

Grundfos FireSAFE+ Residential range

# Grundfos FireSAFE+ Residential range



Marked



Bs 9251: 2014  
Compliant



Iso 9001 approved  
company



Bs 8458:2015  
Compliant



Bsen16925:2018  
Compliant

For use in Residential Fire Sprinkler and  
Water-Mist Installations

# GRUNDFOS

Possibility in every drop

# FireSAFE+ Residential range overview

A FireSAFE+ is a 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 E+ Residential range 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

## A standard FireSAFE+ Residential range package would consist of the following:

- Grundfos CRI Pump (very reliable products from the Grundfos industrial range to meet the high pressure demands)
- Non-return valve (to prevent backflow of water)
- Two LPCB approved pressure switches (to detect any pressure drop and increasing resilience)
- Electronic solenoid (for weekly pressure switch testing and over-temperature protection).
- LPCB approved flow switch (to detect if there is a flow present through the pump/pipes)
- Control panel (programmed to typical fire philosophy including data logging and LCD display)
- Monitored and lockable isolating (preventing full draining/ disconnecting from system during service)
- All connected with a stainless steel discharge manifold

## 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.

## How to select a FireSAFE+ Residential range?

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

### Domestic sprinkler installations:

In domestic category one sprinkler installations, there is a maximum of two sprinkler heads which could operate at one time. The maximum flowrate is calculated by equating the area coverage of the sprinkler head(s) within the largest room of protection. 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 category two or three sprinkler installations, there is a maximum of four sprinkler heads which could operate at one time. The maximum flowrate is calculated by equating the area coverage of the sprinkler head(s) within the largest room of protection. The pressure required is again 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 differ between the application and water-misting heads. Water-mist will usually require lower flow requirements per nozzle, but higher pressure demands.

## Benefits

- FireSAFE+ Residential range 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+ Residential range 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 weekly 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 on the "Premium" unit. 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
- LCD display allowing easy identification of failures.
- Password protected parameters and settings preventing the risk of tampering with settings.
- Full data recorder logging all actions of the unit, parameter settings ensuring full peace of mind the history of the unit is fully captured.
- USB connection for setting of parameters and downloading of data logs saving time when installing and configuring units and allowing ease of programming multiple identical sites. that the equipment is working as intended.

## What standards are associated with this equipment?

The FireSAFE+ Residential range is fully compliant with the following:

- BS 9251:2021 – Fire sprinkler systems for domestic and residential occupancies – Code of practice
- BS 8458:2015– Fixed fire protection systems – Residential and domestic watermist systems – Code of practice or design and installation
- EN16925:2018 - Fixed firefighting systems - Automatic residential sprinkler systems - Design, installation and maintenance

## What other equipment might I need?

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

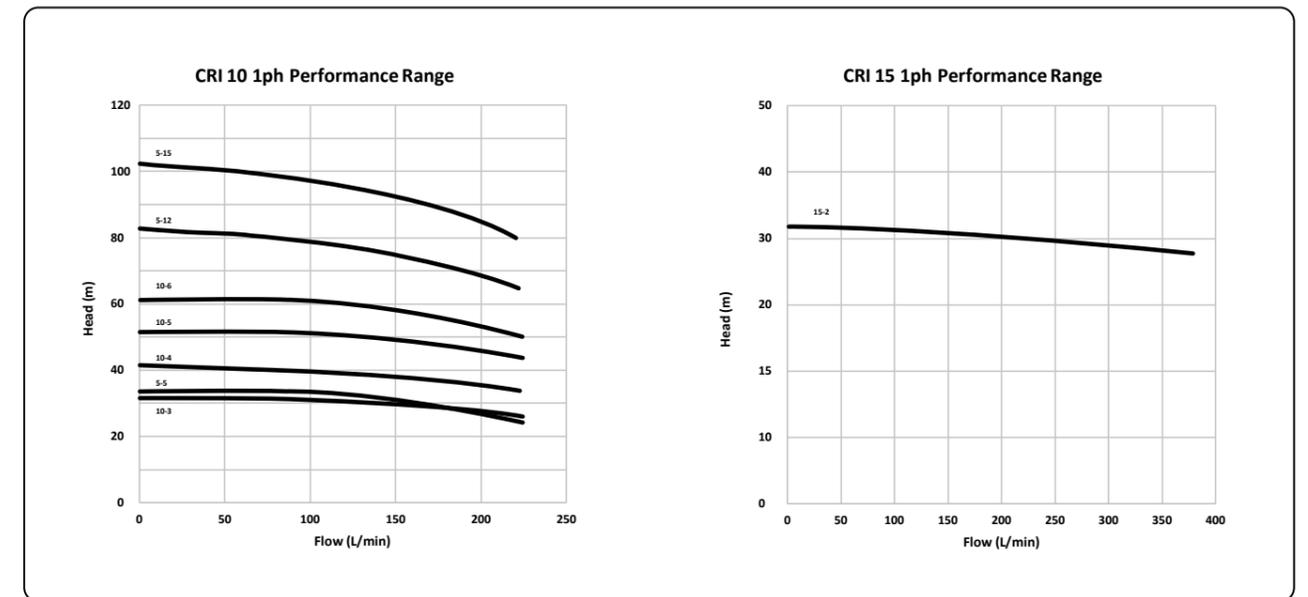
# Pump model



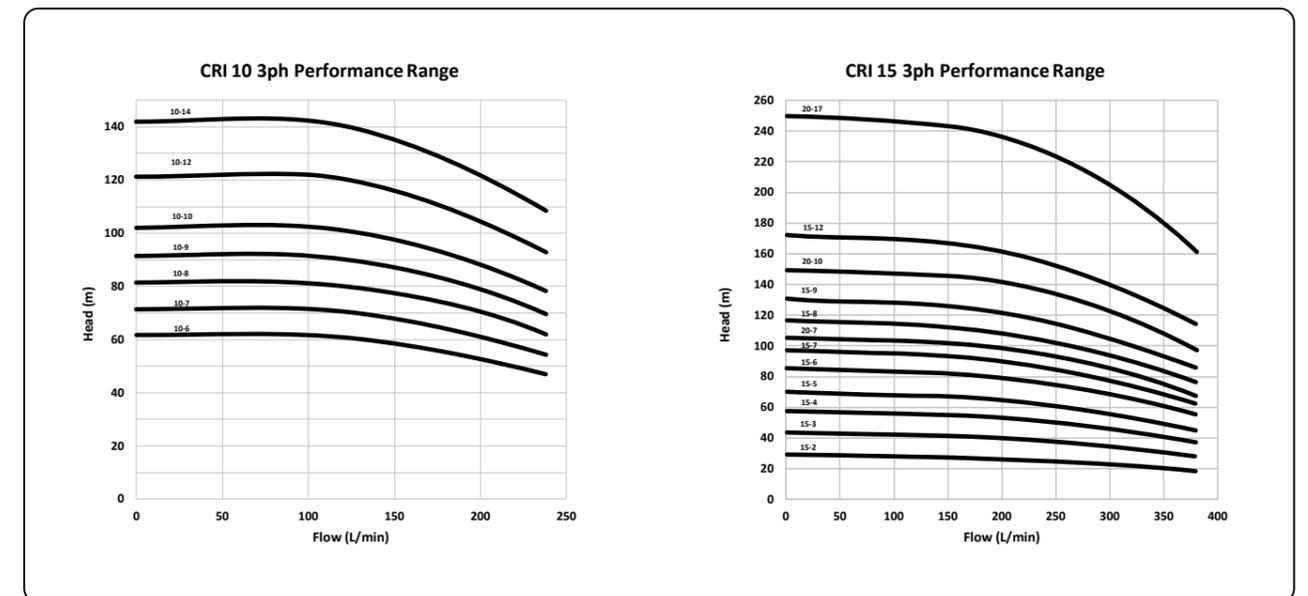
Features and specifications	"LPS" unit
Full conformity standards	BS9251:2021, EN16925: 2018, BS8458:2015, Stainless Steel, welded pipework throughout
Pump Type and Material	304 Grade Stainless Steel Wetted Parts
In-built Controller and Functions	Yes
- Self-Test	Yes
- Alarm if Test Fails	Yes
- Minimum Run-Time to prevent hunting	Yes
- Low Water Level Indicator input (external level switch required)	Yes
- Data logging	Yes
- USB download / updates	Yes
Pressure switches	Two, LPCB approved.
Cable	SY to BS4504
Flow Test Connection	Lockable isolation valve included
Test/Drain Point	Yes
Suction and Delivery Isolation Valves	Yes, Two, monitored and lockable
Flow Switch	Yes, LPCB approved
Delivery Check Valve	Yes

# Pump performance data

## 1PH (240V) UNITS:



## 3PH (415V) UNITS:



Additional units are available, please refer to the Grundfos Product Center for specific pump performance information.

# Pump electrical data

## 1 PHASE - 220-240V 1PH 50HZ

PUMP TYPE	POWER (KW)	STARTING CURRENT (Amps)	FULL LOAD CURRENT (AMPS)	STARTER TYPE	PUMP SET PRODUCT CODE	
					BS	LPC
CR(i) 5-5	0,75	11,8	1,9	DIRECT ONLINE	92878289	92856363
CR(i) 5-12	2,20	46,2	14	DIRECT ONLINE	92878316	92856365
CR (i) 5-15	2,20	46,2	14	DIRECT ONLINE	92878318	92856369
CR(i) 10-3	1,1	28,9	7,4	DIRECT ONLINE	92878334	92856391
CR(i) 10-4	1,5	38,6	9,9	DIRECT ONLINE	92878351	92856392
CR(i) 10-5	2,2	46,2	14	DIRECT ONLINE	92878354	92856393
CR(i) 10-6	2,2	46,2	14	DIRECT ONLINE	92878356	92856395
CR(i) 15-2	2,2	46,2	14	DIRECT ONLINE	92878358	92856399

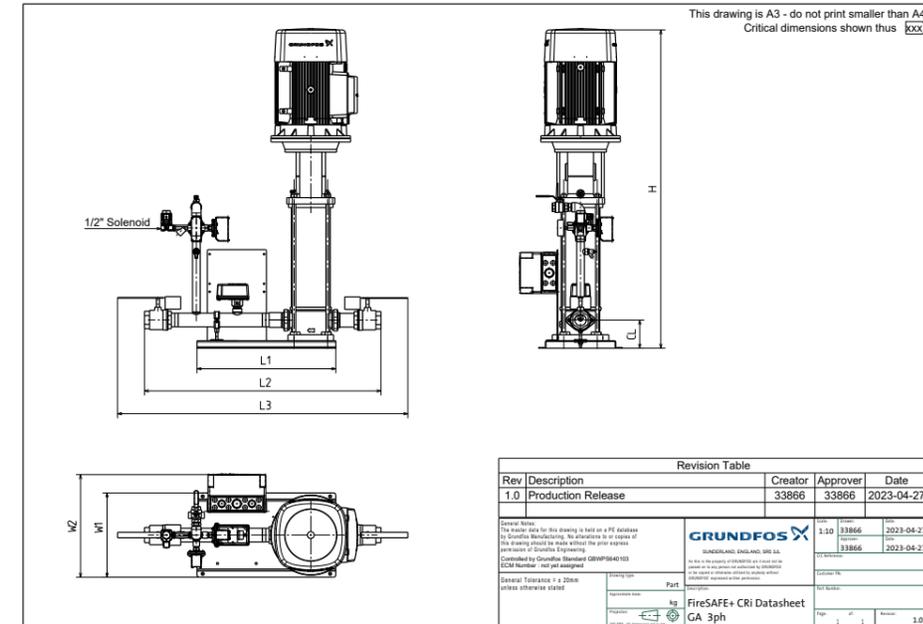
## 3 PHASE - 380-415V 3PH 50HZ

PUMP TYPE	POWER (KW)	STARTING CURRENT (Amps*)	FULL LOAD CURRENT (AMPS)	STARTER TYPE	SOFT START CURRENT** (Amps*)	STANDARD PUMP SET PRODUCT CODE		SOFT-START PUMP SET PRODUCT CODE	
						BS	LPC	BS	LPC
CR(i) 10-6	2,2	42,3	4,6	DIRECT ONLINE	16,9	92878360	92856400	92878385	92856442
CR(i) 10-7	3,0	58,0	6,3	DIRECT ONLINE	23,2	92878362	92856402	On Req.	On req.
CR(i) 10-8	3,0	58,0	6,3	DIRECT ONLINE	23,2	92878364	92856404	On Req.	On req.
CR(i) 10-9	3,0	58,0	6,3	DIRECT ONLINE	23,2	92878365	92856405	On Req.	On req.
CR(i) 10-10	4,0	87,7	7,9	DIRECT ONLINE	35,1	On req.	On req.	On Req.	On req.
CR(i) 10-12	4,0	87,7	7,9	DIRECT ONLINE	35,1	On req.	On req.	92878386	92856451
CR(i) 10-14	5,5	129,8	11,0	DIRECT ONLINE	51,9	On req.	On req.	On Req.	On req.
CR(i) 15-2	2,2	42,3	4,6	DIRECT ONLINE	16,9	On req.	On req.	On Req.	On req.
CR(i) 15-3	3,0	58,0	6,3	DIRECT ONLINE	23,2	92878366	92856409	On Req.	On req.
CR(i) 15-4	4,0	87,7	7,9	DIRECT ONLINE	35,1	92878368	92856410	On Req.	On req.
CR(i) 15-5	4,0	87,7	7,9	DIRECT ONLINE	35,1	92878369	92856411	On Req.	On req.
CR(i) 15-6	5,5	129,8	11,0	DIRECT ONLINE	51,9	92878380	92856412	92878387	92856457
CR(i) 15-7	5,5	129,8	11,0	DIRECT ONLINE	51,9	92878381	92856413	On Req.	on req.
CR(i) 15-8	7,5	131,0	14,4	DIRECT ONLINE	52,4	92878383	92856414	92878389	92856461
CR(i) 15-9	7,5	131,0	14,4	DIRECT ONLINE	52,4	On req.	On req.	On Req.	On req.
CR(i) 15-12	11,0	N/A	20,3	SOFT-START	58,5	N/A	N/A	92878441	92856468
CR(i) 20-7	7,5	131,0	14,4	DIRECT ONLINE	52,4	92878384	92856442	On Req.	On req.
CR(i) 20-10	11,0	N/A	20,3	SOFT-START	58,5	N/A	N/A	92878418	92856465
CR(i) 20-17	18,5	N/A	33,5	SOFT-START	120,6	N/A	N/A	92878442	92856470

\* In event of UPS systems, please note all currents provided are per phase and should be multiplied by the total number of phases.

\*\* Please note soft-start is an optional extra and not included as standard. Please contact Grundfos for further information.

# Pump dimensional data



## 1 PHASE - 220-240V 1PH 50HZ

PUMP	LENGTH	LENGTH L2 (mm)		WIDTH W (mm)	HEIGHT H (mm)	PIPEWORK CENTRELINE HEIGHT CL (mm)	SUCTION DIAMMETER (inches)	DELIVERY DIAMMETER (inches)	UNIT WEIGHT (KG)	PUMP SET PRODUCT CODE	
		BS	LPC							BS	LPC
TYPE	L1 (mm)	BS	LPC	(mm)	(mm)	(mm)	(inches)	(inches)	(KG)	BS	LPC
CR(i) 5-5	610	810	880	370	608	82	1.25"	1.25"	75	92878289	92856363
CR(i) 5-12	610	810	880	370		82	1.25"	1.25"		92878316	92856365
CR (i) 5-15	610	810	880	370		82	1.25"	1.25"		92878318	92856369
CR(i) 10-3	610	950	1000	370	575	113	1.5"	1.5"	72	92878334	92856391
CR(i) 10-4	610	950	1000	370	787	113	1.5"	1.5"	75	92878351	92856392
CR(i) 10-5	610	950	1000	370	817	113	1.5"	1.5"	81	92878354	92856393
CR(i) 10-6	610	950	1000	370	847	113	1.5"	1.5"	83	92878356	92856395
CR(i) 15-2	610	1000	1000	370	770	123	2"	2"	89	92878358	92856399

## 3 PHASE - 380-415V 3PH 50HZ

PUMP	LENGTH	LENGTH L2 (mm)		WIDTH W (mm)	HEIGHT H (mm)	PIPEWORK CENTRELINE HEIGHT CL (mm)	SUCTION DIAMMETER (inches)	DELIVERY DIAMMETER (inches)	UNIT WEIGHT (KG)	STANDARD PUMP SET PRODUCT CODE		SOFT-START PUMP SET PRODUCT CODE	
		BS	LPC							BS	LPC		
TYPE	L1 (mm)	BS	LPC	(mm)	(mm)	(mm)	(inches)	(inches)	(KG)	BS	LPC	BS	LPC
CR(i) 10-6	610	950	1000	370	850	113	1.5"	1.5"	77	92878360	92856400	92878385	92856442
CR(i) 10-7	610	950	1000	370	900	113	1.5"	1.5"	85	92878362	92856402	On Req.	On req.
CR(i) 10-8	610	950	1000	370	930	113	1.5"	1.5"	86	92878364	92856404	On Req.	On req.
CR(i) 10-9	610	950	1000	370	960	113	1.5"	1.5"	90	92878365	92856405	On Req.	On req.
CR(i) 10-10	610	950	1000	370	1030	113	1.5"	1.5"	97	On req.	On req.	On Req.	On req.
CR(i) 10-12	610	950	1000	370	1080	113	1.5"	1.5"	104	On req.	On req.	92878386	92856451
CR(i) 10-14	610	950	1000	370	1200	113	1.5"	1.5"	108	On req.	On req.	On Req.	On req.
CR(i) 15-2	610	1000	1000	370	767	123	2.0"	2.0"	84	On req.	On req.	On Req.	On req.
CR(i) 15-3	610	1000	1000	370	831	123	2.0"	2.0"	91	92878366	92856409	On Req.	On req.
CR(i) 15-4	610	1000	1000	370	920	123	2.0"	2.0"	102	92878368	92856410	On Req.	On req.
CR(i) 15-5	610	1000	1000	370	960	123	2.0"	2.0"	103	92878369	92856411	On Req.	On req.
CR(i) 15-6	610	1000	1000	370	1054	123	2.0"	2.0"	125	92878380	92856412	92878387	92856457
CR(i) 15-7	610	1000	1000	370	1099	123	2.0"	2.0"	127	92878381	92856413	On Req.	on req.
CR(i) 15-8	610	1000	1000	370	1132	123	2.0"	2.0"	139	92878383	92856414	92878389	92856461
CR(i) 15-9	610	1000	1000	370	1177	123	2.0"	2.0"	142	On req.	On req.	On Req.	On req.
CR(i) 15-12	610	1000	1000	370		123	2.0"	2.0"		N/A	N/A	92878441	92856468
CR(i) 20-7	610	1000	1000	370	1090	123	2.0"	2.0"	139	92878384	92856442	On Req.	On req.
CR(i) 20-10	610	1000	1000	370		123	2.0"	2.0"		N/A	N/A	92878418	92856465
CR(i) 20-17	610	1000	1000	370		123	2.0"	2.0"		N/A	N/A	92878442	92856470



### FireSAFE+ Domestic range

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



### High Hazard Fire Sets

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



### FireSAFE+ Residential range

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.