

Grundfos deliver high rise fire protection

In recent years, high rise buildings have become more commonplace in the UK and with the escalating cost of land, increasing housing demand and the arrival of mixed use buildings, this is a trend that is set to continue.

At Grundfos we have developed a range of fire protection sprinkler products and hydrant systems specifically for these developments. We also have devised a simple calculator to assist commercial building services specialists to design the right fire protection solution. Within a few simple steps you can help ensure that these high rise structures and their occupants will be safe in the event of a fire emergency.

Sprinkler systems

FireSAFE R17

FireSAFE R17

FireSAFE R14

FireSAFE R12

FireSAFE R10

FireSAFE R9

FireSAFE R7

OH3-45m / FireSAFE R6

OH3-30m / FireSAFE R5

OH3-15m / FireSAFE R3



Hydrant systems

Building height in red

150m

HyRise 25

135m

HyRise 24

120m

HyRise 20

105m

HyRise 19

90m

HyRise 18

75m

HyRise 16

60m

HyRise 16

45m

HyRise 14

30m

HyRise 12

15m

HyRise 10

The above image shows a zone indication as to the type of Grundfos sprinkler/hydrant system that may be involved in various high rise fire protection systems. As many other factors will need to be taken into account, any final selection should be ratified by an appropriately qualified design engineer.

Notes

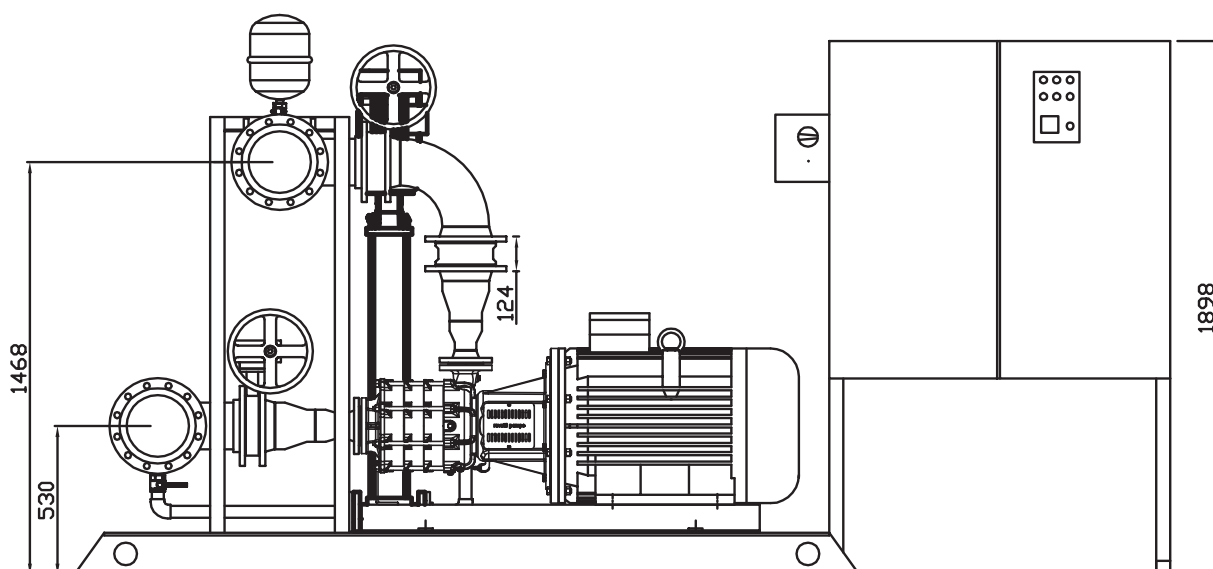
- Residential sprinkler pumps based on providing 200 l/min @ 0.5 bar at the group of highest outlets (200 l/min allowing up to 4 sprinkler heads to run simultaneously).
- Hydrant pumps based on providing 1,500 l/min @ 8 bar at the group of highest outlet (1,500 l/min allowing up to 3 hoses to run simultaneously). Pumps have generally been sized with 1-2 bar of friction losses, plus static height, and the 8 bar at outlet to achieve pump pressure required.

HYDRANT RANGE

Pump type	Pump model	Flow (L/MIN)	Pressure (BAR) CV = Closed Valve	Electrical data				Outline dimensions in metres (L x W x H)
				Power (kW)	Full load current (amps)	Starting current (amps)	Locked rotor current (amps)	
HyRise 10	NB65-315/272	1500	10.09 (10.1 CV)	55	99.5 - 90	246.2 - 222.7	746.2 - 675	2.1 x 1.9 x 1.8
HyRise 11 + 12	NB65-315/295	1500	12.25 (12.3 CV)	75	134 - 122	331.6 - 302	1005 - 915	2.2 x 1.9 x 1.9
HyRise 14	NB65-315/320	1500	14.8 (14.9 CV)	110	194 - 176	454.4 - 416.1	1377.4 - 1249.6	2.5 x 1.9 x 2.1
HyRise 16	ME100K80-90/4-SP ø 183	1500	16.8 (20.09 CV)	75	128.2	317.3	961.5	3.7 x 1.9 x 2.1
HyRise 18	ME100K80-90/4A-TB ø 195	1500	19.5 (23.23 CV)	75	128.2	317.3	961.5	3.7 x 1.9 x 2.1
HyRise 19	SKD80-90/4E-GRTB ø 200,5	1500	20.1 (26.37 CV)	90	154.4	366.85	1111.68	4.2 x 2 x 2.1
HyRise 20	SKD80-90/4-SP ø 189,5	1500	21.6 (24.5 CV)	90	154.4	366.85	1111.68	4.2 x 2 x 2.1
HyRise 24	SKD80-90/5-SP ø 195,5	1500	23.5 (27.05 CV)	90	154.4	366.85	1111.68	4.2 x 2 x 2.1
HyRise 25	SKD80-90/5E-GRTB ø 200,5	1500	25.1 (28.52 CV)	90	154.4	366.85	1111.68	4.2 x 2 x 2.1

Packaged set comprises:

- duty and standby pump units
- 2 x star delta starter panels
- interconnecting pipework
- 2 x suction isolation valves
- 2 x delivery isolation valves
- 2 x delivery check valves
- 1 x jockey pump and DOL starter
- pressure switches pre-wired and factory set
- full pressure test prior to despatch

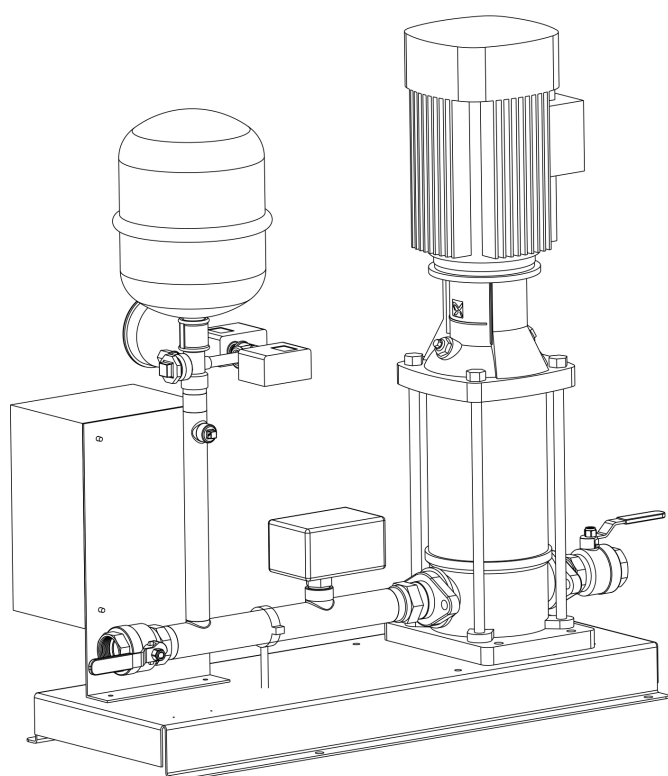


RESIDENTIAL RANGE

Pump type	Pump model	Flow (L/MIN)	Pressure (BAR) CV = Closed Valve	Electrical data				Outline dimensions in metres (L x W x H)
				Power (kW)	Full load current (amps)	Starting current (amps)	Locked rotor current (amps)	
FireSAFE R4	CRi 15-4	200	4.8 (5.6 CV)	4	7.9	87.7	87.7	0.88 x 0.5 x 0.95
FireSAFE R5	CRi 15-5	200	6 (6.9 CV)	4	7.9	87.7	87.7	0.88 x 0.5 x 1
FireSAFE R6	CRi 15-6	200	7.5 (8.3 CV)	5.5	11	129.8	129.8	0.88 x 0.5 x 1.09
FireSAFE R7	CRi 15-7	200	8.5 (9.8 CV)	5.5	11	129.8	129.8	0.88 x 0.5 x 1.14
FireSAFE R8	CRi 15-8	200	9.8 (11.1 CV)	7.5	14.4-14	43.3-42	131-127.4	0.88 x 0.6 x 1.17
FireSAFE R9	CRi 15-9	200	11.5 (12.5 CV)	7.5	14.4-14	43.3-42	131-127.4	0.88 x 0.6 x 1.21
FireSAFE R10	CRi 15-10	200	12.8 (14 CV)	11	20.8-19.8	54-42.6	162.2-154.4	0.88 x 0.6 x 1.43
FireSAFE R12	CRi 15-12	200	15.3 (16.8 CV)	11	20.8-19.8	54-42.6	162.2-154.4	0.88 x 0.6 x 1.52
FireSAFE R14	CRi 15-14	200	17.7 (19.5 CV)	11	20.8-19.8	54-42.6	162.2-154.4	0.88 x 0.6 x 1.6

Packaged set comprises:

- duty pump
- suction and delivery pipework
- 1 x suction isolation valve
- 1 x delivery isolation valve
- 1 x delivery check valve
- 1 x flow switch mounted to delivery pipework for fire alarm signal
- 2 x pressure switches to operate pump as Jockey pump and as main fire pump
- 8 litre pressure vessel
- 1 x drain point



Other datasheets available from Grundfos Fire:



FireSAFE

Grundfos FireSAFE is a small compact and economical fire pump package, designed to operate within both sprinkler and water-misting applications.



FM/UL Fire Sets

Factory Mutual (FM) and/or Underwriting Laboratories (UL) pumps are used within sprinkler installations to protect a wide range of properties from the effects of fire.



Ordinary Hazard Fire Sets

Ordinary hazard pumps are used within sprinkler installations to protect smaller commercial and industrial properties from the effects of fire.



High Hazard Fire Sets

High hazard pumps are used in sprinkler installations to protect commercial and industrial properties deemed as highly combustible from the effects of fire.



Hydrant or Wet Riser Pumps

Hydrant or wet riser pumps are used in installations to provide water to outlet points within a building or around a site. This ensures the fire brigade will have access to water remotely from the fire truck or from difficult/impossible to reach areas.



Packaged Pump Houses

Packaged pump houses are an engineered-to-order solution, which are constructed, pre-wired and tested to individual site requirements prior to despatch. They can be built fully compliant to any known fire standard and can cater for virtually any quantity of pumps required.