

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. Hydrant or Wet Riser pump sets are built in accordance to either BS5306:Part 1, or the more recently BS9990 standard. Grundfos can offer either individual loose components or fully compliant packaged hydrant pump skids.

When would I need an Hydrant pump set?

Within the UK, it is the responsibility of the local fire brigade to determine if a wet riser system is required. The fire brigade will look to see in the event of a fire where they may require water to be available from.

The standard for the installation required is dependent on the equipment available to the local fire brigade. From 2006, the preferred installation should be in accordance to BS9990, but some services do not have sufficient high pressure hose availability. In this instance, BS5306: Part 1 may be accepted.

Applications

- Warehousing and distribution
- Air force and army bases
- High rise buildings
- Commercial properties
- Industrial applications.

A standard Hydrant set could consist of the following:

- Electric Pumpset (including pump-end and electric motor)
- 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)

Other ancillary equipment available as follows:

- Diesel pumpset (including pump-end, non-listed diesel engine, 4 hour single-walled fuel tank, 12/24v Lead acid batteries and controller within a single skid)
- Alternate back-up electric pumpset (including pump-end and electric motor)
- Packaged skid mounted (twin duty/standby pumpset including either two electric pumps or diesel and electric pump, jockey pump, all necessary control switches and controls and common suction and discharge manifolds)
- 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)



High rise twin electric hydrant packaged set

How to select a Hydrant pump?

Unlike sprinkler pumps, hydrant systems do not require approved components. When offering packaged solutions, Grundfos will default to LPCB listed components.

Hydrant pumps, a minimum, must be sufficient to serve two to three lines of hose from landing valves simultaneously. This equates to 1500 litres per minute. The pumps should also be capable of achieving 4-5 bar (if BS5306: Part 1) or 8 bar (BS9990) at the highest point in the system. For example, a 50m high building to BS9990 would require a pump capable of achieving 1500 l/min and 50m height + ~12m Static loss + 8 bar standard = 14.2 bar. The pressure also must not exceed 20 bar at duty point. For example, a building higher than 110 metres would not be compliant to BS9990.

The operation and control of such pumps are generally in accordance to BSEN12845 standard, meaning pumps will automatically start and require a manual shut-down once activated. There are other options with regards to control methods which may be used to protect the equipment from dry running or overheating.

It is also important that once the unit is activated that there is no variance within the flow or pressure, as this could cause the fire to uproar and endanger the lives of the individuals extinguishing it.



High rise twin electric hydrant packaged set

What standards is this equipment approved / compliant to?

- LPCB – Loss Prevention Certification Board (upon request).
- BS9990 – Code of practice for non-automatic fire-fighting systems in buildings
- BS5306:Part 1 – Code of practice for fire extinguishing installations and equipment on premises for hydrant systems, hose reels and foam inlets.

Benefits

- Wide range of end-suction pumps available to suit requirements giving a broad range to suit individual selection requirements.
- Pumps are engineered, built and tested in Grundfos Sunderland, ensuring the product has passed all quality checks and achieved duty parameters preventing incorrectly sized equipment reaching site.
- As solutions are engineered in Grundfos Sunderland, we can add additional protection equipment (ie. dry running protection) ensuring individual site requirements can be met.
- A wide selection of options and accessories are available including pump housing to facilitate the selection of the bespoke equipment.