

# CleanSteam



## Product Overview



Patent numbers: Canadian 2751,895; US and Foreign Patents Pending

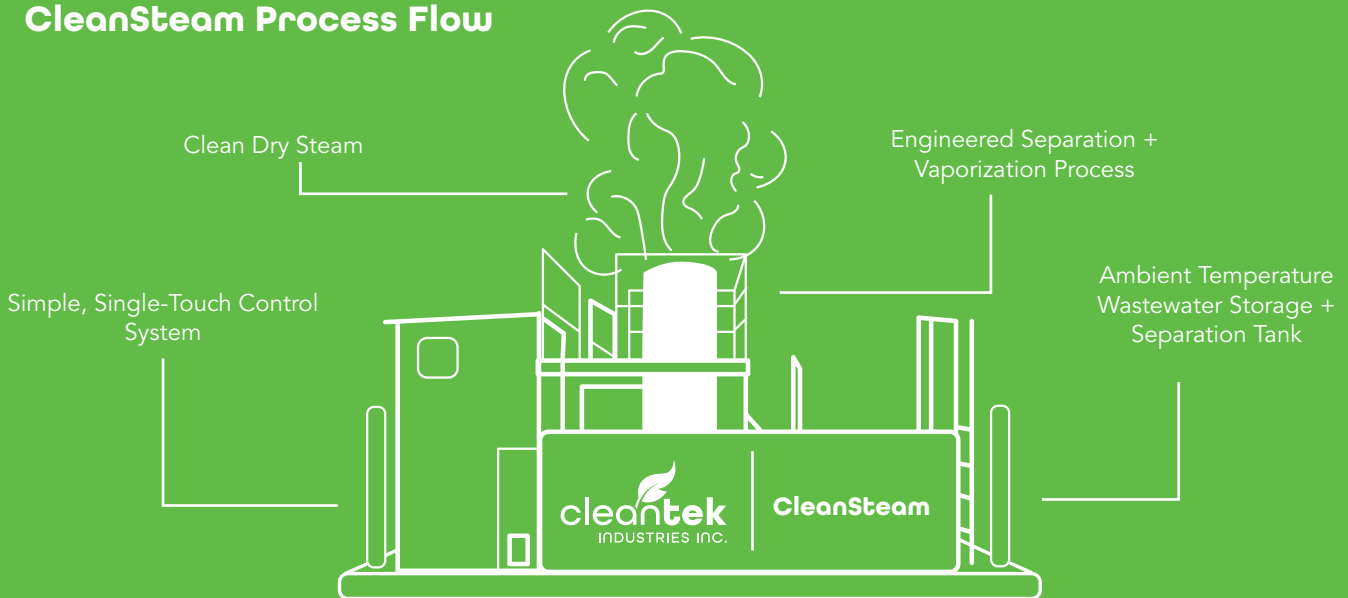
# CleanSteam



CleanSteam™ employs a proprietary German-Engineered “Emissions Scrubbing/Thermal Separation” technology to separate and evaporate to atmosphere the pure water molecules within contaminated liquid.

The “Mist-Pad Layering” design prevents steam droplets containing oils, salts, or other contamination, from atmospheric discharge by cycling them back into the system until correct thermal separation is achieved.

## CleanSteam Process Flow





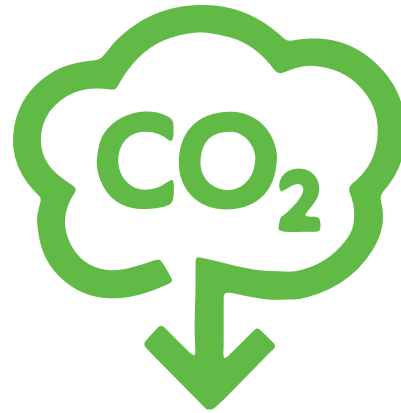
## Environmental Benefits

### Reduced Waste Water

Fewer trips to dispose of waste water means less risk of **off-location spills, accident or injury**, as well as **reduced heavy traffic** on roads



Reduced Environmental Footprint



### Reduced Emissions

The CleanSteam Technology **scrubs the emissions** produced by the fuel source

### Waste Streams Overview:

- Boiler blowdown
- Cement water
- Traces of Brine or Strip water are acceptable
- Lease/ditch water
- Run-off
- Wash water



## Financial Benefits



**85% LESS  
WASTE WATER**

Reduction in waste water to high-cost disposal facility



**Reduced  
Transportation Costs**



**Reduction in Pellet  
and/or Sawdust**

## Operational Benefits

- ✓ Vaporization occurs within seconds of start-up
- ✓ Safe unmanned operations
- ✓ Simple cleaning process - No filtering or pretreatment required
- ✓ Automated control system with extensive sensor network, simple on/off functionality and remote monitoring
- ✓ Avoid excessive disposal expenses by managing waste at the wellsite in an efficient and effective manner

## Features



### Up to 8m<sup>3</sup>/50bbl Daily Throughput

Lower diesel consumption than any other waste water dehydrator in its class with very little maintenance required.



### Significant ESG Benefits

The CleanSteam technology "scrubs" the emissions produced by the fuel source.



### Reduced operational management

Less sawdust, pellets or disposal through injection to mitigate frequent traffic and offer savings by utilizing an on-site water reduction solution.

