



ANGEL GUARD

MONITOR · CLEAN · PROTECT · TRUST



SERAPH PROTECT SERVICES

The World's First AI-Driven Water Management Service Provision

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Company profile

Angel Guard is a water management company that seeks to save time, money and most importantly lives, founded on the experience of Managing Director Jonathan Waggott and Director of Sales and Marketing Elaine Waggott, both very well experienced in the world of water health and plumbing.

With its offices and manufacturing both based within the UK, Angel Guard is proud to be part of Made in Britain to encourage growth and production within the country. Each Angel Guard product has been created with the consultation of respective experts within their field to target critical issues within the water health sector.

Angel Guard are the creators of the world's first clinical washbasin unit which utilises AI technology, as well as the world's first remote water monitoring system with biofilm detection. Angel Guard has one goal - saving time, money and most importantly lives through the deployment of many innovative, scientific, and technological solutions.



Innovation of the Year 2023



SME Recognition Award



Technical Innovation of the Year - Products



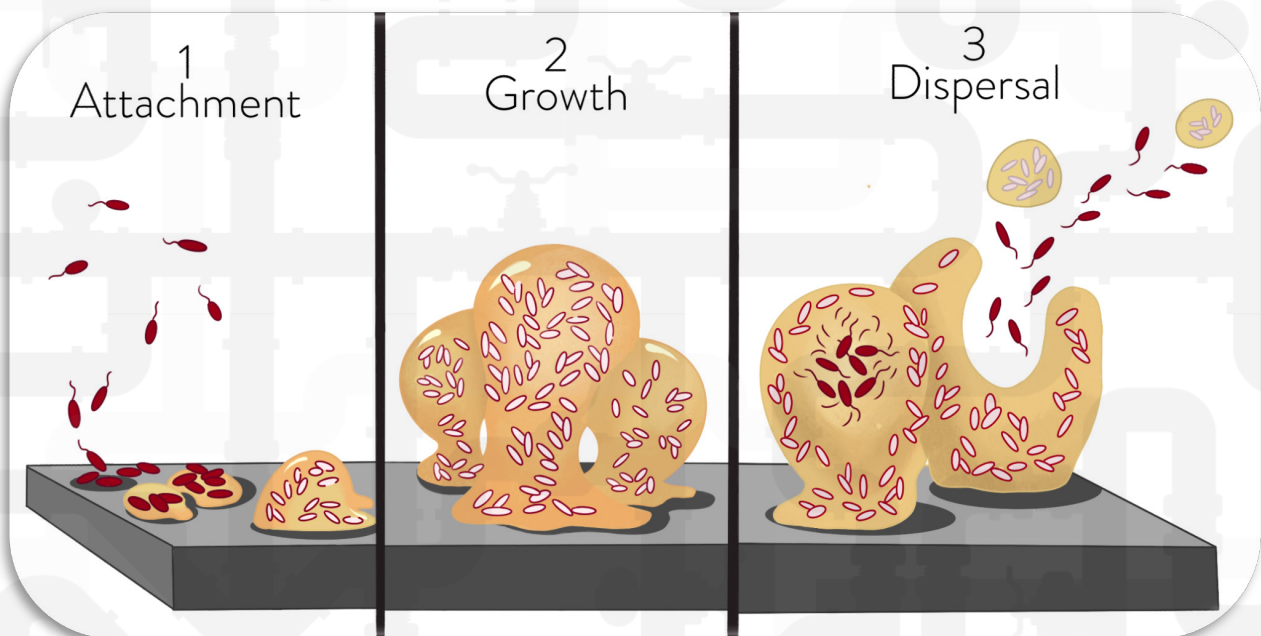
Clinical Washbasin of the Year

How pipework systems can make water unsafe

Nosocomial infections, and what they can lead to

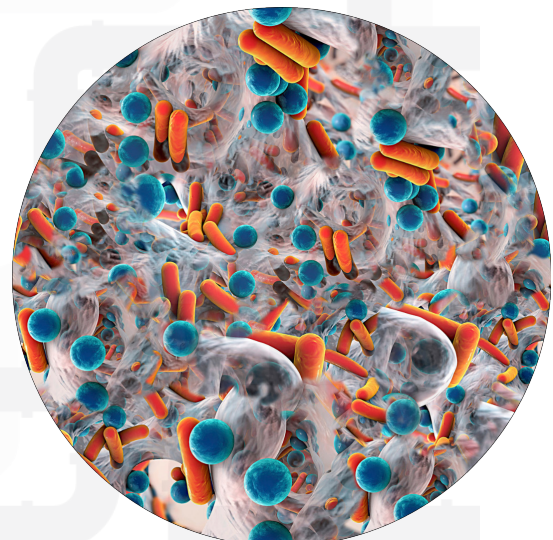
Nosocomial infections, or healthcare acquired infections (HCAs) are infections contracted within a healthcare environment and not prior to or afterwards. In one year alone, HCAs were estimated to have cost NHS England alone £2.1 billion. These costs cover additional bed space, litigation costs and the cost of specialist drugs and treatment. Commonly, the cause of these infections can be found within the water systems of hospitals and other healthcare settings.

Failing to put the proper measures or remote water monitoring systems in place can cause once-safe water systems to rapidly degenerate into breeding grounds for harmful bacteria. These water systems then begin to house water-borne pathogens and gives them a greater chance for transmission.



Biofilm

Bacterial biofilms are excreted by clusters of bacteria that have stuck together and attached themselves to a surface. This often tends to look like a layer of slime, when in reality it is essentially a huge colony of bacteria, able to disperse as particles through water and air. Unfortunately, biofilms pose an even bigger threat to public health, as they can be highly resistant to conventional antibiotics, which only furthers the threat of antibiotic resistant pathogens.

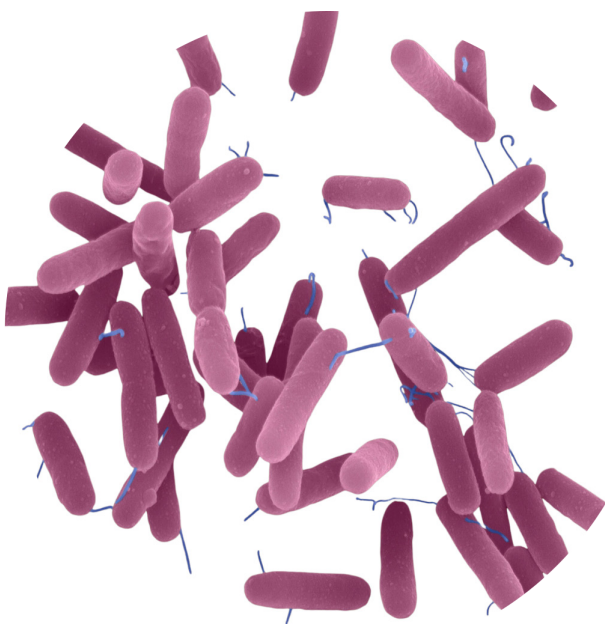
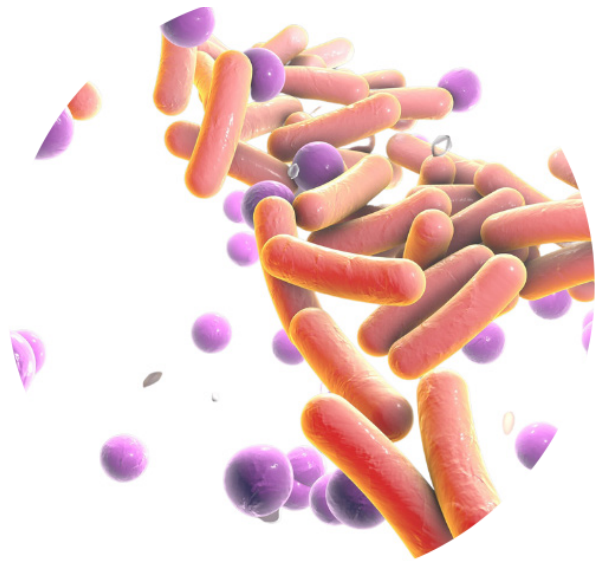


The harmful bacteria that can often be found in water systems

Including, but not limited to:

Legionella

Genus of pathogenic gram-negative bacteria. Capable of causing Legionnaire's disease, legionella grows especially quickly at temperatures between 30 degrees Celsius and 45 degrees Celsius. To ensure that your water system remains legionella-free, you will need to guarantee that your cold water is kept at under 30 degrees Celsius, and hot water kept above 55 degrees Celsius. Another essential safeguard to prevent legionella is to keep water moving and ensure suitable flushing of taps in low use areas.

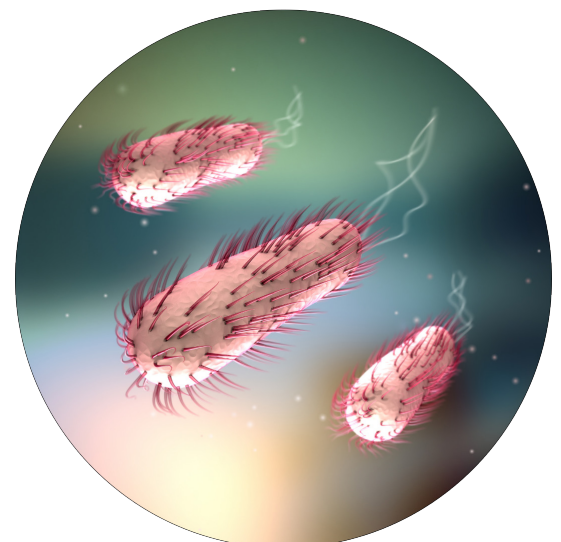


Pseudomonas Aeruginosa

Pseudomonas Aeruginosa is a common bacterium, capable of causing disease in plants, animals, and humans. Known for its intrinsically high level of antibiotic resistance, this bacterium can prove incredibly dangerous to immunosuppressed people. Unfortunately, pseudomonas aeruginosa is capable of thriving up to two metres before point of use, meaning not only the outlet but everything leading up to it, including pipework and the waste trap can become contaminated. Preventing pseudomonas aeruginosa necessitates the regular flushing of taps and fitting outlets without plastic parts that avoid retrograde contamination risks.

E. Coli

Escherichia coli (E. coli) bacteria are frequently found in the intestines of humans and animals. E. coli is often spread through water contaminated with fecal matter, which can then lead to further, serious illness in the form of severe stomach cramps, bloody diarrhoea and vomiting. Like other water-borne pathogens, regular hand washing, flushing and temperature control are vital in preventing any further spread of serious illness.



What Seraph Protect Services can do for you

Choosing Seraph Protect Services guarantees that your every water management necessity is covered. Along with your compliance requirements, everything is available at the press of a button 24/7.

Increased compliance, 24/7

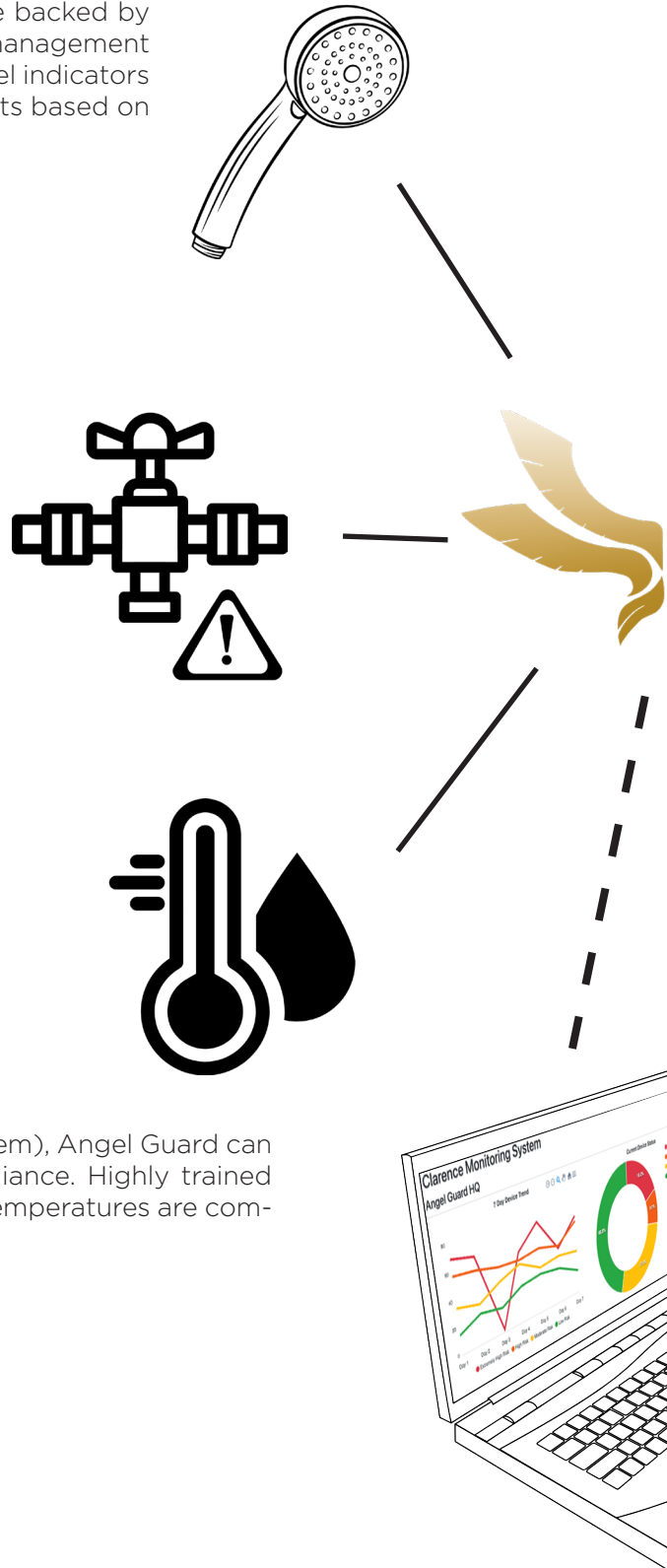
The world's first water management service provision to be backed by an AI-driven cloud-based system providing all your water management information in a single location. Capable of providing risk level indicators in a traffic light system as well as providing automatic reports based on data collated from your water system.

TMV risk assessment

In line with current government legislation, Angel Guard offer Thermostatic Mixing Valve (TMV) risk assessments to determine whether or not a TMV is necessary within your system. The assessment will cover scalding risks and risk of infection via water-borne pathogens.

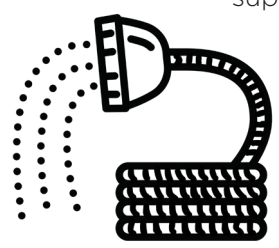
Water temperature testing

In addition to remote testing (provided by the Clarence system), Angel Guard can also provide manual temperature testing, to ensure compliance. Highly trained staff are dispatched to carry out all testing, to ensure your temperatures are compliant with HSG274 and HTM 04-01.



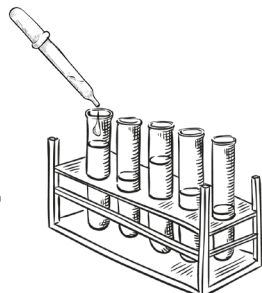
Water filters, shower heads and hoses

Seraph Protect Services expands the product offerings of Angel Guard, with the company now providing replaceable POU (point of use) water filters, shower heads and shower hoses. Angel Guard can provide a supply only or supply and fit service, with the service offering covering replacements.



Water testing

Through Seraph Protect Services, Angel Guard offer water testing to determine if pathogens are present within your water system, and specifically which pathogens. Angel Guard offers both traditional culture testing and a newer form of rapid testing for Legionella and Pseudomonas aeruginosa, capable of providing an indication of result in 24 hours, with a full result confirmed in 7 days.



Risk assessment

To help your company comply with legislation like HSG274 and HTM 04-01, Angel Guard offer risk assessments to help you understand how you can reduce risks within your workplace. These risk assessments will also ensure compliance with Health and Safety Executive inspections, as well as the Care Quality Commission.



Requirement

Every requirement is covered.

Replacement

Seraph Protect keeps track of your consumables.

Risk

Our online portal assesses risk levels from the data received, advising on action required to achieve compliance.



Seraph Protect Portal: Compliance, 24/7

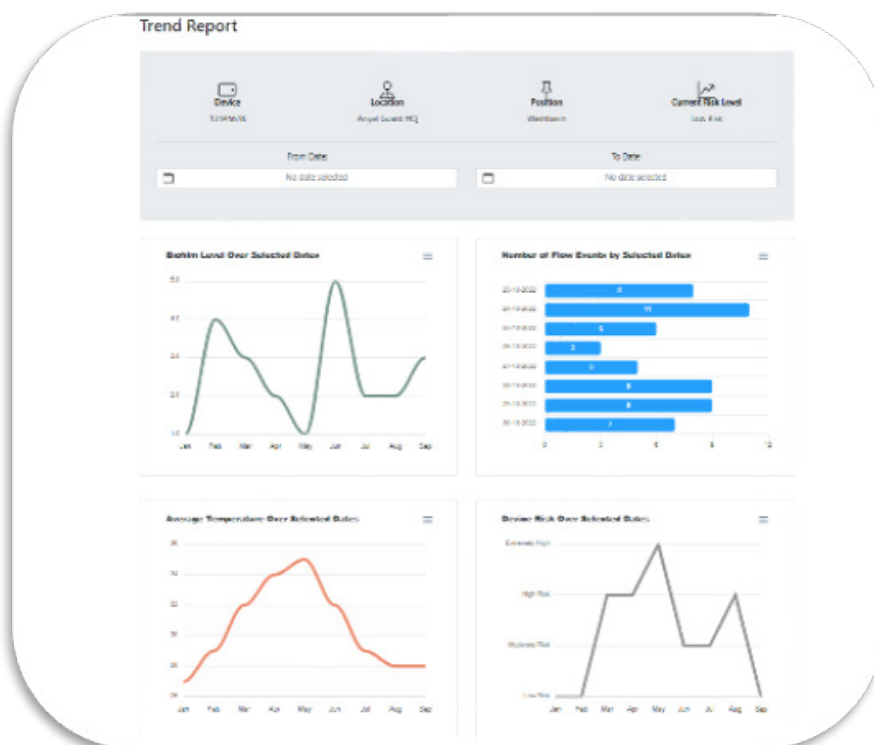
Water system management, any time, anywhere, all in one place

The Seraph Protect portal is the main dashboard where you can access all of your water management data in one place. Water management data is gathered by Seraph Protect, which is then analysed using AI. This analysed data is then used to make predictions regarding water quality, which will then influence device scores and key data points displayed on the Seraph Protect portal.



What can Seraph Protect do for you?

- * Water management dashboard, displaying all relevant data.
- * Simplified view, allowing users to understand data at a glance.
- * Through use of intelligent AI algorithms, evaluates water data and then displays device scores and water health based upon analysed data.
- * Displays replaceable POU water filters, shower heads and hoses installation and replacement dates.
- * Pop-up view allows users to attach documents to each device, including notes and calibration data.
- * Allows users to review risk assessments and water testing results.
- * Easily accessible trend reports for all data and graphs, identifying flow events, temperature readings and biofilm levels.
- * System sends alerts only if and when you need them.





Seraph Protect

Apply Filter Clear Filter

Scan QR

Washroom Location Double Pipe Cabinet Backwater Hot Leak Cold Leak Mixed Leak Return

C-1 DEVICES 2 6 2 1 **O-1 Devices** 1 0 0 4

321654987 Main Office Kitchen

Flow Event: 0 Hours Ago System Risk: High

Min	Max	Avg
22.8°C	30.0°C	43.1°C

Details

666007911 Male Bathroom

Flow Event: 1 Hour Ago System Risk: Low

Min	Max	Avg
42.0°C	51.0°C	74.0°C

Details

415068510 Factory

Flow Event: 2 Hours Ago System Risk: Low

Min	Max	Avg
2.7°C	10.0°C	9.2°C

Details

123456789 Female Bathroom

Flow Event: 7 Hours Ago System Risk: Low

Min	Max	Avg
5.3°C	15.0°C	12.7°C

Details

When accessing Seraph Protect, all data used and held is handled securely and in line with current GDPR guidelines. Angel Guard promises that your data is under the tightest encryption and has extensive failsafes in the highly unlikely event of any data breach. To guarantee further security, no sensitive or identifiable data is sent from any Angel Guard device.

Seraph Protect also allows you to enter and list all of your outlets, as well as any activities that have involved that outlet, e.g. risk assessments, water testing, shower head replacement etc.

With Seraph Protect, it is easier than ever to understand and sort through your notifications. Angel Guard has made sure that all notifications for Angel Guard devices are grouped by area, to allow users to quickly understand where any issues have arisen. With a few clicks, you can filter notifications by priority or escalate issues directly to Angel Guard, where a highly-trained member of staff will be on hand to lend assistance.

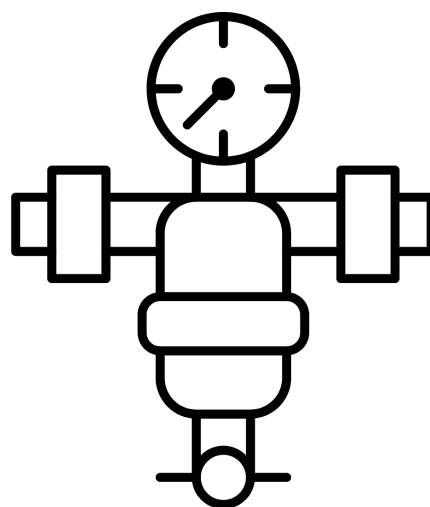
TMV risk assessment

What are TMVs?

Thermostatic Mixing Valves, or TMVs, were once considered an essential component of any mixed water system, as a means of regulating between hot and cold temperatures in order to reduce scald risks. The widespread deployment of TMVs through legislation has led to situations in which a TMV has been installed but is not necessarily needed. Due to its assembly and the materials they are made from, in some cases TMVs can cause more harm than good with plastic parts, complex waterways and residual warm water creating favourable conditions for biofilm growth.

How can Seraph Protect Services help?

Through their innovative Seraph Protect service offering, Angel Guard have decided to place importance on the necessities of TMVs and the risk they can pose to water safety if left unchecked. Through Seraph Protect Services, Angel Guard can deploy experienced staff to carry out all these checks and evaluations for you, granting you peace of mind that your water systems are as safe as can be with regards to TMVs. Once carried out, all the information you need to evaluate your system will be securely uploaded to the Seraph Protect online application, allowing you access to it at any point, giving you the data to guarantee your water system is in the best shape it can be with regard to water-borne pathogens and safety.



What exactly can make them unsafe?

As said before, TMVs are constructed from materials which can later cause issue. Namely, the plastic parts in many TMVs can encourage biofilm growth, as well as rubber o-rings throughout. Compounding on this, when TMVs are installed in improper locations, where the risk of scalding doesn't outweigh the risk of water-borne pathogen transmission. This is why to comply with HTM 04-01, building owners have to carry out dual risk assessments, determining whether the risk of scalding outweighs the risk of infection.



Risk assessment

Legal obligations

Under current United Kingdom health and safety law property managers, business owners and landlords must carry out regular risk assessments to comply with current legislation. Compliance levels are often inspected by the Health and Safety Executive and the Care Quality Commission, with large fines handed out to organisations who fail to reach these compliance standards.



How can Seraph Protect Services help?

Utilising Seraph Protect, Angel Guard are able to carry out strict and thorough risk assessments, assuring building operators that they are adhering to the guidance issued through such legislation as HSG274, HTM 04-01 and BS 8580-1:2019. Through utilising expert knowledge and a comprehensive testing regime, Angel Guard are able to illuminate present risks to your water system. Once the risk assessment has been carried out, Seraph Protect can give you the information and analysis needed to mitigate risks before they occur and allow you to capitalise on opportunities to safeguard your water system.



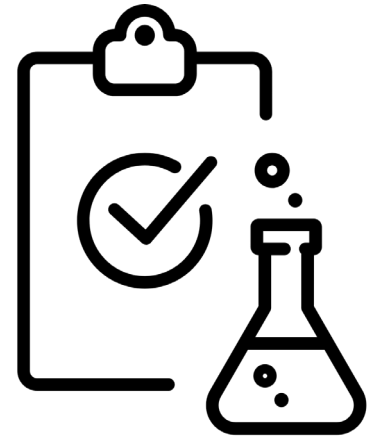
Removing stress as well as risk

In line with the accessible report results, Seraph Protect will also keep you up to date on all of your risk assessments, including gentle reminders of when your next risk assessment will be due. Angel Guard will remove the uncertainty surrounding risk assessments, guaranteeing that as far as water is concerned, you and your clients will have one less thing to worry about.

Water testing

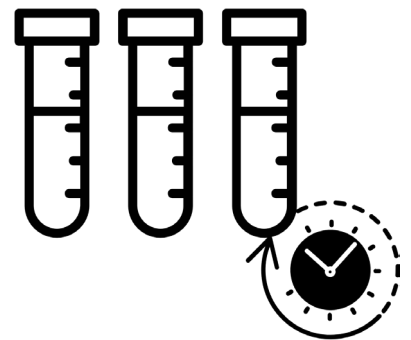
The benefits of water testing

As with any water system, regular testing for pathogens lurking within is imperative. When it comes to deadly pathogens such as legionella or pseudomonas aeruginosa, discovering and confirming them quickly is vital for safe removal and minimising any risk towards your water. As part of Seraph Protect Services, Angel Guard offers both culture and rapid water testing, allowing you to cover more bases with a wider scope of testing with culture, or a rapid test for a more specified search.



Why rapid testing?

As well as culture testing, Angel Guard offer innovative rapid water testing, utilising a more focused criteria for specifically identifying legionella or pseudomonas aeruginosa. Rapid testing allows for an early indication of legionella or pseudomonas aeruginosa within the water supply, with first results showing within 24 hours, and a fully confirmed result in 7 days.



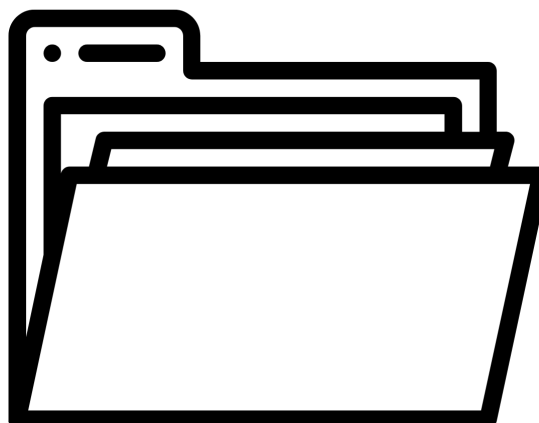
Why culture testing?

The traditional approach to water testing, culture testing is recognised as the best way to confirm any contaminants and pathogens lurking within your system. Whilst it does take time it will give accurate results, ensuring a clear picture of your water system's health, being able to detect many different pathogens.



Organised and stress-free

In order to make the process as simple as possible, Angel Guard also upload your test results to Seraph Protect, allowing you to access your results whenever and wherever, giving you more time and freedom to focus on making improvements where you need them.



Angel Guard peripherals

Expanding upon their suite of compliance solutions, Angel Guard offer a number of peripherals that were designed to supplement existing systems in line with Seraph Protect Services. Angel Guard offer replaceable shower heads along with hoses and replaceable point of use (POU) water filters, to guarantee water safety and boost compliance levels.

Replaceable shower heads

Angel Guard's replaceable shower heads provide simple installation for a safe and secure delivery. The heads themselves are 1/2" BSP compatible, with Angel Guard providing a unique adaptor for hard to reach installations. Each shower head is also fully recycled at end of use, with the materials melted down to produce new shower heads. Angel Guard take pride in pushing for sustainability in all aspects of their business.



Replaceable shower hoses

All of Angel Guard's shower heads are delivered with compatible 1.25m WRAS-approved shower hoses. Angel Guard shower hoses are fully compatible with both standard 1/2" BSP shower head thread, whilst also still functioning with the unique adaptor. As with the shower heads, each hose is also fully recyclable and is recycled at end of life. Angel Guard believe all points of a product's life cycle are important, not only while its providing utility.



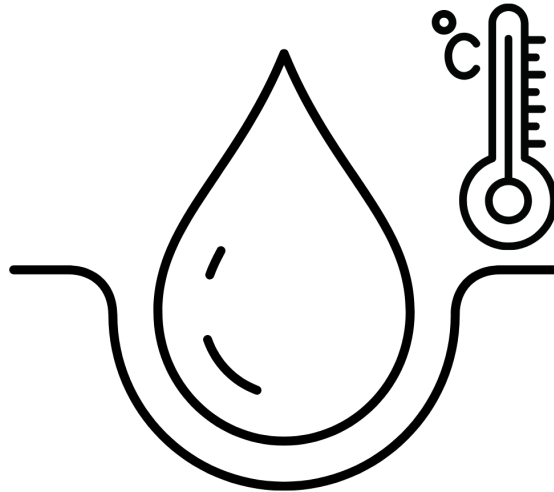
Replaceable POU water filters

In addition to shower heads and hoses, Angel Guard also offer replaceable POU water filters. Provided by Angel Guard, these medical-grade water filters will help offer clean, pathogen-free water. As part of Seraph Protect Services, Angel Guard are able to track your water filter installation dates and provide updates when replacement is required, saving you both time and money.

Water temperature testing

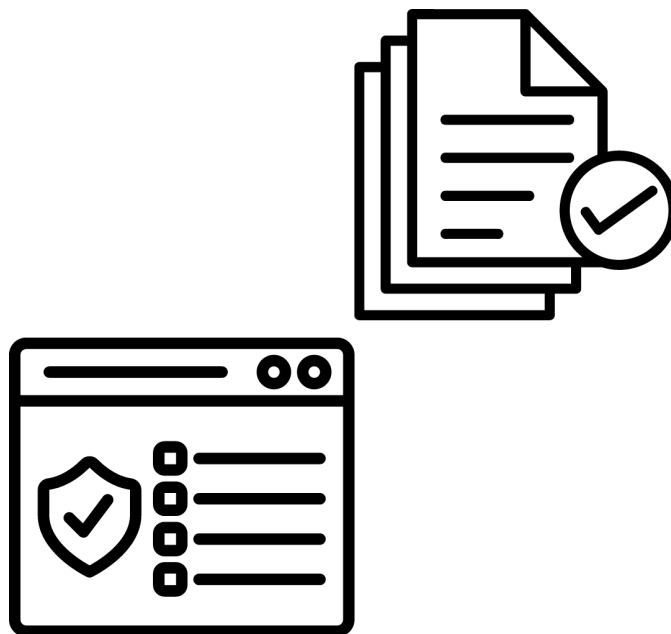
Why monthly temperature testing is needed

Regular monthly temperature testing is vital to maintaining a healthy and sustainable water system, as temperatures need to adhere to either below 20 degrees Celsius for cold water and above 50 degrees Celsius for hot water (55 degrees Celsius within healthcare buildings). Falling into this 20-45 degrees Celsius leaves your water susceptible to becoming the perfect breeding ground for bacteria and biofilm. Keeping your water temperatures within these parameters are required to remain compliant with HSG274 and HTM 04-01.



Compliance, guaranteed

Angel Guard aims to reduce the worries surrounding compliance by deploying trained professionals to measure your water temperatures. With regular testing, your legionella risks will drastically drop as your compliance will exceed all legislation including ACOP. For more information or to make an enquiry regarding any of Angel Guard's services, contact Angel Guard's solution architects today at info@angel-guard.co.uk or telephone 0141 280 9488.



Management at a glance

In order to easily keep on top of your results and ensure compliance is upheld, Angel Guard offers access to its innovative online water management system Seraph Protect. Seraph Protect guarantees ease of mind with automated and easily exportable reports for your convenience.

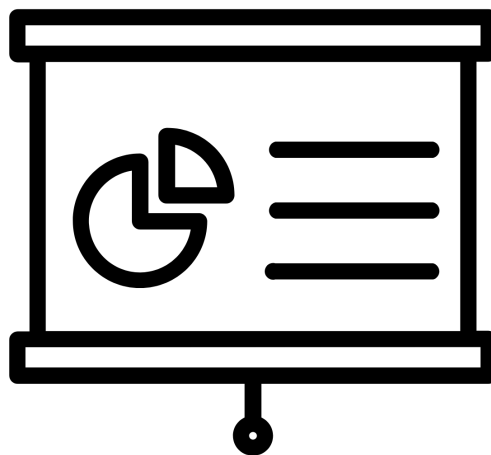
Still need more information?

Angel Guard offer a FREE CPD worth 2 points



ANGEL GUARD
M O N I T O R • C L E A N • P R O T E C T • T R U S T

“Preventing the Spread of Water-Borne Pathogens in Healthcare Settings”



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