Saving Space, Energy and Time;
Design considerations when specifying sustainable drinking water systems.
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Welcome

Today we will cover:

- Water cooled vs Air cooled systems
- Importance of filtration, scale management and maintenance
- Efficiency requirements
- Importance of sustainability
- Industry Accreditations
- Aesthetic tea point consideration and requirements
1989
Billi start production of the first under counter water system

2007
3rd Gen, Quadra launch with unique heat energy reclaim system

2013
Global expansion - UK, Singapore, Hong Kong & UAE

2014
Gold Global Green Tag certification

2015
Launches filtered sparkling water

2016
State-of-the-art showroom opens in London

2018
Billi UK, parent co Billi pty Ltd, acquired by WaterLogic

2017
WRAS Certification
The Billi System Range

- Sahara
- Quadra
- Quadra Sparkling
- Quadra Plus*
- Quadra Plus Sparkling*
- Alpine
- Alpine Sparkling, Bottling
The Billi Tap Range
Importance of Sustainability
Global plastic bottle production

2014
311 Million Tons of plastic bottle produced globally

2050
1,124 Millions Tons of plastic bottles – estimated

2014
Plastics to fish ratio in the Ocean by weight

2050
Plastics to fish ratio in the Ocean by weight
The Solution

- Encourage staff to use re-usable water bottles and commercial spaces to use glass bottles for conference facilities
- Systems that deliver instant filtered, boiling, chilled and sparkling water
- Premium filtration systems to ensure taste and quality
- Efficiency savings
- Reduce carbon footprint
Water cooled
Vs
Air cooled systems
Air cooled systems

- Air flow system to expel heat out and draw cool air in
- Ventilation required
- Refrigerant circulatory system converting gas to liquid and back again
- Chilled water will stop working when cabinet reaches 36ºC
Ventilation
More energy efficient in harnessing heat energy from the cooling process

- Aesthetically more appealing as no ventilation required
- Compact installation footprint
- High grade insulation specification

Heat Exchange system
Under-counter water system

- CO₂: 0.38kg
- Cost: £0.14
- Energy: 0.884kWH

Kettle, watercooler & plastic bottles

- CO₂: 8.92kg
- Cost: £3.31
- Energy: 20.74kWH

*Typical 24 hour day assumes the units are in full operation mode for 12 hours, in sleep mode for 12 hours with a 10 minute warm up period.
For full data, please refer to our Energy Report on our website: www.billi-uk.com/downloads. Costs calculated based on energy prices published by Npower in Jan 2019 (0.16p per kw)
The trouble with kettles

*75% Users will boil more than they need = wasted energy

*£68m wasted from overfilling kettles

**4 Days per year wasted waiting for water to boil

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The Billi undercounter solution

1 Hour

Boiling 250 Cups
Chilled 175 Cups
Sparkling 120 Cups

* Domestic UK
** Commercial UK
Importance of scale management, filtration and maintenance
Hard water and limescale

- Limescale is a deposit of calcium carbonate
- Hard water results in the build-up of scale and is present in over 60% of the UK and Ireland
- Scale build-up damages the performance, efficiency and lifespan of products
- Taste and appearance of drinks can be affected by scale
Five Stage Filtration

SEDIMENTS
Filter out particles in the water

BACTERIA
Kills harmful bacteria such as giardia and cryptosporidium

CHEMICAL
Removes 99.9% of chemicals such as chlorine and ammonia

MINERAL
Enables minerals to flow through the appliance without scale build-up

CHLORAMINE
Filtered from the water
Maintenance and service considerations

- Manufacturers Warranty – usually 24 months
- Maintenance: scheduled or un-scheduled (ad-hoc)
- Limiting Down Time
- Response Time: how quickly can the tech team respond?
- First Time Fix: resolve the issue at first attempt
Industry Accreditations
• The statutory requirement for flow rate must be less than 5 litres per minute.
• Automatic leak detection & in built pressure reducing valves
• Automatic time-out
• 7 day time-switch
• Splash free
• Self calibration
• Green Tag Certification

WRAS – Why not 100ºC?
• To achieve WRAS approval in the commercial environment, you are unable to dispense water above 98ºC for safety and energy efficiency
• Keeping water at 98ºC reduces power consumption

We can help you achieve....
Aesthetic tea point consideration and requirements
Space

Undercounter Space

Sparkling Water – 600mm

Boiling and Chilled Water – 500mm

And where there is space above the counter then all options can be considered
Installation Requirements

Water connection (isolation valve terminating in a 15mm compression)

Waste pipe (32mm or 40mm upstand with trap)

Power (13amp socket)

All services must not obstruct the undercounter system
Quadra

Quadra 440/460
- width: 315mm
- height: 340mm
- depth: 465mm

Power
13amp socket fitted towards the top of base unit, away from water

Water Connection
Leave a min of 350mm above connection to allow for installation rail to be fitted

Waste Pipe
32mm or 40mm pipe with trap, fitted at rear of base unit so a filter can be placed in front
Space

Undercounter Installation

Sparkling Water – 600mm

Boiling and Chilled Water – 500mm
Capacity

Important to understand the likely peak demand as well as the hourly demand during a typical day

How many users are there?

Demand patterns including defined breaks and drinking requirements
Finish

Important to understand the aesthetics of the installation and the range of finishes available*

* Pantone colour matches also available
Case Study

Reliable, energy-efficient under-counter water systems to replace traditional appliances like kettles and watercoolers.
Case Study

Sustainable, energy-efficient and stylish under-counter water systems to replace traditional appliances like kettles and watercoolers.
Case Study

With going plastic-free in mind, this contractor was looking to supply instant boiling, chilled and sparkling water for their staff, whilst also supplying conference rooms with drinking water in branded re-usable glass bottles.
Thank you for your time

Any questions?