The Reclaimer

Key Features
The Reclaimer is a liquid processing unit designed to rapidly treat blackwater and greywater to ISO 30500 standards, enabling onsite reuse and water conservation.

- Unit combines three treatment modalities into a compact, automated system ideal for urban environments.
- Liquid waste from household or community toilets, dewatered sludge, and septic tanks can be treated.
- No additional water is required for operation.
- Buffered batch processing allows the system to accept liquid during operation (100-200 L/day).
- External power required: 20 - 1350 W

Process
- Ultrafiltration removes suspended solids and turbidity.
- Activated carbon removes soluble organic material.
- Electrochemical treatment removes pathogens.

Status of Development
Field-testing underway in India.

Additional Partners
Laboratory Performance Data
Reclaimer system performance with blackwater in laboratory tests. Data show reductions in chemical oxygen demand (COD), total suspended solids (TSS), and bacterial count in 13 separate trials. Dotted lines indicate ISO effluent standards for COD and TSS and disinfection target (< 5/ml) for bacterial count.

![Graphs showing COD, TSS, and bacterial count](image)

<table>
<thead>
<tr>
<th></th>
<th>COD removal</th>
<th>TSS removal</th>
<th>Pathogen removal</th>
<th>Capacity</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>88 - 100%</td>
<td>94 - 100%</td>
<td>below detection in &gt; 95% of trials</td>
<td>114 - 210 L / day</td>
<td>20 W (idle), 75 W (electrochemical treatment), 1300 W (ultrafiltration)</td>
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</tbody>
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**Field-Testing**
The Reclaimer was installed in Coimbatore, India, in February and is currently treating blackwater from up to 20 users per day. Field-testing will continue for six months.

For more information
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