

The Reclaimer

Today, 3.6 billion people lack access to safely managed sanitation. Traditional wastewater treatment requires significant, expensive infrastructure. By 2050, a 30% increase in global water demand is anticipated; yet despite increasing water scarcity, globally, we have a preference for flush toilets. To meet these challenges we have developed **the Reclaimer**: a compact, onsite wastewater treatment technology for buildings and homes that requires no water or sewer hookup and enables treated wastewater to be re-used in flush toilets.

Key features

- Continuous, automated operation
- <10 minute per flush processing time
- Designed to treat blackwater to ISO 30500 standards
- No water or sewer hookup required
- Scalable
- Energy usage: 20-30 Wh/L
- Life expectancy: 10 years (estimated)
- Annual maintenance for filter replacement
- A complete sanitation solution when paired with solids digestion or containment

Performance

The Reclaimer treats between **500-1,000 L/day**, approximately **80-160 uses/day**.



Process

The Reclaimer is designed to receive settled and/or coarsely filtered blackwater (>99% of toilet waste by volume) and treat it with a four-stage process:

1) Ultrafiltration

Removes suspended solids
Automated backwash (prolongs filter)

2) Granular Activated Carbon

Removes soluble organics

3) Zeolite

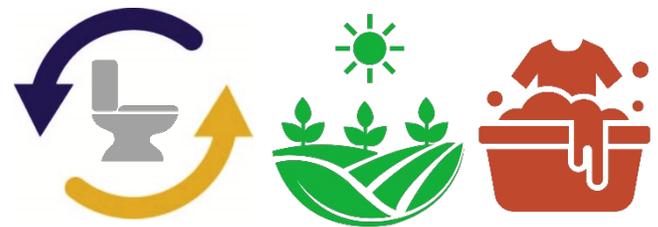
Removes ammonia

4) Electrochemical Oxidation

Removes pathogens



Designed to treat blackwater to ISO 30500, treated water can be re-used for multiple purposes, including flushing, irrigation and laundry.



Use Cases

The Reclaimer can be scaled to meet demand for wastewater treatment in individual and multi-family homes, buildings, dormitories, communal ablution blocks, informal settlements, refugee camps, and mobile treatment units. The technology measures 1m (w) x 1m (l) x 2m (h).

Stage of development

- First generation prototypes have undergone 1+ year of lab and field testing
- Second generation prototype has undergone 6 months of lab testing, is field-ready
- Technology has been licensed by a company in India
- Multiple installations planned for 2021-2022
- Greywater testing underway
- Seeking manufacturing partners to develop local supply chains

For more information

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