring all components are working effectively. This ensures the pump is on demand in event of a fire.

Fault and power outage notification

In addition to an LED display on the control panel, and in compliance with BS9251:2021 and all other relevant standards*, 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 the ability to attach a battery to the audible alarm that will sound periodically if power loss exceeds 2 hours.

Dual pressure switch

There is one twin pressure switch fitted within the unit. Two independent continuously monitored operating micro-switches prevent a single switch failure, which would otherwise compromise the protection of the property.

Enclosure

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

Data logging

The advanced controller records all system pressure and parameter changes into an uneditable memory. The memory can easily be downloaded by inserting a USB, which allows access to true information on all actions the unit has undergone, ensuring your peace of mind that the system is working according to its design parameters, and making the service engineers' lives easier.



Features

- Simple to install and commission
- Compact footprint
- Minimal maintenance design
- Reliable, quiet Grundfos pumps
- USB connection for software updates/data-logging
- Advanced system controller
- Automatic top-up and self-test
- Digital contacts for remote monitoring fault, low water and fire conditions
- Environmentally friendly pump cooling
- Digital inputs for tank low water switch and external flow activation switch (not supplied)
- Power output for external switches, simplifying wiring and removing the need for external power supply
- Easy to understand data logs

Sizing guide

Grundfos FireSAFE+ Domestic range sets are compact fire suppression sets specifically engineered for domestic applications. FireSafe+ Domestic range sets have been designed for easy installation and self-managing operations with minimum interaction with installers/users. The range consists of seven models, based on seven different pump

sizes and two enclosure sizes. To select the desired model, please see the suggested sizing guide below. (All tables are for guidance only – systems must always be correctly sized in accordance with BS 9251:2021).

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	CM3-3	CM5-3	CM5-3
●			2	4	CM3-3	CM5-3	CM10-2
	●		1	4	CM3-3	CM5-4	CM10-2
	●	●	2	4	CM5-4	CM5-5	CM10-2
	●	●	3	4	CM5-5	CM10-2	CM10-3
	●	●	4	4	CM10-2	CM10-2	Consult Grundfos

Mechanical installation

Grundfos FireSAFE+ Domestic range sets 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 according to parameters stated in BS 9251:2021.

Pipework

The pipes connected to the set must be of adequate size and fitted with monitored 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 on the next page.

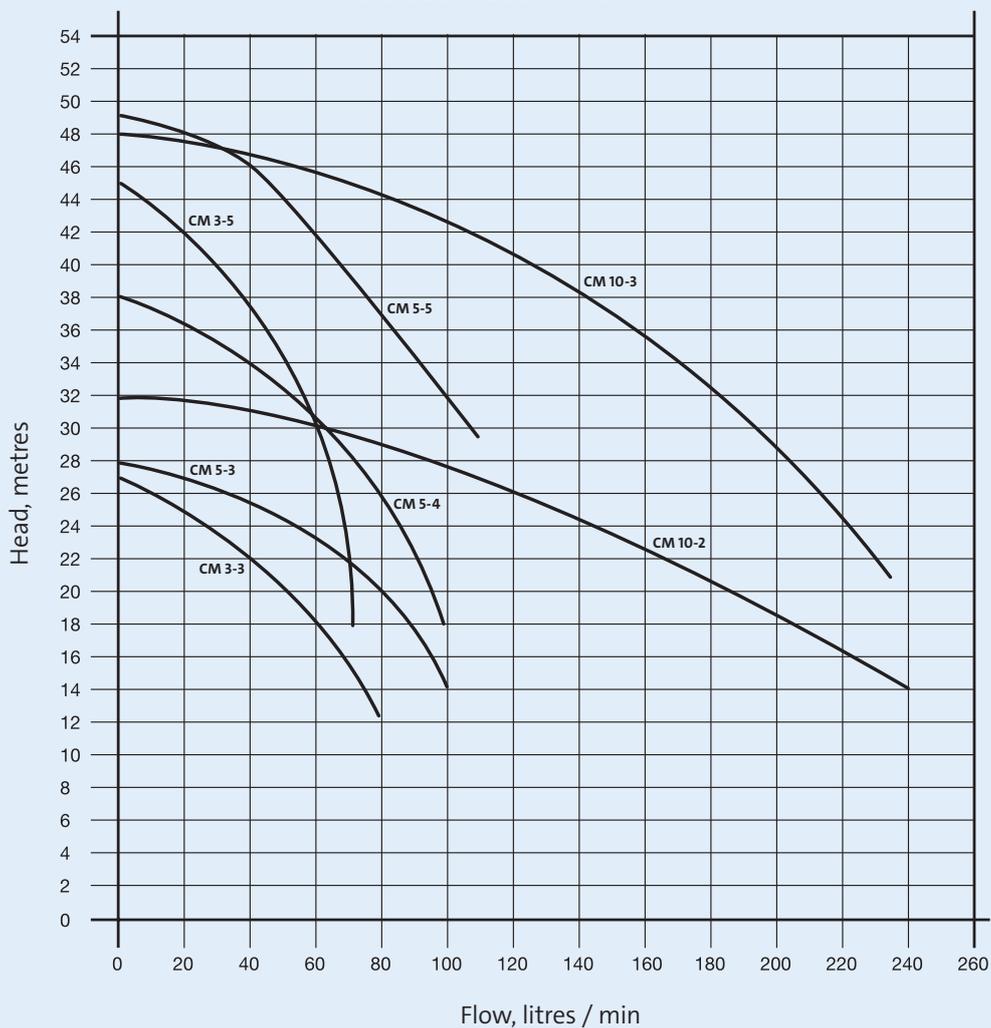
Electrical installation

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.



Domestic FireSAFE
ISO 9906:1999 Annex A



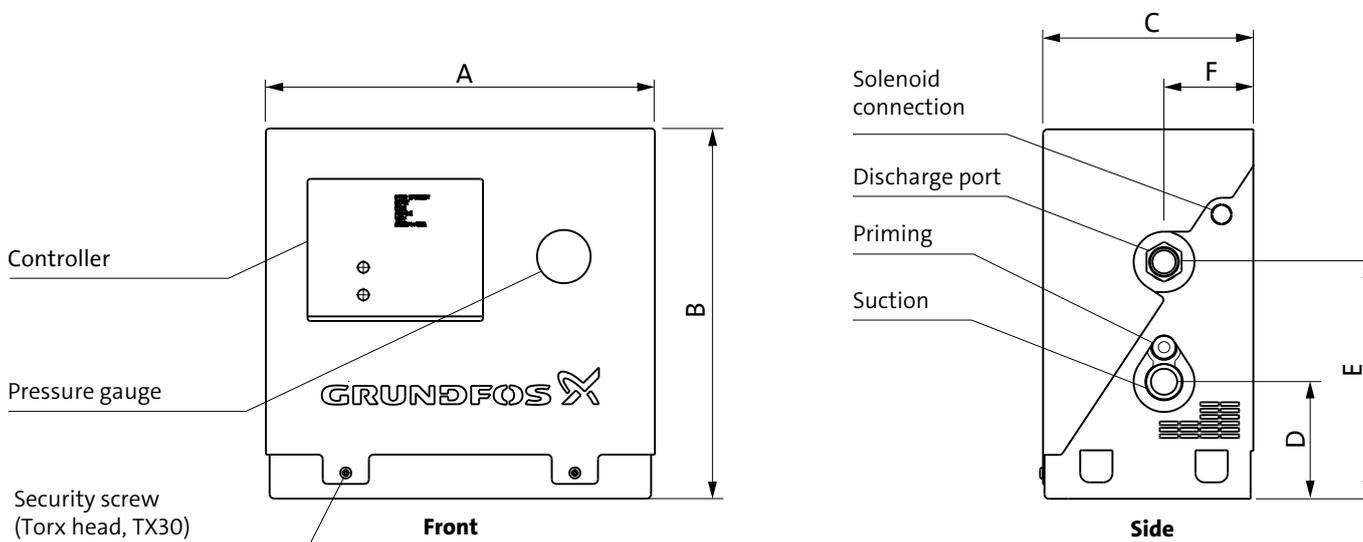
Performance range and product codes

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	93099330	10	2.6	70	1.2	2.67
FireSAFE+ CM3-5	93099332	10	4.3	70	1.7	4.50
FireSAFE+ CM5-3	93099334	20	2.7	120	0.4	2.74
FireSAFE+ CM5-4	93099336	20	3.5	120	0.75	3.66
FireSAFE+ CM5-5	93099338	20	4.35	120	1	4.67
FireSAFE+ CM10-2	93099325	45	3.1	235	1.4	3.04
FireSAFE+ CM10-3	93099327	45	4.4	235	2.1	4.56

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	16.43	Rp 1"	G 1"	435	404	228	127.6	264.0	97.2	25
CM3-5	0.5	2.8	16.43	Rp 1"	G 1"	435	404	228	127.6	264.0	97.2	26
CM5-3	0.5	2.8	16.43	Rp 1 1/4"	G 1"	435	404	228	127.6	264.0	97.2	27
CM5-4	0.67	4.0	17.16	Rp 1 1/4"	G 1"	435	404	228	127.6	264.0	97.2	27
CM5-5	0.9	5.0	23.22	Rp 1 1/4"	G 1"	435	404	228	127.6	264.0	97.2	29
CM10-2	1.3	8.0	28.56	Rp 1 1/2"	G 1 1/2"	545	439	277	153.3	317.5	149.6	44
CM10-3	1.7	10.0	40.70	Rp 1 1/2"	G 1 1/2"	545	439	277	153.3	317.5	149.6	46

All models are 230-240V 1ph 50Hz. Full load and starting current data above are 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.
Liquid temperature	
Inlet temperature range	3°C to +60°C
Ambient conditions	
Ambient temperature during operation	3°C to 40°C
Ambient temperature during storage and transport	3°C to 40°C
Relative air humidity	Maximum 95%

Maximum operating pressure

See pump performance curves.

Inlet pressure

FireSAFE+ Domestic range sets always require a positive inlet pressure, both during startup and operation.





FireSAFE+ Domestic range

Compact fire pump and controller package for domestic sprinkler applications.



High Hazard Fire Sets

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



FireSAFE+ Residential range

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



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.