

FLOOD DEFENCE

FloodPump



FloodPump is an industry-unique, advanced, alarm and automatic flood pump system that can be deployed inside or out, protecting buildings and protected areas at risk from flooding.

FloodPump has been specially developed and adapted for the flood defence market from Andel's market-leading BundGuard®.

BundGuard® is a tried and trusted automatic bund dewatering solution that has been installed in the UK and overseas for thousands of electrical distributors and oil storage site operators, protecting assets and the environment for 30 years.

Not all features are standard, FloodPump is a modular design which means you only pay for what you need. The system is flexible and can be configured to manage a range of different flood risk scenarios.

The system comprises a submersible sensor unit and integrated automatic pump or pumps – all housed below ground level within a sump – and a wall-mounted advanced control panel.

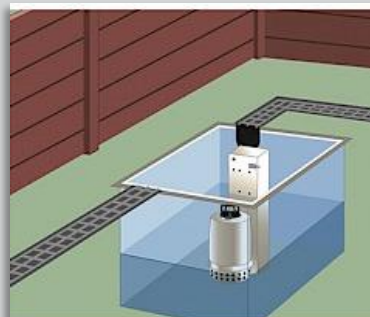
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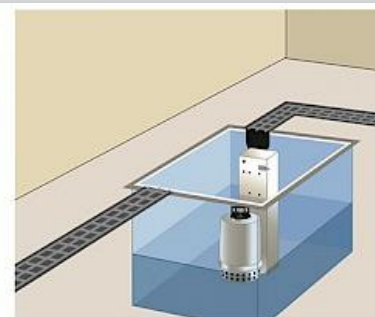
FloodPump capabilities:

- Send SMS text alarm notifications and updates to mobile devices
- Operate up to two flood pumps
- Automatically control other equipment such as flood gates, flood doors and automatic closure devices on drains
- Send alarm notifications and logs via Modbus to a Building Management System (BMS)
- Provide system status alerts

The system works continuously and automatically 24 hours a day, 7 days a week, 365 days a year.



The robust insertion unit and integrated pump is located below ground level and can be installed outside within a perimeter flood defence or inside a building or property. A drainage channel or gully allows flood water to enter the sump where the insertion unit is located.



The wall-mounted control unit performs a multitude of automatic functions.



The standard pump operates at a rate of 150 litres per minute – secondary pump and larger pumps are available if required.



The insertion unit is equipped with a number of probes that can be configured as required.

Insertion unit probes:

- 1 COMMON PROBE
- 2 STOP PUMP PROBE
- 3 START PUMP PROBE
- 4 HIGH WATER ALARM PROBE
- 5 FLOAT SWITCH OIL ALARM*

The common probe 1 creates conductivity with the other probes when immersed in water.

The control unit recognises conductivity between the probes. When the water level in the insertion unit rises to predetermined levels, the control unit can perform a multitude of automatic functions such as starting the pump, sending text messages and triggering closure devices.

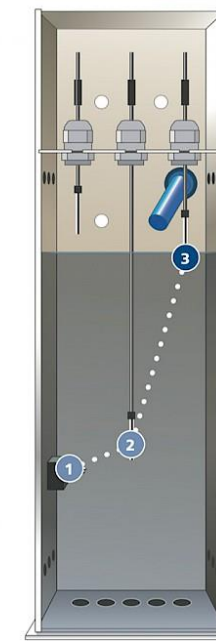
*The float switch will only trigger if oil is present in the insertion unit and oil detection alarm notifications would be sent out.

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How does FloodPump work?

'An industry-unique solution'

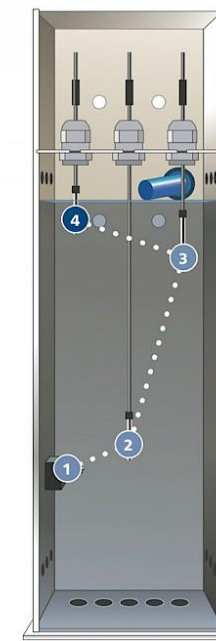
- The unique system can automatically perform a multitude of functions and can be configured to fit individual requirements.
- The controller sends outward alarm notifications by SMS – to inform that the system is active and protecting the property.
- The controller can notify BMS via Modbus.
- The system automatically pumps out flood water and has the capability to operate two pumps both alternately and simultaneously. There is also an option to install a larger capacity pump or pumps if required.
- FloodPump, through output relays, can also control a range of anti-flood devices such as flood gates, flood doors and drain closure devices.



When the rising flood water level reaches the START PUMP PROBE 3, the control unit recognises conductivity between THREE probes.



The primary flood pump is automatically activated.



When the rising flood water level reaches the HIGH WATER ALARM PROBE 4, the control unit recognises conductivity between FOUR probes.

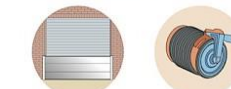


Alarm notifications are sent via SMS to mobile devices.

Alarm notifications are sent via Modbus to BMS.



A second flood pump is automatically activated.



Flood defences such as flood gates, flood doors and drain flap closure devices are automatically activated.



When the receding flood water level falls below the STOP PUMP PROBE 2, the control unit recognises that there is NO conductivity between probes.



The pump or pumps are automatically switched off.

Closure devices remain closed until manually opened to avoid any external flood water re-entering the protected area.

The system continually monitors water levels and if the water level rises again in the insertion unit, the cycle automatically repeats.

Andel FloodPump – example cycle

The illustration shows how a cycle can work within a protected area during a flood event with rising and falling water levels.

The example includes the option of a secondary pump and flood defence closure equipment. Andel FloodPump can be configured to meet a range of individual requirements based on a flood risk