



OIL STORAGE MAINTENANCE AND COMPLIANCE

BundGuard®

The market-leading bund dewatering solution



Pollution prevention, sustainability, compliance
and peace of mind for site operators



Making water sustainable for
a cleaner and safer environment.

BundGuard® protects your site 24 hours a day, 7 days a week, 365 days a year.

BundGuard® 4 has dominated the market for nearly twenty years with many thousands of units installed across the UK and Europe, protecting the environment and providing peace of mind and protection for site operators. Though BundGuard® 5 is now available, BundGuard® 4 is still fully supported.

BundGuard® 5

With two-pump capabilities and the option for fitting larger pumps, BundGuard® 5 offers a range of enhanced features to site operators.



BundGuard® 5 control panel features:

- 2-pump Capability
- LCD Menu Display
- High Oil Alarm
- High Water Alarm
- Mains Failure Alarm
- System Fault Alarm
- Pump Disable
- Historical Data Alarm
- Delay Customisation
- Technical Support Code
- Connector Disconnection Alarm
- Textual Alarms
- Filter Back-pressure Monitoring Support
- Outlet Water Meter Support
- Pump Current Monitoring
- Auto Changeover
- Over-current Disable
- Battery Backup
- Modbus RTU Interface
- SMS Alarm Forwarding (optional)



The BundGuard® control unit can also be supplied in a GRP enclosure to National Grid specifications.



Over 30,000 BundGuard® units are already protecting customer assets and the environment.

The BundGuard® bund dewatering system was first developed in 1992 for the UK electricity industry and its growing need for an effective dewatering solution at substation sites.

Today, over thirty thousand BundGuard® units are installed around the world, protecting site operators, preventing fuel and oil from escaping and contaminating the environment. BundGuard® is a sustainable, cost-effective and easy-to-fit dewatering solution, comprising control unit, submersible sensor/pump assembly and mounting system.

BundGuard® expels rainwater and keeps oil contained within the bund.

BundGuard® discriminates between oil and water, keeping oil contained and expelling water from the contained or banded area.

The robust, stainless-steel submersible sensor unit monitors the different liquid levels in the bund sump via a series of conductive probes that can be configured as required. The mounted control unit activates the pump to remove only water that is safe to sewer or interceptor, depending on site circumstances.

Failsafe systems and a range of visual and relay alarm outputs ensure complete safety and allow onward communication to remote monitoring systems.

Compliance and containment safeguard for sensitive sites.

BundGuard® gives peace of mind and ensures compliance with regulations throughout the UK, it also removes the need for regular bund emptying by waste contractors, reducing costs, environmental impact and carbon footprint.

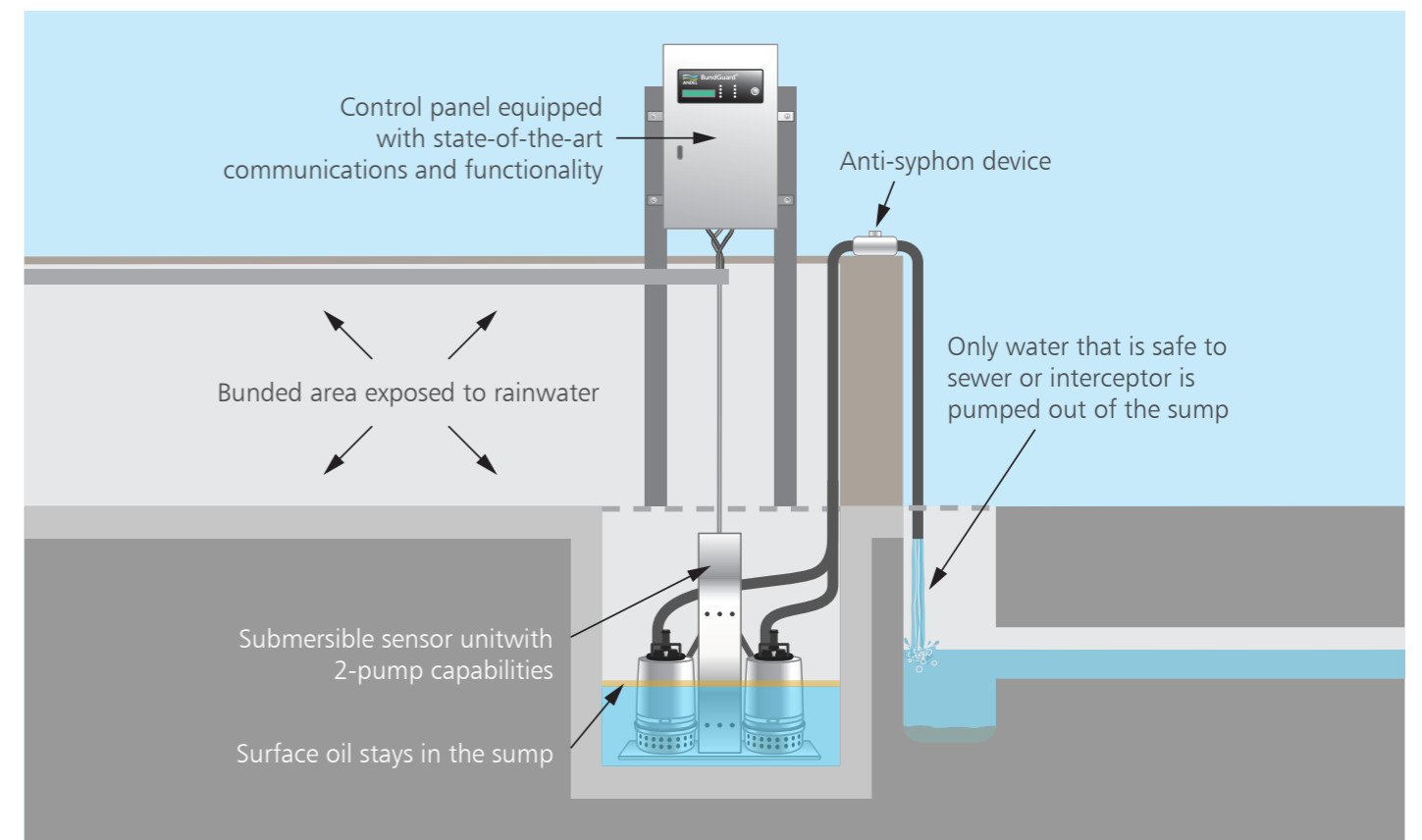
FilterSepta® is an additional and highly cost-effective, secondary containment safeguard for sites where extra caution is required and is recommended for environmentally critical sites or where there is concern about pumped water discharge through soak-away or surface water drainage where there is no underground interceptor.

FilterSepta® is an above-ground interceptor and filter unit that guarantees a Class 1 discharge of water from the bund to surface water, adhering to EN858-1:2002.

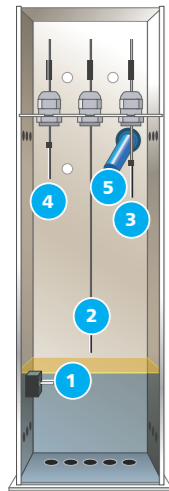
FilterSepta® eliminates the need for costly underground interceptor or separator tanks to be installed and maintained and is ideal for both retrofit and new installations.



FilterSepta® performs to the requirements of a Class 1 full retention oil/water separator and relevant section EN858-1:2002 under test conditions.



The submersible sensor unit has a number of conductive probes that can be configured to suit each individual installation.



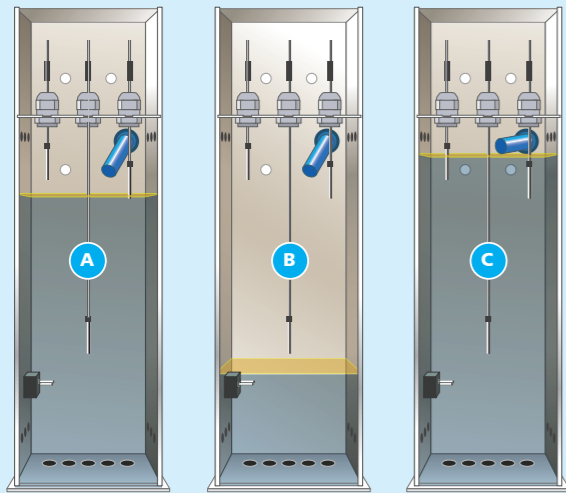
- 1 Common Probe
- 2 Stop Pump Probe
- 3 Start Pump Probe
- 4 High Water Alarm Probe
- 5 Float Switch High Oil Alarm

The Common Probe 1 creates conductivity with the other probes when immersed in water. The sensitivity of the probes can be configured to suit any site conditions, ensuring BundGuard® always delivers optimum performance, even in bund water that has developed low conductivity.

The control unit recognises conductivity between the various probes and activates the pump when the water level reaches the Start Pump Probe 3 and switches the pump off when the water level drops below the Stop Pump Probe 2. If the water rises and reaches the High Water Alarm Probe 4 a second pump will be activated.

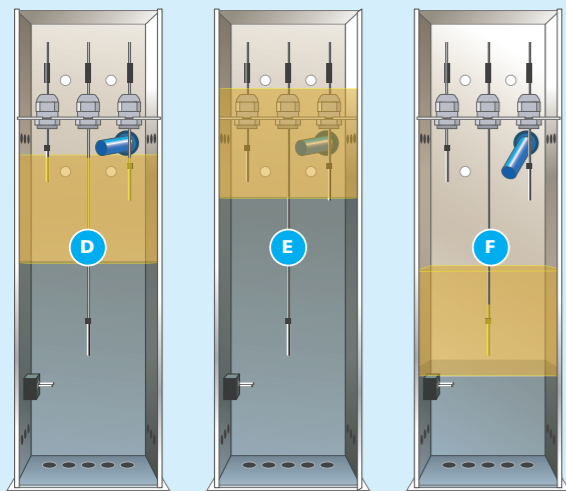
The Float Switch 5 puts the control panel into High Oil Alarm and deactivates the alarm as the level drops below the float switch.

Sensor unit cycle with rising and falling water levels and a thin film of oil.



- A Water entering the sump reaches the level of the Start Pump Probe and the control panel activates the pump and water is pumped out of the sump.
- B The water level is pumped below the Stop Pump Probe and the control panel deactivates the pump. Any oil on top of the water is kept well away from the pump inlets.
- C If the water level keeps rising, due to an unusually high volume of water entering the sump (greater than 150 l/m) and reaches the level of the High Water Alarm Probe, the control panel will go into High Level Alarm and the second pump will be activated if fitted.

Sensor unit cycle with rising and falling water levels and a significant volume of oil.



- D With a significant volume of oil in the sump, water entering the sump raises the level of the oil to the Float Switch. Because the water has not reached the Start Pump Probe, the system recognises this and the control panel will go into High Oil Alarm.
- E If the water level rises and reaches the Start Pump Probe, still in High Oil Alarm, the pump is activated and pumps the water out of the sump.
- F When the water level drops and the oil is no longer lifting the float switch, the control panel will no longer be in High Oil Alarm and the activity will have been logged for future analysis. The water level is pumped below the Stop Pump Probe and the control panel deactivates the pump. The significant volume of oil on top of the water is always kept well away from the pump inlets.

Special builds

Andel's team of experts can adapt BundGuard® to detect a wide range of other pollutants and keep them contained within the bund.



Bespoke special-build installation using National Grid specification enclosures, designed to interface with existing glycol alarm system.

Special-build BundGuard® units can take inputs from other probes that can detect a wide range of pollutants and unwanted contaminants in site trade effluent, as well as interface to customers' existing pollutant detection systems. If predetermined levels of a pollutant are detected, the system will deactivate the pump/s with contaminants contained within the bund and not entering the drainage system. BundGuard® also sends alerts to initiate a response.

Examples of typical special-build requirements:

- Semi ATEX units – sensors and pumps for zone 0 areas and control panels fitted in non-hazardous areas
- Units linked to pH sensors

- Units linked to ammonia sensors
- Units linked to detect unwanted contaminants in site trade effluent
- Units linked to FliterSepta®, Andel's above-ground interceptor
- Control panels in GRP enclosures
- Automatic sump frost protector system for extreme cold weather conditions
- Power coupling for portable generators.

A choice of submersible sensor units for a range of sump sizes

Andel supplies a range of sensor units. As well as the Standard, the XL is available for larger sumps and smaller units are available for customers who have an existing sump with smaller dimensions than the standard sump size, for example:

- An old oil tank bund that has a smaller sump for a manual pump
- A point for a tanker to empty
- A small bund for a small transformer where there is no space for a standard sump
- A BundGuard in a cable duct with limited space.



TECHNICAL INFORMATION

STAINLESS STEEL CONTROL PANEL:

- Power: 110/230 VAC, 440 Watts (1 pump running), 970 Watts (2 pumps running)
- Construction: Stainless steel, IP66 rated, also available to National Grid spec in GRP enclosure
- Dimensions: H 410 x W 262 x D 100 mm
- Indicator LEDs:
 1. Power – Green
 2. System Fault – Red
 3. Pump 1 Active – Green
 4. Pump 2 Active – Green
 5. High Oil Alarm – Red
 6. High Water Alarm – Red
 7. Pump 1 Disabled – Yellow
 8. Pump 2 Disabled – Yellow
- Display: 2 x 16 characters LCD for pump cycle counter and system status plus set-up menus when accessed
- Fixing: wall/surface mount via external fixing lug

SENSOR UNIT:

- Power and Voltage: nominal
- Construction: Stainless steel, immersion proof
- Dimensions:
 - XL – H 1000 x W 180 x (D)70 mm
 - Standard – H 570 x W 180 x D 70 mm
 - Compact – H 450 x W 180 x D 70 mm
 - Mini – H 300 x W 220 x D 55 mm
- Fixing: Free standing in base of sump

STANDARD PUMP:

- Power and Voltage: 230 VAC (110 VAC optional)
- Construction: Stainless steel
- Dimensions: H 250 x W 160 mm
- Safety: Thermal trip with self-reset
- Flow Rate: 150 litres per minute at 2-3 metre head
- Fixing: Integrated – part of the sensor unit

FIXING AND CONFIGURATION:

BundGuard® is supplied complete with a fixing kit, anti-syphon device and 5 metres of 18 bar flexible hose. The unit is configured in the factory prior to delivery though some on-site adjustment may be required on installation. No further calibration is required. Maintenance should be carried out every 6 to 12 months depending on site conditions.

PLUG-AND-PLAY OPTION:

A Plug-and-Play option is also available to simplify site maintenance where site conditions mean that BundGuard® units may require more frequent attention. All connections between the sensor unit and the control panel are via IP68 connectors.



Making water sustainable for a cleaner and safer environment.

For over 30 years Andel has supplied specialist products and services to many of the world's leading blue chip organisations.



LEAK DETECTION



WATER SUSTAINABILITY



OIL STORAGE MAINTENANCE & COMPLIANCE



DRAINAGE & INTERCEPTOR MAINTENANCE



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