

## Continuum modular water treatment system

We believe that one of the basic factors of life is clean water. Unfortunately, despite all the advances in science and technology, clean water is still not available to all people in the world even in this, the 21<sup>st</sup> century. Dirty and polluted water remains a feature in many locations worldwide caused through a variety of industrial, agricultural and mining activities. It is a key part of Continuum's environmental services strategy to be able to provide solutions to clean up dirty water and provide a safer, healthier and cleaner environment for us all. The solution is here and available right now. WTS.

### The Continuum Water Treatment System (WTS)

The Continuum WTS is a modularly designed, transportable and stand-alone system that is designed to provide water treatment solutions for a wide range of problems. These solutions include cleansing and filtering of drinking water, recycling residential grey water, cleansing of industrial waste water, remediation of water polluted through the agricultural use of chemicals, handling flow-back water in oil and gas extraction and remediation of polluted water from mining activities. It may also be used to purify water from liquid waste management.

Each module is designed to have very low power consumption and can be powered by its' own fuel cell or by a small solar panel attachment. The unit is designed to be run continuously (24/7) and once in operation will provide up to one cubic metre of drinking water per hour.



*A WTS unit loaded on a trailer for delivery*

A single unit can cleanse and provide enough clean water for around 200 people, so multiple units may be installed should the output need be higher.

For an industrial scale application, for example in a mining or oil and gas exploration installation where large amounts of polluted and contaminated water has to be cleansed, larger sized individual modules may be constructed to suit the required input/output. This would also reduce the unit cost of operation to produce each cubic metre of remediated water. Operation is simple. It can be locally or remotely controlled and monitored for performance and is completely environmentally safe in its operation.

## The range of applications for the WTS

The application of our modular solutions is wide ranging and will bring immediate benefits to a number of situations where the treatment of contaminated water is urgently needed on site. It is an extremely versatile system which may be used in a wide range of problems, such as:-

- Purification of water to drinking level standard
- Recycling of domestic contaminated water
- Desalination of industrial, domestic or natural brines
- Purification of industrial waste water
- Liquid water and effluent disposal
- Cleansing of contaminated water from oil and gas exploration
- Remediating water from mining operations and capturing of residual precious metals if applicable

## How our WTS system works

The success of the Continuum WTS equipment operations is based on the application of pulsed electricity and magnetic fields to the liquid being passed through the system. This combined with the use of our proprietary solutions to eliminate toxins and particulates in the liquid and the ability to extract waste in dense liquid or dry solid form provides a unique treatment

for contaminated water.

The system not only regenerates the water passed through it but also completely neutralises all toxins, poisonous or radioactive substances and removes all other materials in the water.

The units are easy to use and operate and multiple units can be operated and managed by a single operative following a short training course. The units are safe. They include an integral monitoring system that continuously checks input, operating and output parameters to completely ensure the sterility and safety of the treated water. The units are equipped with a fire protection system and explosion protection system to prevent the accumulation of hydrogen.

The WTS unit produces clean hydrogen as a useful by-product of its operation. This clean hydrogen can either be used as fuel for generators for example or fed into an optional fuel cell.

With the optional fuel cell incorporated into the system the unit needs no external power supply and, once in operation any excess electricity that is generated can be fed either into the local grid or local domestic power supply.

## How our WTS is constructed

The standard WTS unit weighs around 500 Kg and is 1.1 x 1.1 x 1.35 metres in overall size. Modules may be altered in configuration according to clients' own individual needs and requirements.

Taking into account an estimated and average usage rate of twenty (20) hours per day of continuous operations a major service and overhaul of the units should only be required every twenty (20) years. Regular smaller operational maintenance would of course be carried out locally.

This means that units installed in remote locations can be left to operate without the need for regular major maintenance and servicing.

Each unit consists of five individual modules which are easily accessible for servicing and repair. The modules consist of a chamber used to extract salts, metals, minerals and other compounds, a waste disposal unit that can produce either solid dry waste or dense liquid waste and a module which adjusts and optimises the physical properties of the water as it is treated such as conductivity and levels of pH. The system can also be configured to produce saline or other structured water types.

## The benefits of the Continuum WTS

The Continuum WTS addresses and treats a broad spectrum of water borne contaminants and offers the following key benefits:-

- WTS can be configured to deal with many different types of water borne contaminants
- Can be utilised on location for full onsite water remediation
- Totally scalable due to its modular design and format
- Eliminates a wide range of contaminants including hydro carbons, heavy metals, salts and chlorides
- Kills and removes a wide spectrum of bacteria in the water, making the water safe to drink and avoiding associated health hazards
- Does not use chemicals or toxic substances in its application making it a natural process
- Mobile and compact, can be shipped in normal shipping containers
- Easy to set up and install
- Low or no energy consumption (no energy is used when the optional fuel cell is applied)
- Decreased costs and increased return on investment (ROI) in comparison with other solutions.
- Reduces the need for hazardous and toxic waste disposal as a result of the remediation process

## More information

The Continuum WTS solution is an innovative and cost effective way to remediate polluted and dirty water in a wide range of industrial, domestic, mining and exploratory applications.

It can be used to provide clean drinking water to remote locations or alternatively act as an intermediary solution while the main water supply is corrected or remediated.

It can also be used in a wide range of other applications including the treatment of industrial or other liquid waste.

For more information as to how the WTS can work for you please contact Continuum at [info@continuum.li](mailto:info@continuum.li)