

Ordinary Hazard pumps are used within sprinkler installations to protect smaller commercial and industrial properties from the effects of fire. Predominantly the units are designed to predefined duty parameters, but this may be revised to suit local site demands. The units meet the latest LPCB requirements and are red book listed.

When would I need an Ordinary Hazard set?

In the UK, each building has a designated hazard criterion that relates to the building usage and is defined by a relevant insurance body. If assigned to LPCB, then a hazard category is also assigned. There are three of these categories: light hazard, ordinary hazard and high hazard and they relate to the combustibility rating of the items within the building (for instance, a high combustibility would be considered a 'High Hazard').

Applications

Within the UK, each building is given a designation that is defined by a number of criteria and given a hazard category.

OH1

Typically: large schools and offices, hospitals, hotels, restaurants, libraries, dairies, cement works, sheet metal producers and abattoirs.

OH2

Typically: museums, bakeries, breweries, photographic labs and car workshops.

OH3

Typically: shopping centres, supermarkets, industrial processes and buildings with a highly combustible load.



Ordinary Hazard Fire Set Diesel

A standard Ordinary Hazard set could consist of the following:

- Diesel pumpset (including pump-end, diesel engine, 4 hour single-walled fuel tank, 24v Ni-Cad batteries and controller within a single skid)
- Electric pumpset (including pump-end, electric motor and slide rails)
- Electric pump controller (Star-delta starter with 4 volt-free contacts)
- Jockey pump (Grundfos CR pump achieving a minimum of 1 bar over the closed valve pressure of the proposed duty pump)
- Jockey pump starter (direct on-line starter)
- Remote alarm panel (for monitoring of signals remote from the pumphouse)
- Automatic supply change-over panels (used on twin electric pump installations to alternate two incoming supplies to each pump)

How to select an Ordinary Hazard Fire Set?

The first aspect to be considered is how quickly a fire could grow within specific regions of the building. This is done by calculating the flammable materials within each region. Flammable materials stored to higher vertical levels are most likely to increase the energy of the fire, increasing the chances of the fire spreading.

This information would be self-assessed using the BSEN12845 standard. Some examples of requirements are also noted by building type. Once given a category class the height of the building is then used to select the exact pump model required.

Within the standards of BSEN12845 are the recommended installation types for standard buildings and recommended standard grades per flammable materials.

What standards is this equipment approved / compliant to?

- LPCB – Loss Prevention Certification Board
- BSEN12845 – fixed firefighting systems, automatic firefighting systems, design, installation and maintenance
- LPS1239 1.1 – requirements and testing procedures for the LPCB Approval and listing of diesel engines for sprinkler pump sets
- LPS1131 1.1 – requirements and testing methods for pumps for automatic sprinkler installation pump sets



Ordinary Hazard Fire Set Diesel

Benefits

- All products are LPCB listed and approved to BSEN12845, ensuring that they follow the correct criteria giving peace of mind that they work effectively
- Electric motors are fitted on slide rails as standard for easy removal/replacement/repair by service teams, thereby curtailing costs
- Full range of end-suction pumps available to suit requirements of Table 16 in BS EN12845 as well as fully hydraulically calculated systems giving a wider range to suit individual selection requirements
- All pumps are fitted with an orifice plate as standard, meaning in the event of site growth/ expansion orifice plates can be trimmed/ tailored, thus negating the need for a new pump, saving cost and time
- Pumps are engineered, built and tested in Grundfos Sunderland, ensuring the product has passed all quality checks and achieved the duty parameters
- A wide selection of extra options and accessories are available including pump housing to facilitate the selection of the correct equipment

Hazard Class	Highest Sprinkler (from control valveset m)	Duty 1		Duty 2		Duty 3	
		Flow (L/min)	Pressure (bar)	Flow (L/min)	Pressure (bar)	Flow (L/min)	Pressure (bar)
OH1	0-15	900	1.2	540	2.2	375	2.5
	15-30	1150	1.9	540	3.7	375	4.0
	30-45	1360	2.7	540	5.2	375	5.5
OH2 Wet (OH1 Dry)	0-15	1750	1.4	1000	2.5	725	2.9
	15-30	2050	2.0	1000	4.0	725	4.4
	30-45	2350	2.6	1000	5.5	725	5.9
OH3 Wet (OH2 Dry)	0-15	2250	1.4	1350	2.9	1100	3.2
	15-30	2700	2.0	1350	4.4	1100	4.7
	30-45	3100	2.5	1350	5.9	1100	6.2
OH4 Wet (OH3 Dry)	0-15	2650	1.9	2100	3.0	1800	3.5
	15-30	3050	2.4	2100	4.5	1800	5.0
	30-45	3350	3.0	2100	6.0	1800	6.5