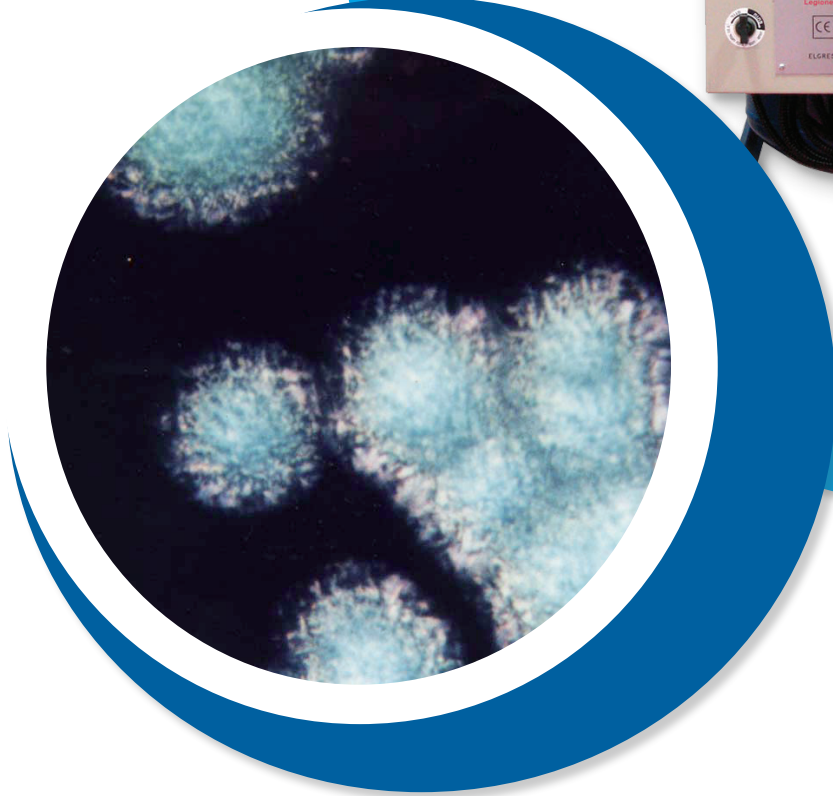




**ELGRESSY**  
ENGINEERING SERVICES LTD.



# **SUPER L.P.B SYSTEM**

**Eradication and Control of Legionella  
Pneumophila Bacteria In Hot Water Systems**

## Super LPB - Legionella Pneumophila Bacteria Treatment system for hot water system

### Addressing the problems of the Legionella Pneumophila (LP) Bacteria

The LP's breeding ground are water systems, both natural and manmade. In natural water systems, its concentration is low and the risk is minimal.

In manmade systems - including hot water systems the risk of infection is increased greatly.

The LP bacteria is very resilient, reproduces at temperatures of 20° C to 45° C and can survive in water with temperatures of up to 70° C.

The bacteria can result in sever, often fatal, pneumonia to which the elderly, young children, smokers, alcoholics and those with a damaged immune system are particularly susceptible

### Super LPB Provides the Right Solution at the Right Place

Elgressy's LPB system facilitates the automatic control and eradication of microorganisms, including Legionella Pneumophila bacteria, in hot water systems.

The system is based on an electrochemical process, which reduces significantly the buildup of sediment and scale within hot water systems.

Prevention of scale buildup and precipitation assists in the prevention of LP bacteria growth and also corrosion.

The system is chemical free and therefore prevents damage to system components, is not a health risk and is environmentally safe.

The Elgressy LPB system is patented in Israel and patent pending in the United States.

Tested and approved by the Spanish and Israeli Ministry of Health

### The benefits of the Elgressy Super LPB system

#### Removes harmful bacteria and health dangers

- By facilitating the efficient eradication of the potentially lethal LP bacteria, the LPB system provides a safer and healthier environment.

#### Chemically free water treatment

- No chemicals are used in the process so that the water remains clean and healthy and poses no threat to people or the environment.

#### Prevents LP bacteria re-growth

- Reducing scale build up and sediment, the system removes the LP bacteria's favorite breeding ground and ensures a bacteria free water supply.

#### Efficient operation and a longer system life

- Because the system uses no chemicals, operation is more efficient, vital components aren't damaged and the systems life expectancy is significantly increased.

#### Lower operating costs

- Operating costs are significantly reduced because less maintenance is needed, no expensive and harmful chemicals are used and water efficiency is greatly increased.

LPB SYSTEM



STIRRING TANK FRONT VIEW



STIRRING TANK side view



### L.P.B Installations (partial list)



### Super LPB – The Electrochemical Process

The Elgressy LPB system destroys buildups of the LP bacteria, and prevents its reestablishment in hot water subsystems by using an electrochemical process.

#### Three Step Process:

- Removal of Legionella Pneumophila bacteria growth media**

At the bottom of any hot water tank, there exists the perfect environment for the development of LP bacteria - sediment buildup. The LPB system prevents the buildup of sediment by causing turbulence at the water entry point thus preventing sediment and scale buildup and depriving the bacteria of their growth medium.

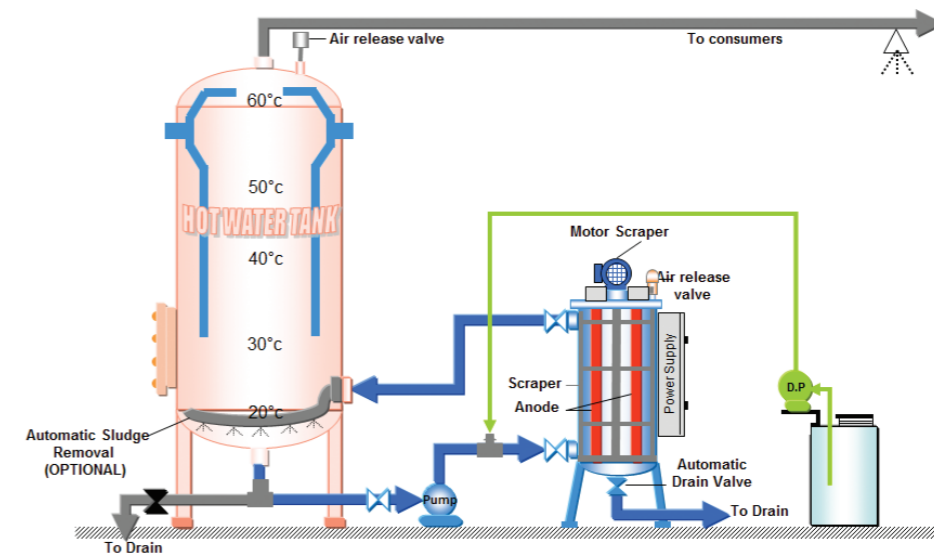
- Electrochemical disinfection treatment**

Inside the reaction tank are unique titanium

and nickel oxide anodes, patented by Elgressy Engineering. With a life expectancy of several years, these anodes do not cause corrosion or water contamination. When direct electric current is passed through the anodes a tiny and controlled amount of free chlorine (CL2) is produced along with oxygen radicals. Together they help disinfect the water. Additionally, the pH levels of the water are raised to 14, especially near the walls of the tank. Such high pH levels prevent the development of micro-organisms.

- High temperature treatment**

As an additional safeguard, once the water has undergone treatment in the LPB system, it is pumped through heat exchangers where temperatures exceeding over 70° C are attainable that destroy any remaining bacteria.



## Elgressy Engineering Services

Elgressy Engineering Services Ltd. has been active in the field of water treatment for over 37 years and has a reputation for innovation, quality and service second to none.

Elgressy develops and markets comprehensive solutions and systems for the treatment and prevention of common water related problems including: scale, bacteria and corrosion. Elgressy also provides solutions for the reclamation of water with a high concentration of organic compounds and waste water and its reuse.

Elgressy maintains a team of highly skilled and experienced professionals to update and develop new systems to meet the changing needs of our clients and the more than 20,000 systems installed worldwide.

### Elgressy Engineering Services Ltd.

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Elgressy Engineering Services Ltd. is a subsidiary of Clean Technologies Group (CTG).  
CTG is an international Cleantech company providing best-of-breed environmental solutions to industrial and municipal clients worldwide.  
CTG delivers state-of-the-art solutions for water, wastewater and solid waste management.



Design: Studio Perach