

TOWER

CtrlFlow 

“This changes everything...”

It's ECA technology but not as you know it.

CtrlFlow is the production of high-quality biocides and cleaning agents by electrolysis. This is sustainability at its most efficient.

In the past ECA technology has been used, tweaked, and experimented with in many applications. And in some cases, this has been effective.

But we have refined the process and the machinery, to take these solutions to a whole new level.

“We recommend the Flow-40 Plus Cruise Ship systems for installations on cruise ships. With automated production of cleaning and disinfectant solutions on-board from just salt and water, it not only removes the dependency on all existing synthetic chemical disinfectants and cleaning agents on-board, but it also reduces plastics at sea and the environmental footprint. The activated solutions are non-toxic, non-hazardous, and hypoallergenic and while highly effective at killing all forms of microorganism and cleaning surfaces and fabrics, are totally safe to use around children, the elderly and the immunocompromised”

The logo for TOWER, featuring the word "TOWER" in a bold, white, sans-serif font. Above the letter "O" is a stylized, light blue wave icon.

The logo for CtrlFlow, featuring the word "CtrlFlow" in a white, sans-serif font. To the right of the text is a stylized, light blue wave icon.

What does it do?

It is a highly effective cleaner and disinfectant that will replace 90% of regular cleaning and disinfectant products, with the exception of heavy duty degreasers and limescale removers.

- The solution will replace many conventional packaged chemicals that require:
 - Shipping
 - Storage
 - Dilution
 - Training
 - Packaging
 - Waste and disposal
- The CtrlFlow solution reduces everyone's exposure to highly concentrated packaged chemicals.
- One unit will replace an array of multi-coloured and fragranced concentrates and reduces training requirements.
- It will significantly reduce weekly/monthly/annual purchasing and disposal of most daily-use packaged chemicals.



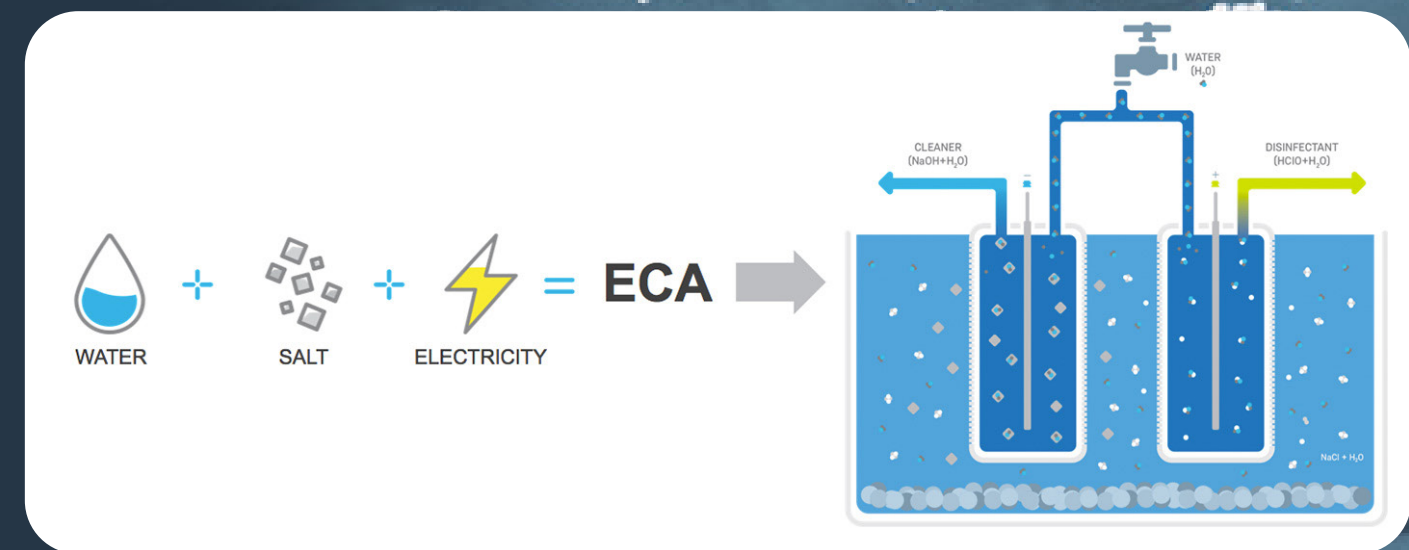
What does it do?

- CtrlFlow makes a bold statement that your enterprise is committed to enhancing your environmental commitments and credentials. With on-site generation of the solution there is no transportation of products from factory to warehouse to client, a process that is repeated every delivery and there is no packaging to dispose of.
- In addition, the solution generated is non-toxic, meaning that there are no harmful solutions to damage staff, clients or the public or being released into the environment.



How does it work?

- The solution is made by ElectroChemical Activation (ECA) and is a branch of electrolysis that uses specialist cell technology to generate biocides from ordinary tap water and salt.
- The activation process allows the chlorine in the salt (NaCl) to combine with the hydrogen and oxygen in the water (H_2O) to create hypochlorous acid (HOCl) which is a very safe but powerful disinfectant. Humans produce hypochlorous acid naturally as part of our immune system to combat pathogens. As a result, the solution is non-toxic and non-allergenic to humans. Hypochlorous acid is a very powerful biocide with efficacy levels many times higher than other forms of chlorine based disinfectants.
- The cleaning part of the solution: the sodium in the salt combines with the hydrogen and oxygen in the water to create sodium hydroxide, a cleaning agent. This compound gives the solution its cleaning properties with pH level of pH10. These can be available as separate solutions or combined with the hypochlorous acid to produce a single disinfectant/cleaner.



Performance

- The strength of any disinfectant is measured in parts per million (ppm) of the active ingredient. With disinfectants containing (HOCl) most microorganisms can be destroyed with a concentration of 100ppm however we have used a solution of 250ppm.
- The effectiveness of a biocide is determined by its “kill kinetics”:-
 - Kill rate (efficiency)
 - The speed of the kill (contact time)
 - Rate of regrowth
- It has been proved by independent laboratory testing that the CtrlFlow solution has a high level of efficacy (up to 99.9999% kill rate), has a very low contact times (kills on contact) and very low regrowth rates, because survival rates are so low. This makes the solution one of the highest performing biocides available. Will kill E.coli, salmonella, staphylococcus aureus, methicillin resistant, MRSA, listeria, bacillus subtilis, norovirus and COVID-19.
- The solution has good general cleaning properties for all hard surfaces and fabrics, including chairs, carpets and curtains. The solution dries smear-free and leaves polished effect on glass, mirrors, ceramics, stainless steel and chrome.

Environmental

- Once CtrlFlow is installed the only consumables needed to generate unlimited quantities of the disinfectant cleaning solution are:
 - Salt = 2gms per litre of solution
 - Water
 - A very small amount of electricity
 - 1ltr of solution = less than 10% of boiling a kettle
- Both salt & water are naturally sustainable products.
- The cost of producing the solution is very competitive including accounting for the capital outlay. In addition - “back-office” procurement, delivery, inventory, and disposal processes can be eliminated, further cutting cost.

BIOCIDE = A biocide is defined in the European legislation as a chemical substance or microorganism intended to destroy, deter, render harmless, or exert a controlling effect on any harmful organism by chemical or biological means.

- ECA water is listed as an approved BIOCIDE under all five categories of the European Chemicals Agency (ECHA) which has to approve all chemicals sold in the EU and which the UK has continued affiliation after Brexit.



ECA Water – Test Results – Part 1

We have received the test results from the laboratory for EN14476 & EN16777. Attached are the full reports, but are summarised below:

- EN14476 is a quantitative suspension test for evaluation of virucidal activity in the medical area. The tests were conducted by an independent accredited laboratory to European EN standards protocols, which are recognised globally for virucidal efficacy. The viruses tested were Vacciniavirus, and Feline Coronavirus.
- EN16777 is a quantitative non-porous surface test without mechanical action for the evaluation of virucidal activity of chemical disinfectants used in the medical area. The tests were conducted by an independent accredited laboratory to European EN standard protocols. The viruses tested were Vacciniavirus.
- By passing against Vaccinia virus the product is certified to kill 99.9% of all enveloped viruses wherever it has achieved a log 4 reduction. Enveloped viruses include any influenza or coronavirus, including Covid-19, amongst other significant medically relevant organisms.



ECA Water – Test Results – Part 2

- Both tests were conducted on solution at 3 concentrations: 500ppm, 200ppm and 100ppm
- Both tests were conducted at 1 minute and 5 minutes.
- EN14476 and EN16777 achieved Log 4 reduction for all concentrations and contact times, except for 100ppm at 1 minute where it achieved Log 3.96 and 3.98 reductions respectively. This is within the statistical deviation rate for a Log 4 reduction. For the 5 minute contact time >Log 4 reduction was achieved for both tests at 100ppm.



ECA Water – Where is it used?

- Sanitisation on cruise ships
- Disinfection Healthcare
- For general commercial cleaning
- Food production areas – for cleaning
- Food production areas – for product enhancement
- Marine ballast tanks
- Retail establishments
- Laundry Solution
- Carpet Cleaning



ECA Water – Extra Information

- Please contact the Cruise team for any extra information and supporting documents





Thank you

For further information please call or email
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