

Water Sustainability in the built environment



Making water sustainable for
a cleaner and safer environment.

A range of Water Sustainability
products that can that reduce water
usage, reduce water wastage and
save money on water bills



Welcome to ANDEL

Andel is an environmental company at the **cutting edge of water, oil and gas resource control** and management, both within the **built and natural environment**.



WATER, OIL
& GAS LEAK
DETECTION



WATER
SUSTAINABILITY



OIL STORAGE
MAINTENANCE &
COMPLIANCE



DRAINAGE &
INTERCEPTOR
MAINTENANCE



FLOOD
DEFENCE

Why the focus on **Water Sustainability**?

Water is at the core of sustainable development and is critical for socio-economic development, healthy ecosystems and for human survival itself.

Water is also at the heart of adaptation to climate change, serving as the crucial link between the climate system, human society and the environment.

Water is a finite and irreplaceable resource that is fundamental to human well-being. It is only renewable if well managed.

Source: United Nations Department of Economic and Social Affairs

ABOUT THE FlowGuardian®

A robust water leak detection and high-usage alarm system that measures flow between a site boundary and a property



FlowGuardian® is an effective and sustainable water conservation solution, saving precious water, saving on water bills and earning BREEAM WAT 02 and WAT 03 credits.

BENEFITS AT A GLANCE

- Major mains water leak alarm
- Excessive water usage alarm
- Protects against damaging and costly water leaks
- Monitors water usage
- Saves on water bills
- Can earn BREEAM WAT 02 and 03 credits

HOW THE FlowGuardian[®] WORKS

FlowGuardian[®] uses two flow meters, one situated at the site boundary and the other in a building and actively monitors the mains water supply.

The system uses the flow rates and volumes from the internal low meter to identify major water leaks and excessive water usage as well as providing general water usage monitoring.

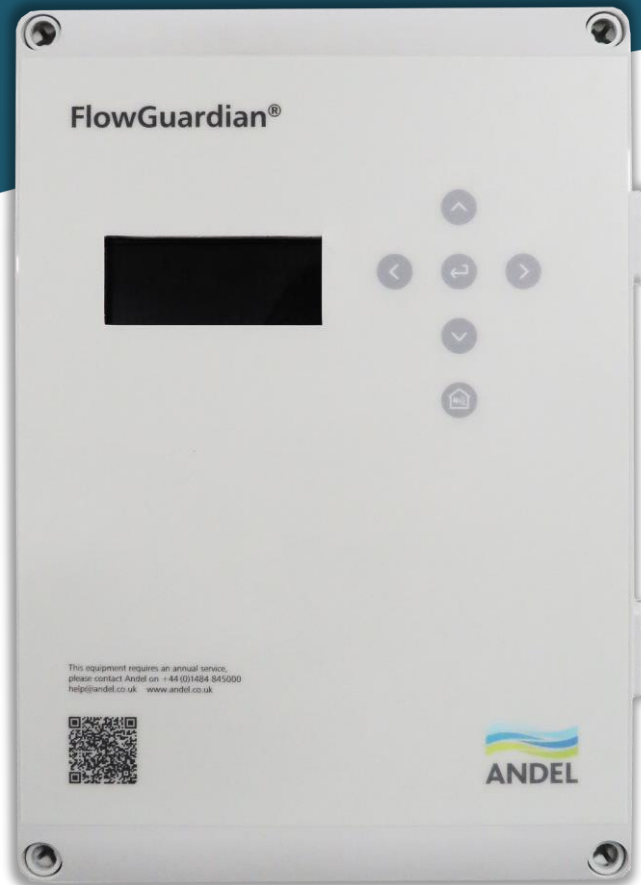
The programmable, discreet, wall-mounted control panel has a simple, interactive push-button LCD display with audible buzzer alarm. All alarms are displayed continuously until corrected and reset on the system.

The wall-mounted panel is equipped with advanced communications and Modbus connectivity for onward communications to BMS and remote users plus an option to control water isolation valves in the event of a water leak.



FlowGuardian[®]

BREEAM Credits



FlowGuardian[®] provides flow monitoring and water leak detection in line with the defined BREEAM standards WAT02 and WAT03 and can earn BREEAM credits subject to a successful audit by an authorised third-party assessor.

WAT02 – 1 credit. WAT 02 ensures water consumption can be monitored and managed, and therefore encourages reductions in water usage.

WAT03 – 2 credits. WAT 03 is to reduce the impact of water leaks that may otherwise go undetected. Once credit for a compliant leak detection system, and one credit for compliant flow control devices.



FlowGuardian[®]

TECHNICAL INFORMATION

POWER

- Mains supply: 110-230Vac 50/60Hz
10W

CONSTRUCTION

- IP66, ABS Enclosure

DIMENSIONS

- W175mm x H250mm x D75mm

FIXING

- Control panel: surface-mounted
internal wall
- Flow meters: compression/flange
fitting dependant on size of flow
meter

MONITORING

- Major underground water leak –
difference between internal and
external flow meters
- Excessive volume within user
specified daily time period
- Excessive flow rate within user
specified daily time period
- User-adjustable daily volume, flow
rate and time period for continuous
monitoring
- Flow meter fault monitoring
- Daily volume in litres and all-time
volume in cubic metres display
- Alarm data event log on FIFO basis

STATUS AND ALARM INDICATORS

- 4 x 12 LCD backlit display
- Audible buzzer alarm
- All alarms displayed continuously
until corrected and reset on the
system

OUTPUTS

1. Mains Fail SPCO Relay (5A @ 250Vac)
2. Flow Alarm SPCO (5A @ 250Vac).
3. Flow Meter Fault SPCO (5A @
250Vac)
4. Complete Power Failure SPCO (5A @
250Vac)
5. Modbus RTU

All relays are clean volt-free contacts.

ABOUT THE PIR WaterSave®

Motion sensor water flow control system for
water sustainability and BREEAM credit



PIR WaterSave® is an effective water sustainability solution for office buildings, care homes, schools and any buildings with communal areas with running water.

BENEFITS AT A GLANCE

- Reduces water usage
- Reduces water wastage
- Protects against damaging and costly water leaks
- Saves on water bills
- Can earn one BREEAM WAT 03 credit

PIR WaterSave®

FUNCTIONS AND FEATURES

PIR WaterSave® is a motion sensor water flow control system that reduces water usage, water wastage and the risk of water leaks.

Installed in any areas within a building where there is running water such as bathrooms, shower rooms, WCs and kitchens, the motion-sensor automatically ensures that water is only supplied when movement is detected.

The PIR WaterSave® system comprises of a wall-mounted control panel and a 360° PIR (Passive Infra-red) motion sensor which together control low-energy, motorised isolation valves, switching the water supply on and off as required, through the detection of movement in the monitored area.

Each control panel can manage up to three motorised valves and a further two PIR motion sensors if required.



PIR WaterSave®

BREEAM Credits



The aim of WAT03 is to reduce the impact of water leaks that may otherwise go undetected. As defined by the standards in BREEAM WAT 03, PIR WaterSave® is an automatic device detecting occupancy or movement in an area to switch water on and turn it off when the presence is removed.

PIR WaterSave® can aid in the accumulation of credits subject to a successful audit by an authorised assessor. Andel Ltd, its products and services are not aliased, endorsed or certified by BRE Global Ltd. All rights reserved.



PIR WaterSave[®]

TECHNICAL INFORMATION

POWER

- Mains supply: 86-264Vac 50/60 Hz
- Mains fuse protection: 3Amp
- Maximum current consumption: 60W
- Minimum current consumption: 150mA(approximate)

DIMENSIONS

- W175mm x H175mm x D50mm

FIXING

- Control panel: Surface-mounted internal wall, optional wall brackets supplied with the unit
- PIR motion sensor: Ceiling mount with spring-loaded retaining clip. 64mm diameter hole required for fitting.

MONITORING

- Continuous monitoring for movement at the PIR sensor location
- Up to three PIR sensors can be connected to each system
- Automatic time delay following no movement

CONSTRUCTION

- IP66, ABS Enclosure

SHUT-OFF VALVES

- WRAS – approved
- Stainless-steel motorised ball valves supplied with a 2-core flying lead
- Orifice sized in mm: 10, 15, 20, 25, 32, 38 or 50

STATUS AND ALARM INDICATORS

- Power on: Green LED (no light when power is off)
- Water on: Green LED (no light when water supply is off)

OUTPUT R1

- Three simultaneous outputs (one for each valve)
- Up to three valves per system

OUTPUT R2

- Single-pole, double-throw relay output, clean-contact switch, only used to simultaneously switch the lighting circuit on at the same time the PIR motion sensor activated to ON. Rated at 230V 6A for a typical lighting circuit

ABOUT FlowStop®

FlowStop® is a cost-effective water sustainability and water leak prevention system for apartments, hotel rooms, small offices, retail units and homes.



24-hour protection against damaging and costly water leaks within properties

BENEFITS AT A GLANCE

- Highly cost-effective
- Low maintenance
- Easy to install, easy to set-up
- Monitors up to two water supplies
- Freeze protection (user adjustable)
- Time-out protection (user adjustable)
- Excess flow protection (user adjustable)
- 24-hour non-use protection (user adjustable)
- Override control
- Discreet flush or wall-mounted control unit
- Option to add leak detection sensors
- Optional connection to onward BMS and GSM for absent occupants
- Optional connection to Andel Smart Device for real-time notifications
- Mains or battery powered

HOW THE FlowStop® WORKS



WRAS approved FlowStop® can be installed in new builds and retrofit in existing occupied buildings.

FlowStop® detects abnormal water flow or the risk of freezing pipes, automatically shutting off the water supply, saving precious water, saving on water bills and protecting against the costly consequences of water damage from burst pipes, internal leaks and floods.

FlowStop® isolates the water supply if no water is used for predetermined periods, as set by the user, covering for periods when the property may be temporarily vacated. This prevents leaks in empty properties going unchecked with potentially serious consequences.

When the water supply is isolated, one push on the mute button on the control unit will silence the alarm and reset the system and the water supply will start to flow again.

FlowStop® unlike other systems has four programmable criteria for preventing water leaks:

- Continuous flow time: 5 to 60 minutes (user adjustable)
- Flow rate: 2 to 40 litres per minute (user adjustable)
- Low temperature: -1 to +5 degrees (user adjustable)
- No flow time: 1 to 24 hours (user adjustable with the option to disable)
- FlowStop® can be installed on 15, 22mm and 28mm pipes. One wall-mounted control unit can manage two valve/meters and two water supply pipes.

Option to add leak detection sensors

There is also an option to add leak detection tape, cable and other sensors for more localised leak detection in areas such as kitchens, utility rooms and areas with running water such as bathrooms, showers and WCs.

Smart Device connection

You can also add the Andel SmartDevice to the control unit which will provide selected personnel with app and text message notifications of leaks and system activity in real time.

FlowStop[®]

TECHNICAL INFORMATION



POWER

- Mains supply: 240Vac or battery operated (9V PP3 1200mAh)

DIMENSIONS

- Control unit: W145mm x H85mm x D9mm

PIPE SIZE

- FlowStop[®] can be installed on 15mm, 22, and 28mm diameter pipes

CONSTRUCTION

- Control unit: Moulded ABS

OPERATION

- Max working pressure 10 bar
- Min operating pressure 1 bar
- Working temperature 4 to 80°C
- Can handle 2 inputs, controlling up to 2 solenoid or low-energy motorised isolating valves

ABOUT THE SmartDevice

“Andel SmartDevice is a cost-effective, discreet unit that can attach to a choice of Andel water leak detection sensors.



The discoverable Wi-Fi-enabled **SmartDevice** connects to all popular smart home apps, allowing for 24/7 monitoring of any high-risk areas within a property.

There is an option to add email and text alerts within the app so users are alerted if a leak is detected by a sensor.

SmartDevice is quick and easy to install and set up and attaches to a choice of leak detection sensors via connecting cable and Andel's Plug and Play Auto-Connect system.

BENEFITS AT A GLANCE

- Smart, cost-effective, sustainable solution
- Simple to install and set up
- Suitable for residential and commercial environments
- Attaches to a choice of Andel's water leak detection sensors
- Discoverable Wi-Fi connects to all popular smart home apps
- Option to add email and text alerts through your home app
- Allows for 24/7 monitoring of high-risk areas
- Uses 2 x AAA batteries
- Easy surface mounting

WORLDWIDE MARKET

Clients of Andel's Water control systems

Her Majesty The Queen
The Royal Household
The Houses of Parliament
The UK Ministry of Defence
The National Health Service
BT
O2
EE
Orange

Vodafone
Equinix
Global Switch
Goldman Sachs
Deutsche Bank
HSBC
National Bank of Australia
Massachusetts Institute
of Technology

The Pentagon
Marina Towers Financial District Singapore
NATO
The Gnome Campus
University of Oxford
University of Cambridge
Chep Lap Kok Airport Hong Kong
UK Air Traffic Control
The Shard

Where are these products in use?

United Kingdom | Ireland | France | Poland | Netherlands | Belgium | Italy | Spain | USA | Brazil
| China | Singapore | Australia | South Africa | Saudi Arabia | UAE | Kuwait | Israel



ANDEL

Making water sustainable for
a cleaner and safer environment.

