

ELBE EUT — TECHNICAL DATASHEET

DT Disc-Tube Membrane

Technical Datasheet & Application Guide

Technical White Paper · 2026 Edition

1. Product Overview

The ELBE EUT DT (Disc-Tube) membrane module is a high-pressure reverse-osmosis and nanofiltration element engineered for the treatment of high-salinity, high-COD industrial effluents. Its unique disc-tube hydraulic design combines open feed channels with short membrane flow paths, delivering stable performance on streams that foul conventional spiral-wound elements within days.

2. Technical Specifications

Parameter	Value
Membrane type	RO / NF (polyamide composite)
Maximum operating pressure	90 bar (1,305 psi)
Typical operating pressure	35 – 75 bar
pH operating range	2.0 – 11.0
Maximum feed temperature	40 °C (104 °F)
Salt rejection (RO)	≥ 99.2 % (NaCl, 1,500 mg/L, 25 °C)
Recovery (single stage)	75 – 85 %
Recovery (two-stage DTRO)	85 – 95 %
Feed turbidity limit	≤ 50 NTU
Module diameter	200 / 220 mm
Effective membrane area	9.0 m ² (DTRO-200)

3. Key Advantages

- Open-channel flow path resists fouling on high-suspended-solid feeds.
- Short permeate distance maintains high flux at low driving pressure.
- 90 bar rating enables treatment of saturated brines and leachate concentrate.
- Individual discs are replaceable, reducing lifetime operating cost.

4. Typical Applications

DT modules are the industry standard for landfill leachate concentration, coal-chemical ZLD systems, mining-impacted water, and any stream where spiral-wound RO cannot operate due to

fouling risk or pressure limitations. ELBE EUT supplies complete two-stage DTRO / DTNF skids with automatic CIP, energy recovery, and PLC-based control.

Contact: <https://x.com/huihuapp>