

**EXCELLENCE IN
LEGIONELLA CONTROL**

Quantum
LEGIOWARD



OUR STORY

The Quantum LegioGuard story is based on innovation and the quest to harness renewable energy to produce safe sustainable water distribution systems. The origins of the company date back to the mid 1970's when extensive research was undertaken by the University of Melbourne in the development of heat pump technology. With over 40 years of on-going product development and its focus within the global health sector, Quantum LegioGuard is part of the ASX listed Quantum Health Group, an international distributor of high-end medical equipment.

Worldwide there is a significant increase in the number of reported Legionella detections, especially within the health and aged-care sector. This is primarily due to ineffective traditional water management technologies. Quantum LegioGuard acknowledges that legionella bacteria sits dormant in cold water until the optimum conditions are created i.e.; temperature, stagnant water, and food source.

Currently, the health and aged-care sectors attempt various methods of Legionella control including TMV's (thermostatic mixing valves), point of use TMV's, UV (ultra violet) warm water systems, and disinfectants including chlorination. Given that the frequency of Legionella detections is on the rise, clearly these methods are not fully successful.

Having identified the faults in current technologies, Quantum began developing a water system to eradicate Legionella in water distribution systems. After extensive R & D, testing and certification Quantum has developed a range of LegioGuard systems; unique patented sanitised water distribution systems, proven to offer the ultimate in Legionella control in any commercial environment. LegioGuard systems are designed to heat all incoming potable water to a facility to approximately 70°C therefore killing legionella and other bacteria.

LEGIOWARD IS THE ANSWER



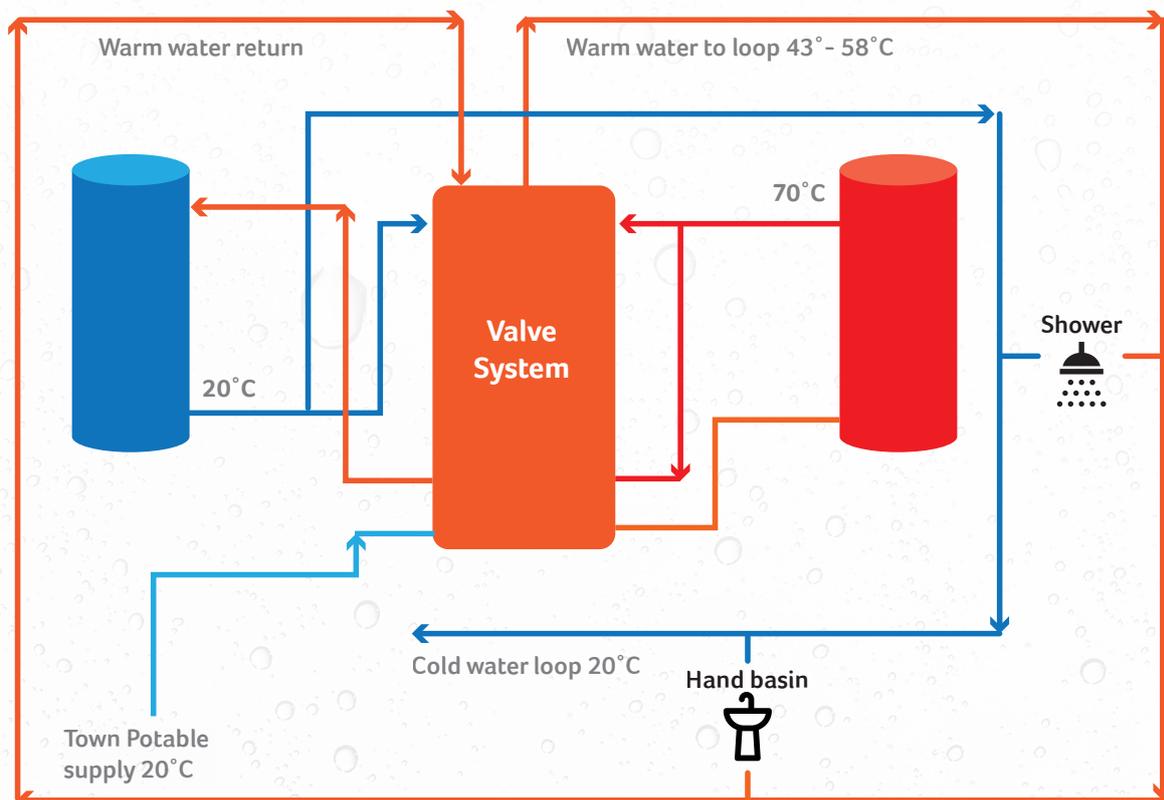
PATENTED TECHNOLOGY

Dual Effect Heat Pump (DEHP) technology developed by Quantum LegioGuard sets new standards in legionella control with its patented process to heat and cool water simultaneously. This results in thermally sanitised hot and cold water supply to a facility in an energy efficient manner. Coupled with constant and accurate temperature control through the unique four port mixing valve, Quantum LegioGuard is the industry leader in safe, sanitised and reliable cold and warm water delivery.

Utilising Quantum LegioGuard's DEHP technology, LegioGuard systems heat all incoming potable water to approximately 70°C and simultaneously cool a portion of the 70°C water to between 15-20°C for supply to the facility. All the cold water for amenities passes through the heating process, thereby cold water in the facility is sanitised. LegioGuard systems mix the sanitised hot water and cold water with a large mixing valve (up to 380 litres per minute), distributing sanitised warm water

CAPACITY

LegioGuard systems can be sized to suit any daily demands. Talk to us to discuss the facility and its daily water requirements.



LEGIOWARD CERTIFICATION

LegioGuard has been subjected to extensive testing by Flinders University microbiology department, wherein a warm water test circulating system was constructed to mirror a typical hospital or aged care facility.

The circulating system, which incorporated a shower, basin and washing machine outlets, was infected with biofilms and Legionella bacteria. Legionella bacteria introduced into the system was not detectable in any sampling point post the LegioGuard system. Legionella entering the LegioGuard system are rapidly rendered non-viable or killed before distribution to outlets.

The complete LegioGuard systems are Watermarked to Australian standards.



Watermark Certification to AS3498 **WMKA25313**

SPECIFICATIONS

Hot Temperature	60°C - 75°C
Cold Temperature	15°C - 24°C - User definable
Working Pressure	500 kPa (PRV supplied)
Expansion Control Valve	550 kPa x 2 (supplied)
Pressure Temp Relief Valve	850 kPa x 2 (supplied)
Cylinder Material	Vitreous Enamel Lined Steel - Y Class
Anode	2 x Aluminium per Cylinder
Electric Element	3 x 3600W or 3 x 4800W per Cylinder

RECOVERY RATES (LITRES PER HOUR)

HP Model	Cold	Hot
10 kW system	176 LPH	176 LPH
15 kW system	266 LPH	266 LPH
20 kW system	352 LPH	352 LPH
30 kW system	533 LPH	533 LPH

VALVE MODEL

MAXIMUM FLOW RATE COMBINED (LITRES PER MINUTE) / PRESSURE LOSS (KPA)

25mm valve	80/145
32mm valve	180/160
40mm valve	280/195
50mm valve	380/200

Key Benefits

LegioGuard tempered water delivery systems



Sanitised cold water supplying fixtures within the facility



Sanitised warm water supplying fixtures within the facility



Quantum LegioGuard Patented Technology



Energy efficient water sourced heat pump with favourable COPs (coefficient of performance).



Reduced maintenance requirements equals lower costs and less facility down time



Requires no end of line TMV's



No UV disinfection, chlorination or chemical dosing necessary



Legionella Performance Warranty available.



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