OIL STORAGE MAINTENANCE AND COMPLIANCE

BundGuard® ORS

Combined dewatering and oil recovery system for transformer oil leaks within bunded areas



Specifically developed for electrical substation sites to manage excessive oil leakage from transformers

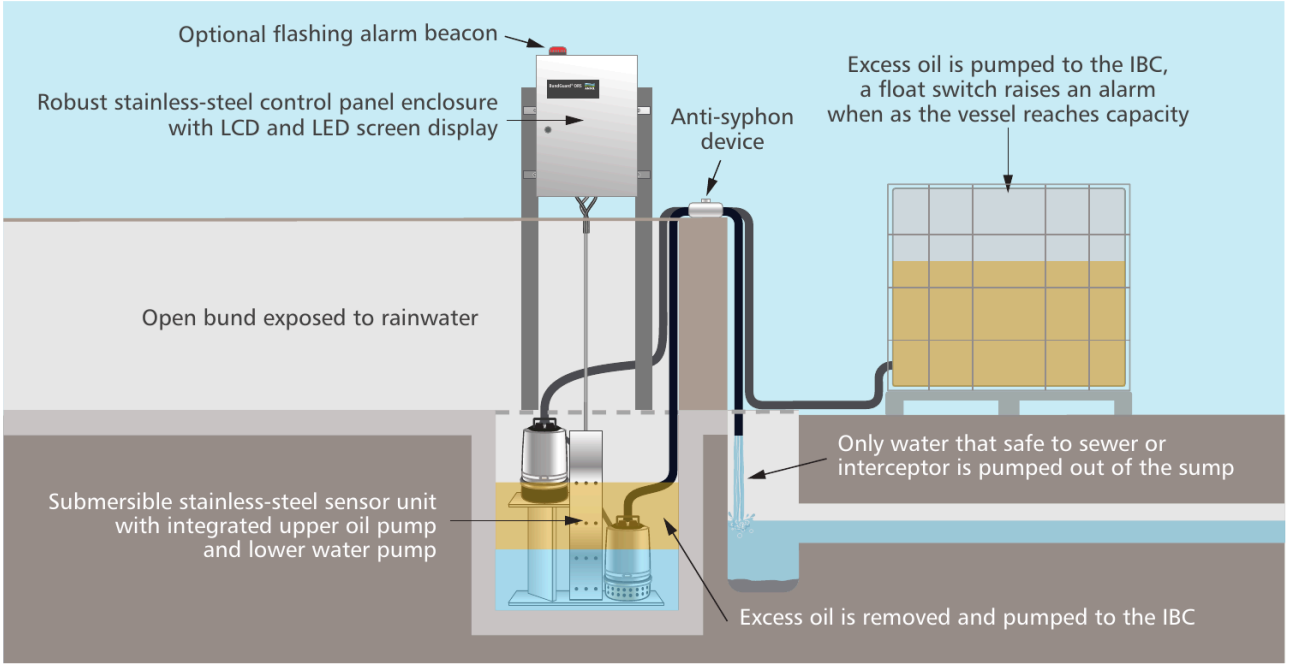
Transformer oil leaks are common, and oil build-up within substation bunds significantly increases the risk of environmental pollution while driving frequent, costly waste-contractor removals.

BundGuard® ORS delivers an automated, low-maintenance solution that safely recovers oil while maintaining the required 110% bund capacity.

System description

BundGuard® ORS is a development of the proven BundGuard® platform and comprises a wall-mounted control panel, a submersible sensor and dual-pump assembly, and a dedicated mounting system.

Using conductive probes, advanced circuitry and microcontroller-based control, the system continuously monitors the sump, automatically managing oil and water levels without the need for manual intervention.



BundGuard® ORS — combined bund dewatering and oil recovery: excess oil is pumped to an IBC while only water safe to sewer or interceptor is discharged from the sump.

Dual-pump operation

Upper pump – oil recovery

The upper pump removes excess oil from the surface of the sump fluid and transfers it to an IBC for on-site storage. An integrated non-return valve prevents recovered oil from flowing back into the sump, ensuring effective

oil separation and retention.

Lower pump – water management

When a pre-set water level is reached, the lower pump operates independently to remove excess rainwater while discriminating between oil and water. This controlled discharge maintains the required 110% bund capacity, keeps the pump primed at all times, and supports long-term, reliable system operation.

BundGuard® ORS discharges water only via the lower pump.

Discharge quality and environmental protection

Testing shows that water discharged by BundGuard® ORS typically contains oil levels below 5 ppm. For environmentally sensitive sites or where enhanced downstream treatment is required, Andel recommends FilterSepta®, an above-ground Class 1 interceptor designed in accordance with EN 858-1:2002 that delivers almost undetectable hydrocarbon in discharged water — effectively zero.

Control and monitoring

The control panel automatically activates and deactivates both pumps, manages LCD and LED status displays, and provides alarm outputs to BMS and other remote monitoring systems.

An optional high-visibility flashing alarm beacon provides on-site visual indication of alarm conditions.

An IBC-mounted float switch disables the oil pump and raises an alarm when the storage vessel reaches capacity, enabling prompt intervention.

Benefits at a glance

- 10-year control panel warranty
- Low-maintenance operation
- Significantly reduces the risk of pollution incidents
- Reduces reliance on frequent tankering services
- Lowers overall environmental impact
- Minimises engineer site visits by eliminating repeated high-oil alarms
- Recovered oil can be recycled or sold
- Multiple communication options: volt-free contacts (VFC), Modbus and SMS
- Pump current monitoring with maintenance alarms

Warranty: 10-year control panel warranty.

Configurations

BG ORS Control Panel Issue 5	BG ORS Standard Sensor + Pumps	BG6 ORS Control Panel
Item 500391	Item 500392	Item 500476

TECHNICAL INFORMATION

ELECTRICAL SUPPLY

Supply voltage: 230 VAC, 50 Hz

Power Consumption: 4.5W (standby), 970W (2 pumps running)

FUSE RATING

Control: FS1 0.5A, 240 VAC, T1, 20mm

Pump 1: FS1 5A, 240 VAC, T5, 20mm

Pump 2: FS1 5A, 240 VAC, T5, 20mm

Mains alert (common alarm output): FS1 1A, 240 VAC, T1, 20mm

WEIGHT

Control panel: 5.9kg

Sensor and pumps: 8.45kg

STAINLESS STEEL CONTROL PANEL

Construction: Stainless steel, IP66 rated

Dimensions: (H) 415mm x (W) 317mm (excluding mounting lugs) x (D) 118mm

Display: 2 x 16 characters LCD for pump cycle counter and system status plus set-up menus when accessed

Fixing: Wall or surface mount via external fixing lug

STAINLESS STEEL SUBMERSIBLE SENSOR UNIT

Construction: Stainless steel, immersion proof

Dimensions: (H) 680mm x (W) 240mm x (L) 490mm

Fixing: Free-standing in base of sump

PUMPS (STANDARD)

Power and voltage: 230 VAC (110 VAC optional)

Construction: Stainless steel, immersion proof

Dimensions: (H) 250mm x (W) 160mm

Safety: Thermal trip with self-reset

Flow Rate: 140 litres per minute at 2-3m head

Fixing: Integrated as part of the sensor unit

ALARM RELAY RATINGS

Mains failure alarm: 220 VDC @ 0.1A

High oil alarm: 220 VDC @ 0.1A

High level alarm: 220 VDC @ 0.1A

IBC Full alarm: 220 VDC @ 0.1A

System fault alarm: 220 VDC @ 0.1A

CONFIGURATION

The system is factory-configured prior to delivery, with limited on-site adjustment required during installation. No further calibration is required. Routine maintenance is recommended every 6 to 12 months, depending on site conditions.

PLUG-AND-PLAY OPTION

A Plug-and-Play option is available to simplify installation and ongoing site maintenance where more frequent access to the sensor unit is required. All connections between the sensor unit and the control panel are via IP68-rated connectors.