Building a world without prolonged thirst
Our mission

To improve the life, living and livelihood of every individual globally through safe, simple and swift water treatment solutions.

Life
Living
Livelihood

Our story

WateROAM was founded in 2014 when three undergraduates learnt of the urgent need for clean water in underdeveloped communities across the globe. With a passion to end prolonged thirst, they develop innovative water treatment solutions to help the underprivileged.

Our vision

Building a world without prolonged thirst.

With your help, we can change that today.

2.1 billion people lack access to safe drinking water globally
(Source: UNICEF)

Communities in rural regions and disaster zones often drink contaminated water which can lead to diarrhoea, waterborne illnesses and sometimes, even death.

When a community gains access to clean water, it changes everything. It can improve health, increase productivity and help kids spend more time in school.
The ROAMfilter™ Ultra uses PVDF hollow fiber membrane technology with a pore size of 0.02 microns to effectively remove 99.9999% of bacteria and 99.99% of viruses. It is capable of producing up to 1500 liters of clean, filtered water every hour.

To increase the lifespan of the ROAMfilter™ Ultra, it can be operated in the cross-flow method whereby the feed water can be continuously recirculated through the feed tank, allowing the system to operate at a longer duration before the need to backwash.
# Product Specification

## Specification

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Hollow Fiber (Out-to-In Filtration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Hydrophilic modified PVDF</td>
</tr>
<tr>
<td>Fibre Size (ID / OD)</td>
<td>1.0mm / 1.8mm</td>
</tr>
<tr>
<td>Recovery</td>
<td>&gt; 95%/65% (Dead End/Cross Flow)</td>
</tr>
<tr>
<td>Surface Area</td>
<td>38m² (410 sq ft)</td>
</tr>
<tr>
<td>Pore Size, nominal</td>
<td>0.02 micron</td>
</tr>
<tr>
<td>Flow Rate: City water</td>
<td>+/- 1500 litres per hour*</td>
</tr>
<tr>
<td>Shipping Dimension &amp; Weight</td>
<td>30 x 24 x 134 cm, Housing: 11.6 kg</td>
</tr>
<tr>
<td></td>
<td>PVDF Membrane insert: 11.3kg</td>
</tr>
<tr>
<td>Fittings</td>
<td>1 inch camlock</td>
</tr>
</tbody>
</table>

*subject to feed water condition

## Operating Process

<table>
<thead>
<tr>
<th>Temperature</th>
<th>&lt; 50 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure (TMP)</td>
<td>&lt; 1 bar - Feed; &lt; 2 bar - Backwash</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>&lt; 5 bar</td>
</tr>
<tr>
<td>pH Range</td>
<td>3 to 9 (Operating); 2 to 11 (CIP)</td>
</tr>
<tr>
<td>Filtration (Out-to-In)</td>
<td>Feed and Product in Dead End / Cross Flow Mode</td>
</tr>
<tr>
<td>Re-generation (In-to-Out)</td>
<td>Backwash / CIP</td>
</tr>
</tbody>
</table>

## Application

- Aquaculture and fish farm
- Boiler feed water
- Church, Mosque, Temple
- Construction Site
- Evacuation holding area
- Emergency disaster relief efforts
- Healthcare
- Hotel, hostel and resorts
- Manufacturing plant
- Office and workplace
- Orphanage
- Pre-treatment to RO
- Rural villages
- Schools
- Swimming pool

## Operational Requirement:

- Electric Power:
  1) 400 Watt for feed
  2) 750 Watt for backwash
- Total weight: 45kg
In the month of January 2015, WateROAM deployed the ROAMfilter™ Ultra through NGOs which headed into Kelantan to provide relief for the East Malaysia Floods. What began as a light rainfall in mid December 2014 eventually led to torrential rains that stretched for 3 long weeks, causing disruption to the livelihood of the citizens. With more than 200,000 people affected, the 2014 Malaysian Flood is described as the worst floods in decades.

In particular, clean water supply was contaminated by floodwaters intruding into wells. The proved to be the ideal solution in such circumstances, converting river water into clean water for cleaning, cooking and drinking. ROAMfilter™ Ultra remained robust throughout its operation due to the nature of its design being highly durable and minimal maintenance required. Each system was capable of supporting 500-800 people in the vicinity.
In the month of April 2015, WateROAM provided ROAMfilter™ Ultra through a collaboration between the Singapore Red Cross and Relief Singapore for relief efforts in Vanuatu following the devastating effects of Cyclone Pam.

ROAMfilter™ Ultra were deployed, with one being on the volcanic island of Tanna. Tanna was considered to be the worst hit area by Cyclone Pam, being hit with large scale destruction to housing, farming and livelihoods.

The ROAMfilter™ Ultra filtered water from a muddy creek 7km away, providing clean drinking water into the town of Isangel that has a population of 4000. At the flow rate of 800L/hr, it remains limited in its ability to supply the entire town but it has added a permanent alternative water source to the town's water network. Each system is designed to support up to 800 people.
Our Core Strengths

- Dedicated Account Manager
- WASH Consulting and Advisory
- 24/7 Remote Support
- Ready Inventory Stock Pile
- Customisable Solution Set-up
- Flexible Logistic Partners
- 100% Product Quality Check and Assurance
- Complementary Product Training Services

Press Features

Our Partners
Awards

- **UN Young Leader Representative**
  Sustainable Development Goals for Clean water and Sanitation

- **ASEAN Impact Challenge**
  Best Innovation Awardee

- **Facebook Social Entrepreneurship**
  APAC Regional Winner

- **Brands for Good**
  Patent for Good Awardee

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