

# PURE-RO/LTC

Leachate Treatment Container

- high recovery membrane solution
- 100% safety
- compact unit



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# PURE-RO/LTC

## Leachate Treatment Container



### Compact solution for leachate treatment of domestic landfills

Domestic waste, being placed on landfills, contains high contamination of biodegradable organic materials. Treatment of leachate - arising from its moisture and rainfall - is difficult due to its unstable characteristics, high organic and ammonia content.

Pureco provides turn-key, containerized leachate treatment units, equipped with the latest technological development with the so called Spacer Tube® module (ST), produced and patented by Ultura. The ST modules are the sole of the reverse osmosis technology installed after suitable pretreatment steps.

### Advantages of the ST® modules

The main advantage of these ST® is the large surface area of the membranes, compared to the disc membranes accommodated in the same sized membrane

vessels. The larger surface area ensures lower membrane flux (ltr/hr/m<sup>2</sup>) at identical flow rate, or the possibility of pressing higher flow rate through the membrane at constant membrane flux.

Due to this phenomenon, the RO membrane cleaning becomes less frequent and therefore the cleaned water yield is significantly increased.



### Main Technological Steps of Pure-RO/LTC

- Sand filtration to remove coarse TSS particles
- Cartridge filtration to remove the fine TSS particles
- ST® designed in one, two or in three-staged configuration depending on the required discharge parameters and influent concentrations
- RO membranes allow high organics concentration in the feed flow
- Possible to operate between 60 – 90 bar pressure placed into fiberglass housing

- Concentrate minimization at 120 bar pressure within stainless steel housing (concentrate stage)

• Instead of NaOH dosing, CO<sub>2</sub> degassing is applied to increase the effluent pH

• Ion exchanger might be applied, in order to remove the majority of the remaining ammonia and CaCO<sub>3</sub> from the RO concentrate

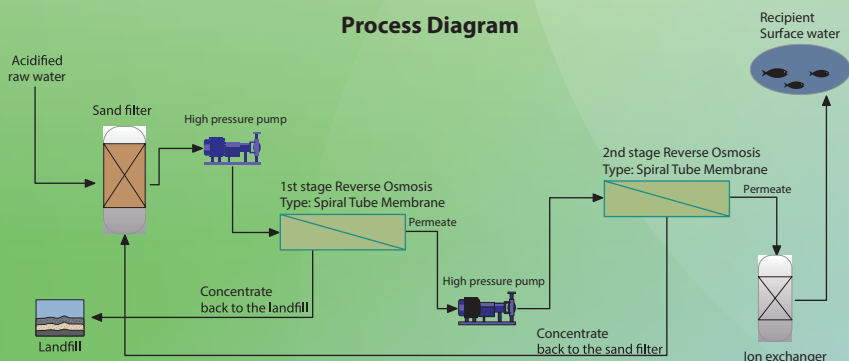
- Regeneration of the resin (filling material of the ion exchanger) is possible to be done on spot



As dedicated in our activities of environmental protection with the creation and conservation of a livable and clear natural environment in mind, we developed our technology for leachate treatment in a complex and sustainable way.

Our environmental friendly, cost-effective and unique leachate treatment technology focuses on added value as well as on predictability, liability, flexibility and multi-faceted approach.

### Process Diagram



### Membrane advantages:

- No sludge generation from pre-treatment process
- High rejection of contaminants such as COD; BOD; TDS & heavy Metals etc.
- Large surface area of membrane
- Greater resistance to scaling and fouling
- Low space requirement
- Low flux

Membrane supplier:



address: H-1118 Budapest, Rétköz u.5. • BudaWest Office Building • phone: +36 1 224 0670

fax: +36 1 224 0679 • e-mail: info@pureco.hu • web: www.pureco.hu

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Published by Pureco Ltd. Copies: 5 000

