

CST-CERA TUBULAR MEMBRANE

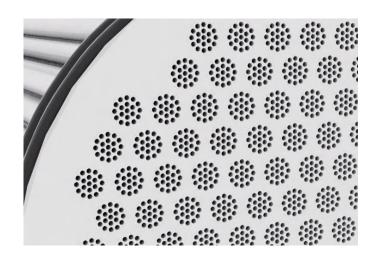
柱式陶瓷膜





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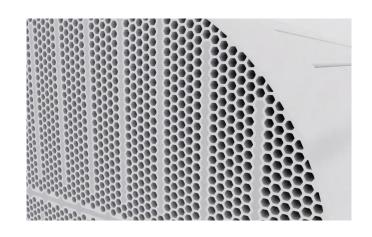
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CST-CERA TUBULAR MEMBRANE

CONSEPTEC Ceramic Membrane is asymmetric membrane crafted from ceramic materials through a specialized manufacturing process. The membrane surface exhibits an exceptionally high porosity and uniform pore size distribution. As an inorganic membrane, it can maintain stable performance in harsh conditions such as high temperatures and acidic or alkaline environments, showcasing exceptional mechanical strength and chemical stability. Consequently, ceramic membranes find extensive applications across various fields including water treatment, food and beverage industries. bio-pharmaceuticals, and fine chemicals. facilitating processes like separation, sterilization, clarification, concentration, thereby significantly enhancing product quality and production efficiency.

Compared to traditional organic membranes, ceramic membranes possess a longer lifespan and enhanced restorability, making them a pivotal novel separation material.



柱式陶瓷膜技术优势 TECHNICAL ADVANTAGE

性能卓越,结构稳定 Outstanding performance, stable structure

- 刚性和机械强度好,耐腐蚀性强
- 孔径分布窄,精度高,膜孔不变形
- 能有效去除水中胶体物质和颗粒,处理 后水浊度低,稳定控制在0.1 NTU以下
- 有效去除微生物,包括隐胞子虫、贾第 鞭毛虫和细菌等,显著提高饮用水的微 生物安全性
- Excellent rigidity and mechanical strength, coupled with strong corrosion resistance
- Narrow distribution of pore size ensures high precision, with no deformation of membrane pores
- It exhibits remarkable effectiveness in removing colloidal substances and particulates from water, resulting in low post-treatment turbidity that remains consistently controlled within 0.1 NTU
- Effectively removes microorganisms, including cysts, Giardia, and bacteria, significantly enhancing the microbiological safety of drinking water



2 易维护 Easy to maintain

- 设计简单、系统操作自动化程度高,操作方便,通过自动化气洗和水反洗能有效清除膜表面的污染物
- 可采用在线药液清洗来恢复膜的性能
- 标准化元件,系统安装及维护方便
- With its simple design and high degree of automation in system operation, it offers convenient operation Through automated air scouring and water backwashing, it effectively eliminates contaminants from the membrane surface
- The performance of the membrane can be restored through the implementation of online chemical cleaning, where appropriate cleansing agents are utilized.
- Standardized components, facilitating easy system installation and maintenance

3 占地面积少,使用寿命长 Small footprint, long service life

- 附加或预处理工艺少
- 超高的通量使得陶瓷超滤膜比有机超滤膜节约50%占地面积
- 标准化的模块化设计方便组合扩容,使用寿命高达20年以上
- Requires minimal additional or pre-treatment processes
- The ultra-high flux of ceramic ultrafiltration membranes results in approximately 50% less footprint compared to organic ultrafiltration membranes
- Standardized modular design facilitates easy combination and expansion, with a lifespan extending beyond 20 years



节约能耗,运行成本低 Energy-efficient, low operating costs

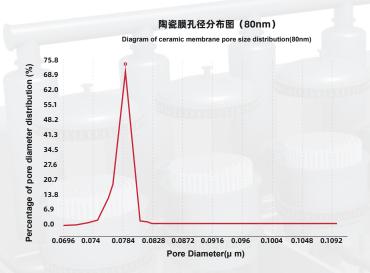
- 需要的反洗水量低,可节约大量的能耗,回收率可达98%
- 陶瓷膜具有极佳的亲水性,能有效地降低跨膜压差,进一步降低能耗
- 减少消毒剂投加量和消毒副产物生成, 能有效去除藻类、细菌和病毒等微生物 陶瓷膜材料低碳,可再循环利用,不会 产生危废
- Low water consumption and energy savings.
 Achieving a recovery rate of up to 98%
- Ceramic membranes exhibit excellent hydrophilicity, effectively reducing transmembrane pressure and further lowering energy consumption
- Reduces the dosage of disinfectants and the formation of disinfection by-products, effectively removing algae, bacteria, viruses, and other microorganisms. Ceramic membrane materials are low-carbon and can be recycled, without generating no hazardous waste

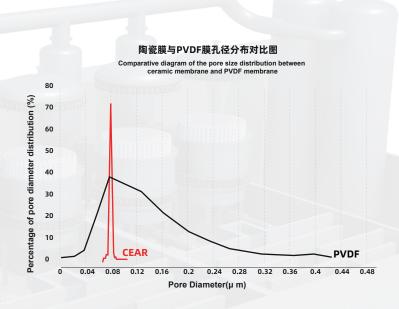


纳米级过滤层 Nanoporous filtration layer



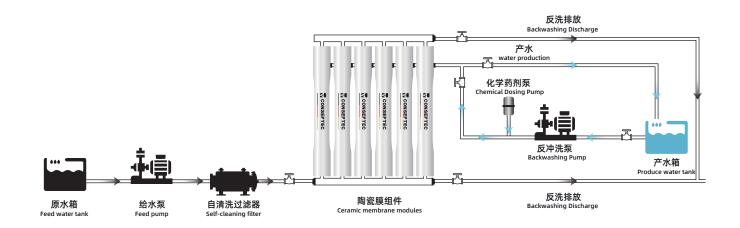
CONSEPTEC	CST-CMT-255
过滤面积(m²) Membrane area	25.5
膜材料 Membrane material	氧化铝、氧化锆 Al ₂ O ₃ , ZrO ₂
标准孔径(nm) Pore size	30、80
工作温度(°C) Operating temperature	5-75
运行压力(bar) Operation pressure	1-5
рН	2-12
过滤方式 Filtration mode	内压式 Internal pressure type
膜结构 Membrane structure	非对称 Asymmetry



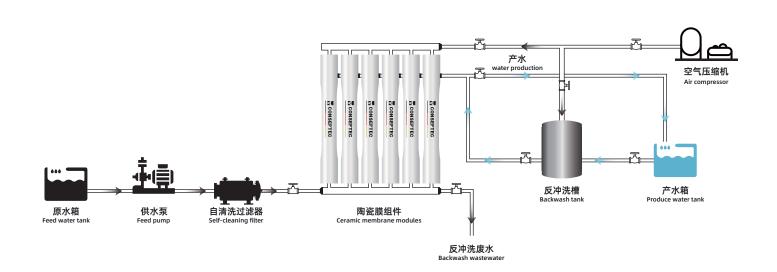


水反洗原理

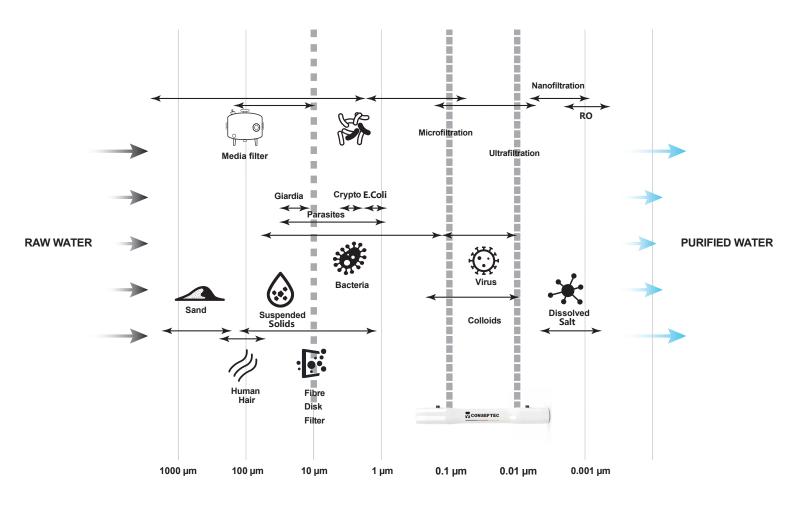
THE PRINCIPLE OF WATER BACKWASHING



气体强脉冲反洗 GAS STRONG PULSE BACKWASH



分离精度 SEPARATION ACCURACY



应用领域 APPLICATION

- ■海水淡化
- 矿井水
- 工业废水
- ■市政饮用水
- ■食品饮料
- 电子半导体
- 中水回用
- ■零排放

- Desalination
- **■** Mining Wastewater
- Industrial Wastewater
- Municipal potable water
- **■** Food and Beverage
- **■** Electronics & Semiconductors
- **■** Water Reuse
- Zero Liquid Discharge



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