

borg&  
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# Infection control measures for drinking water and drinking water dispensers CPD.

How advances in technology, UV-C purification and carbonless filtration make for safe and hygienic drinking water solutions.

# Importance of water.

- Essential for life.
- Needed by everyone, everyday,
- Good hydration improves: mood, health, sleep, focus, productivity, profitability and creativity.
- Opportunity to elevate the experience of drinking water through innovative, premium designed water dispensers.



# Benefits of providing safe & hygienic water.

- Essential, hygienic resource.
  - Improved quality over tap water.
  - Lower risk of infection\*.
- \*Refer to HTM 04 01 Safe Water in Healthcare Premises <https://www.england.nhs.uk/>
- \*Refer to The Workplace (Health, Safety and Welfare) Regulations 1992 <https://www.legislation.gov.uk/uksi/1992/3004/contents/made>



# Choosing the right water dispenser.

- Countertop, floor standing or integrated tap?
- Bottle fed or point of use?
- Water supply and waste requirement?
- Reservoir or reservoir-free?
- Aesthetics and durability?
- Energy saving and carbon footprint?
- Dispense options – height, portion control, hot, cold sparkling.

## Does it have?

- ✓ Touchless technology
- ✓ Antimicrobial finish
- ✓ Filtration
- ✓ UV-C purification

# Overview of waterborne pathogens.

- Microorganisms, such as bacteria and viruses, including Legionella and pseudomonas.
- They can be found in water supplies.
- Stored water can harbor buildup of bacteria and pathogens.
- Ability to cause infections and illness.



Infection control  
risks and solutions.

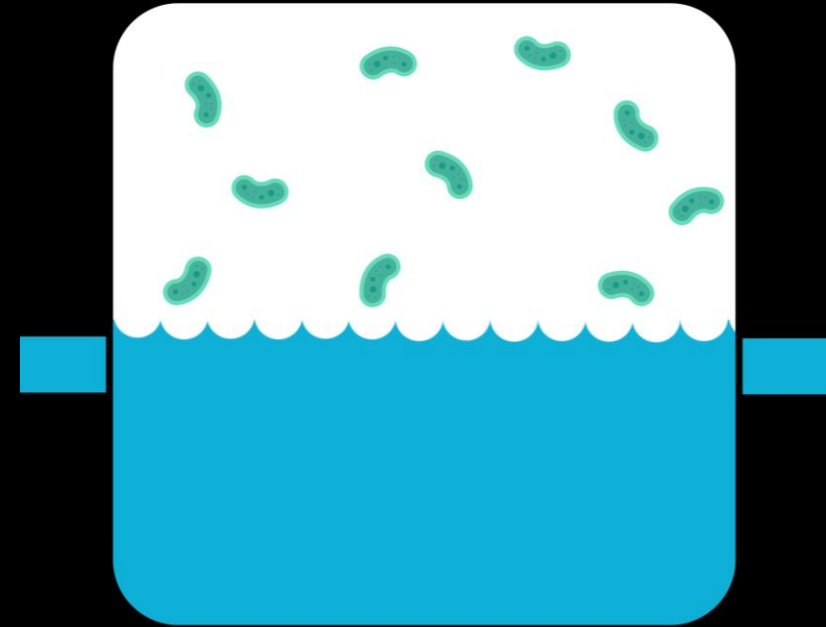
# Risk.

## Reservoirs.

- Stored water can harbor bacteria such as Legionella and pathogens\*.
- Legionella is a waterborne bacteria.
- Dangerous if consumed by people with low immunity.

– \* Refer to HTM 04 01 Safe Water in Healthcare Premises  
<https://www.england.nhs.uk/>

– \* \*Refer to The Workplace (Health, Safety and Welfare) Regulations 1992  
<https://www.legislation.gov.uk/uksi/1992/3004/contents/made>



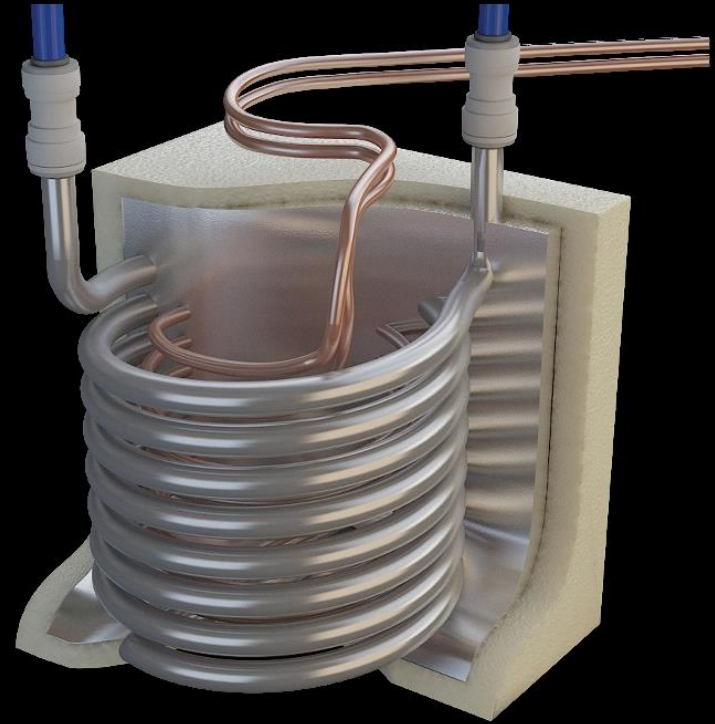
Traditional reservoir water dispenser



# Solution.

## Aluminum block cooling system.

- Reservoir-free, airless, rapid cooling technology.
- No stored water.
- Fresh and hygienic water.

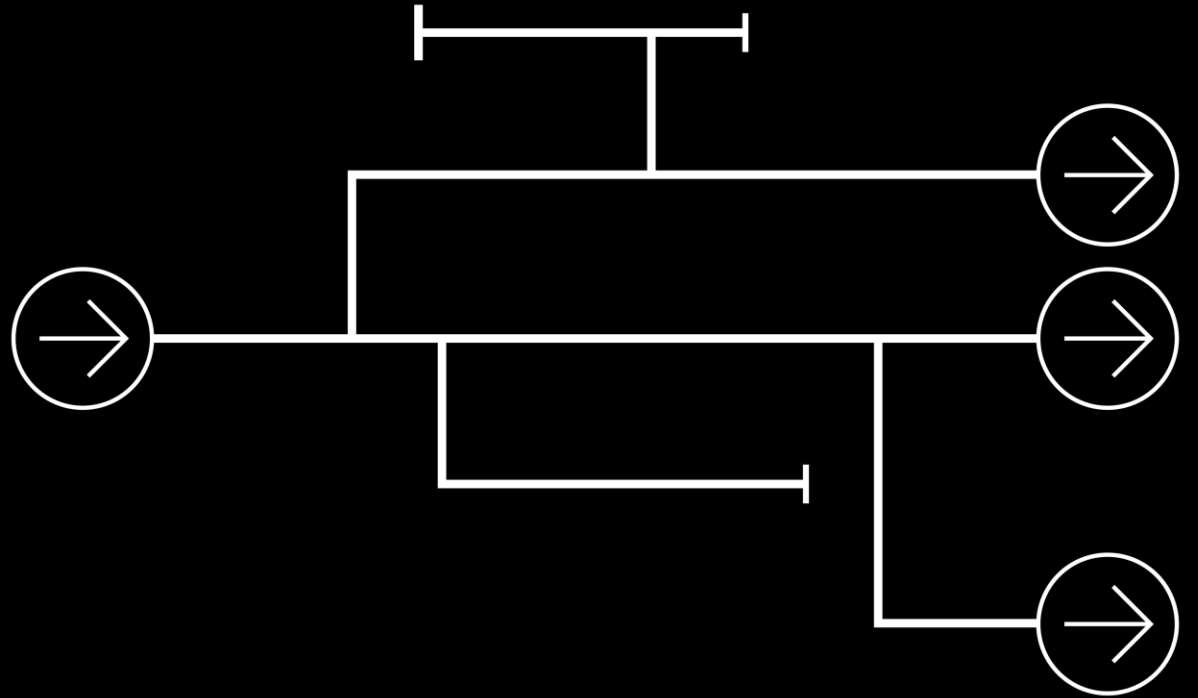


# Risk.

## Dead legs.

- Dead legs occur in pipe work which is no longer in use\*.
- Unused areas of pipe can store stagnant water.
- Bacteria can build up.

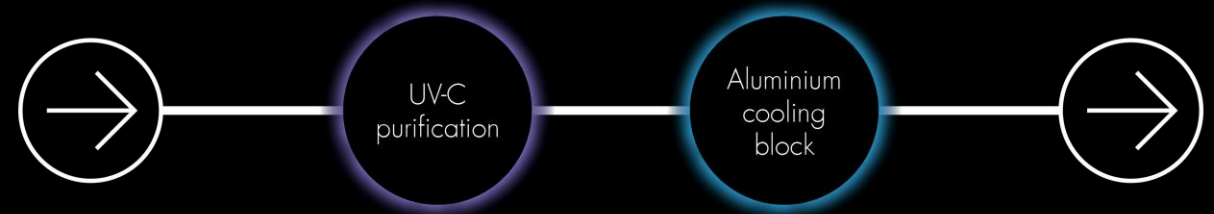
- \*Refer to HTM 04 01 Safe Water in Healthcare Premises  
<https://www.england.nhs.uk/>
- \*Refer to The Water Supply (Water Fittings) Regulations 1999  
<https://www.legislation.gov.uk/uksi/1999/1148/contents/made>



# Solution.

## Single water pathway.

- Shortened, single water pathway, eliminates dead legs\*
- Ensures continuous moving of water
- Minimal wetted area.



- \*Refer to The Water Supply (Water Fittings) Regulations 1999  
<https://www.legislation.gov.uk/uksi/1999/1148/contents/made>

# Risk.

## Touch transmission.

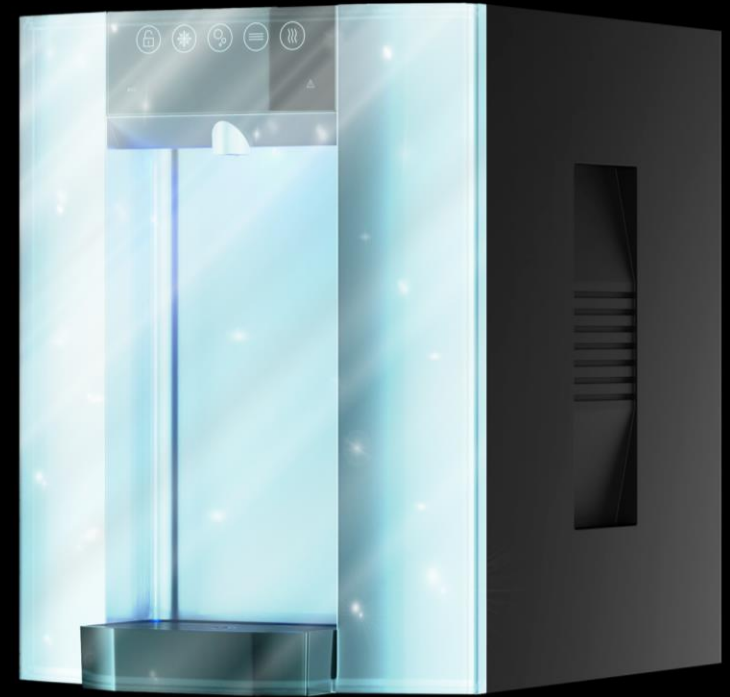
- High-touch areas allow for surface transfer of germs.
- Unwashed hands, sneezing.
- Bacteria can live on surfaces for up to two hours.



# Solution.

## Antimicrobial surfaces.

- Silver ion antimicrobial technology resists bio-film development.
- Kills germs and bacteria.
- Cannot be washed away, doesn't wear off.



# Risk.

## Touch transmission.

- High-touch areas allow for surface transfer of germs and HCAs.
- Traditional buttons can harbour bacteria, even when cleaned.



# Solution.

## Touch-free dispense.

- Eliminates the need for contact.
- Reduces risk of bacterial spread.
- Perfect for high footfall areas.



# Risk.

## Waterborne bacteria.

- Bacteria and viruses maybe present in pipes and mains water\*
- Can lead to illness and infections.

– \*Refer to HTM 04.01, Safe Water in Healthcare Premises  
<https://www.england.nhs.uk/>

– \*Refer to The Water Supply (Water Quality) Regulations 2016  
<https://www.legislation.gov.uk/uksi/2016/614/contents/made>

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# Solution.

## UV-C purification.

- UV-C light is a type of ultraviolet light which is highly effective at destroying germs.
- It can be used to sterilise surfaces, air, and liquids.
- Ultraviolet eco-LEDs with high germicidal efficacy render viruses & pathogens non-viable to Log 4 (99.99%)
- UV treatment has no effect on taste, colour, smell or pH levels.



# Risk.

## Waterborne particulates.

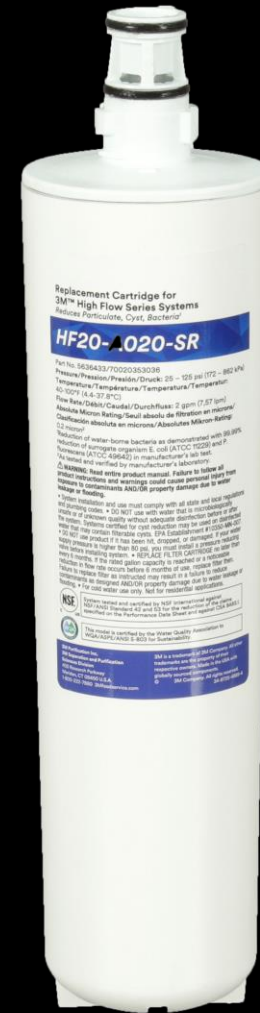
- Risk of foreign particles present in water supplies.\*
- Risk of microplastics.



– \*Refer to The Water Supply (Water Quality) Regulations 2016  
<https://www.legislation.gov.uk/uksi/2016/614/contents/made>

# Solution. Filtration.

- Filtration removes sediment, particulates and microplastics
- Carbon filtration, filters out bacteria to a minimum of Log 4 (99.99%)
- Carbonless filtration maintains chlorine levels for optional disinfection and filters out bacteria to minimum of Log 6 (99.9999%)



Summary.

# New Technologies

## - UVC

Refer to The Water Supply (Water Quality) Regulations 2016  
<https://www.legislation.gov.uk/uksi/2016/614/contents/made>

## - Carbonless filter

Refer to The Water Supply (Water Quality) Regulations 2016  
<https://www.legislation.gov.uk/uksi/2016/614/contents/made>

## - Single water pathway

Refer to HTM 04 01 Safe Water in Healthcare Premises <https://www.england.nhs.uk/>

Refer to The Water Supply (Water Fittings) Regulations 1999  
<https://www.legislation.gov.uk/uksi/1999/1148/contents/made>

## - Aluminum block cooling system

Refer to HTM 04 01 Safe Water in Healthcare Premises <https://www.england.nhs.uk/>

Refer to The Workplace (Health, Safety and Welfare) Regulations 1992  
<https://www.legislation.gov.uk/uksi/1992/3004/contents/made>

## - Touchless dispense

## - Energy saving

Refer to <https://businessclimatehub.uk/>

## - High capacity

Refer to <https://committees.parliament.uk/publications/31509/documents/176742/default/>

# Three learning points.

- Understanding the risk of infection transmission within drinking water
- How UV-C purification, filtration and advances in design and technology mitigate the risk of infection within drinking water
- The benefits of providing safe and hygienic drinking water.



Thank you for your time.

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