

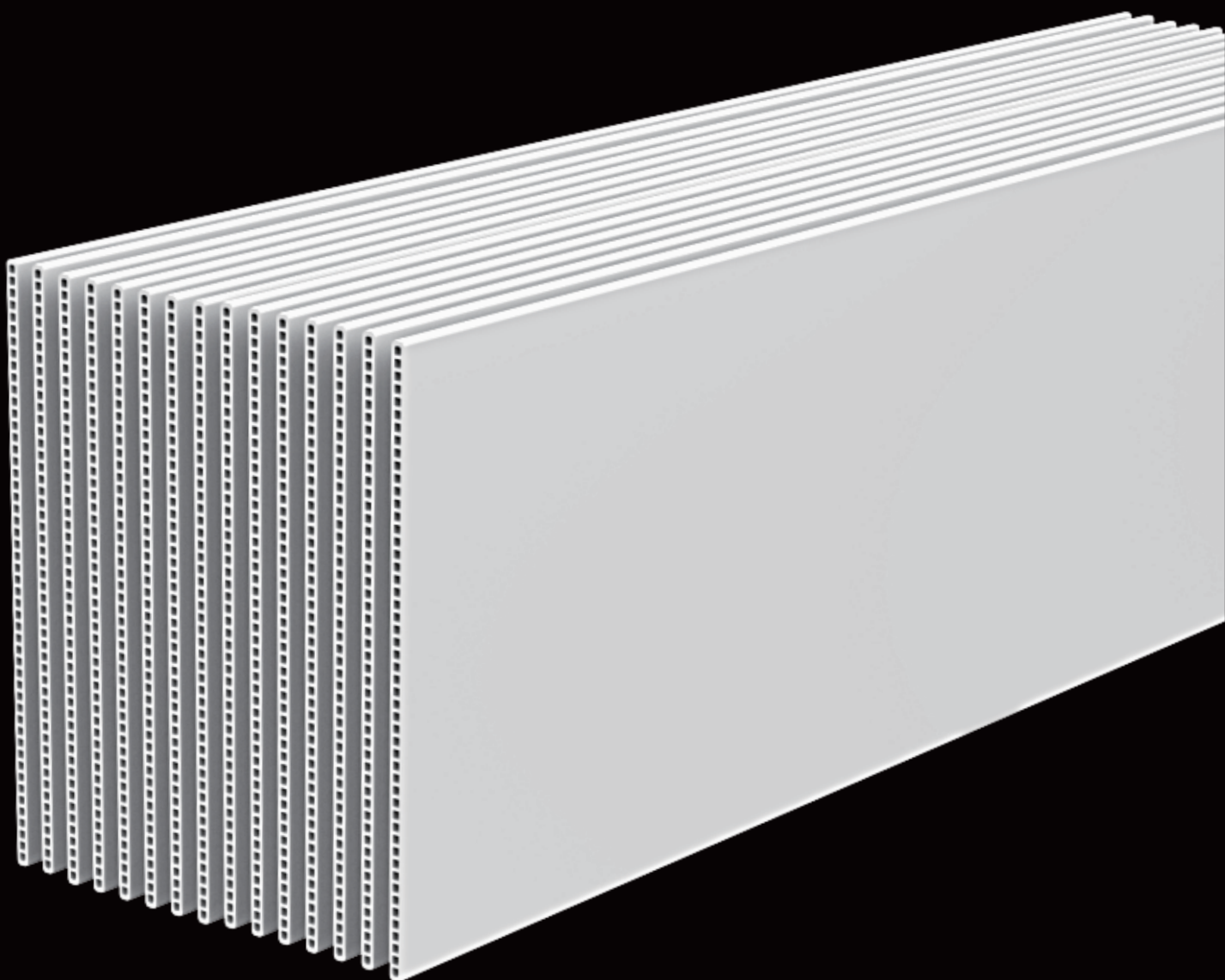


**CONSEPTEC**



# **CST-CERA FLAT MEMBRANE**

平板陶瓷膜



[www.conseptec.net](http://www.conseptec.net)



## CST-CERA FLAT MEMBRANE

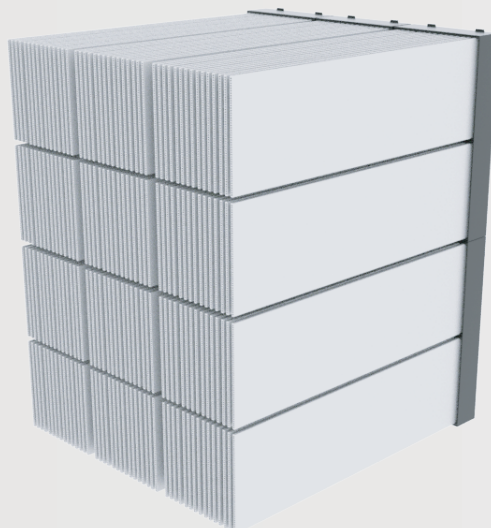
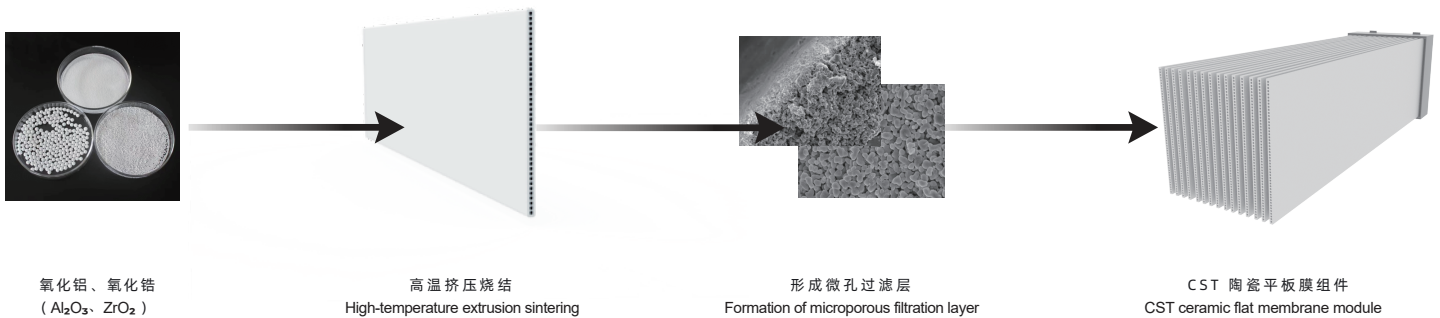
### 平板陶瓷膜

CONSEPTEC平板陶瓷膜是一种颠覆性的固液分离产品，替代化学合成有机膜组件，是膜过滤和水处理技术的革命性技术，以寿命长、通量大、能耗低、耐污染、易清洗、可回收等显著特点，将成为水处理行业有机膜的替代品，也是无机材料应用于水处理行业的创新技术，是水处理膜材料的发展趋势

## CST-CERA FLAT MEMBRANE

CONSEPTEC ceramic flat membrane is a disruptive solid-liquid separation product that replaces chemically synthesized organic membrane components. It represents a revolutionary advancement in membrane filtration and water treatment technologies. With significant features including long lifespan, high flux, low energy consumption, resistance to fouling, easy cleaning, and recyclability, it is poised to become a substitute for organic membranes in the water treatment industry. Additionally, it represents an innovative application of inorganic materials in water treatment, indicating a trend in the development of membrane materials for water treatment.

## CST-CERA FLAT MEMBRANE TECHNOLOGY



# 平板陶瓷膜技术优势

## TECHNICAL ADVANTAGES

### 1 性能卓越，结构稳定

#### Outstanding performance, stable structure

- 刚性和机械强度高，耐腐蚀性强
- 孔径分布窄，精度高，膜孔不变形
- 纯水通量高达  $1200\text{ L} / \text{m}^2 \cdot \text{H}$
- 外壳和附件采用耐恶劣水质的尼龙材质，具备极长的使用寿命
- 抗污染能力强，膜再生性能好
- 因药品作用和受热而发生的损坏少
- Excellent rigidity and mechanical strength, coupled with strong corrosion resistance
- Narrow distribution of pore size ensures high precision, with no deformation of membrane pores
- Achieves a high pure water flux of up to  $1200\text{ L} / \text{m}^2 \cdot \text{H}$
- Housing and accessories are constructed from nylon material resistant to harsh water conditions, ensuring an exceptionally long lifespan
- Demonstrates strong anti-fouling capability and excellent membrane regeneration performance.
- Minimal damage occurs due to chemical exposure and heat

### 3 节约能耗，运行成本低

#### Energy-efficient, low operating costs

- 板式的结构可以让气泡有效地清洗膜表面
- 需要的气洗量低，节约了大量的能耗
- 陶瓷膜的亲水性非常好，能有效地降低跨膜压差，进一步降低能耗
- The flat-like structure facilitates effective bubble cleaning of the membrane surface
- Low air scouring requirements result in significant energy savings
- Ceramic membranes exhibit excellent hydrophilicity, effectively reducing transmembrane pressure and further lowering energy consumption

### 2 占地面积少，使用寿命长

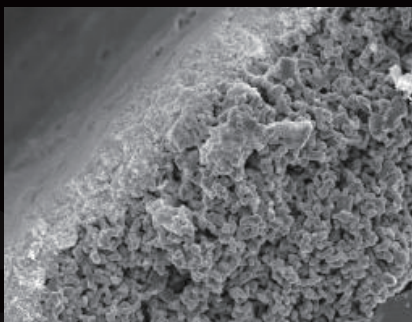
#### Small footprint, long service life

- 附加或预处理工艺少
- 超高的通量使得板式陶瓷超滤膜比有机材质的超滤膜节约50%占地面积
- 标准化的模块化设计，最大程度发挥膜的性能作用
- 使用寿命高达20年以上
- Requires minimal additional or pre-treatment processes
- The ultra-high flux of the ceramic flat ultrafiltration membrane reduces the footprint by approximately 50% compared to organic ultrafiltration membranes
- Standardized modular design maximizes membrane performance, allowing for integrated systems to be used either in submerged or external configurations
- A service life extending over 20 years

### 4 易维护

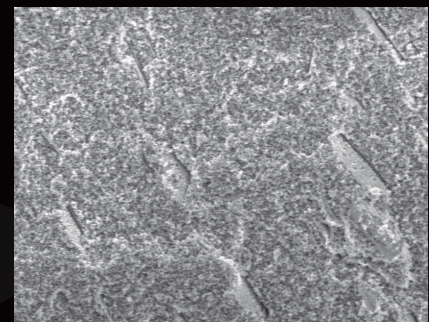
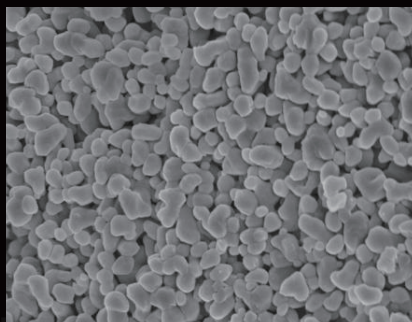
#### Easy to maintain

- 清洗容易，操作简单，通过自动化反冲洗和采用在线药液清洗，可免除日常维护
- 通过气洗和水反洗能有效清除膜表面的污染物
- 膜片间无需外部框架或软管连接，系统安装及维护方便
- Easy to clean with simple operation; daily maintenance can be eliminated through automated backwashing and online chemical cleaning
- Pollutants on the membrane surface can be effectively removed through air scouring and water backwashing
- No external frame or hose connections are required between membranes, making system installation and maintenance convenient



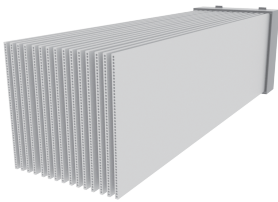
微孔过滤层

Microporous filtration layer



技术参数

TECHNICAL DATA



CST-CMP-6-15

膜片数量 (PCS) No. Of Membrane cushion	15	运行压力 (bar)	-0.3~-0.1
标准孔径 (nm) Pore size	30、80	纯水通量 (LMH) Pure water flux	1200
过滤面积(m²) Filtration area	6	pH	2-12
模组重量 (kg) Weight	35	工作温度 (°C) Operating temperature	5-75
过滤方式 Filtration mode	负压抽吸 (外压式) Negative pressure suction (external pressure type)	膜材质 Membrane material	氧化铝、氧化锆 Al <sub>2</sub> O <sub>3</sub> 、ZrO <sub>2</sub>

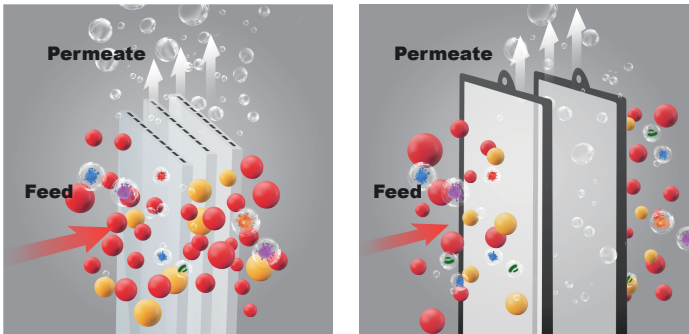


框架材质 Frame material	SUS304/316
管道材质 Manifold material	UPVC
产水管径 Outlet manifold size	DN50~DN200
反洗管径 Backwash manifold size	DN50~DN200

平板陶瓷膜通量优势

ADVANTAGES OF MEMBRANE FLUX

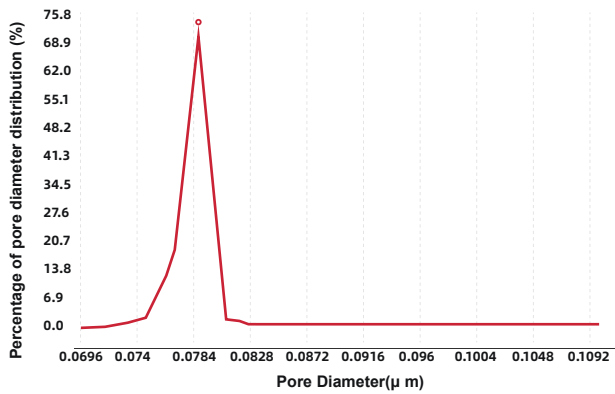
陶瓷膜凭借优异的亲水性能，设计产水通量为一般市面流通有机膜的3-5倍，并且抗污染、抗腐蚀能力以及节省能耗等方面均是有机膜远远无法企及的



With its outstanding hydrophilic properties, ceramic membranes are designed to achieve water production fluxes 3-5 times higher than those of commonly available organic membranes on the market. Additionally, their resistance to fouling, corrosion, and energy-saving capabilities far surpass those of organic membranes

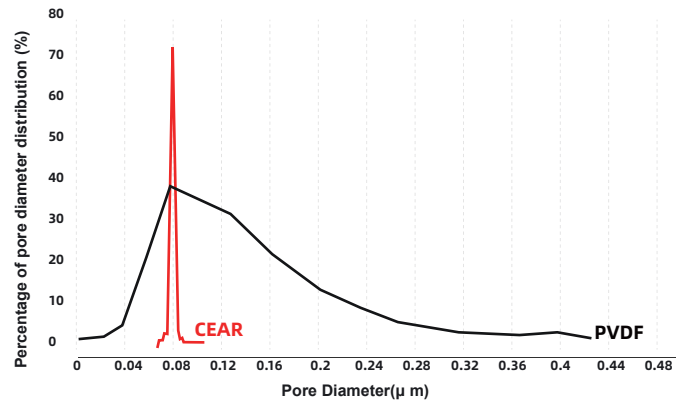
陶瓷膜孔径分布图

Diagram of ceramic membrane pore size distribution

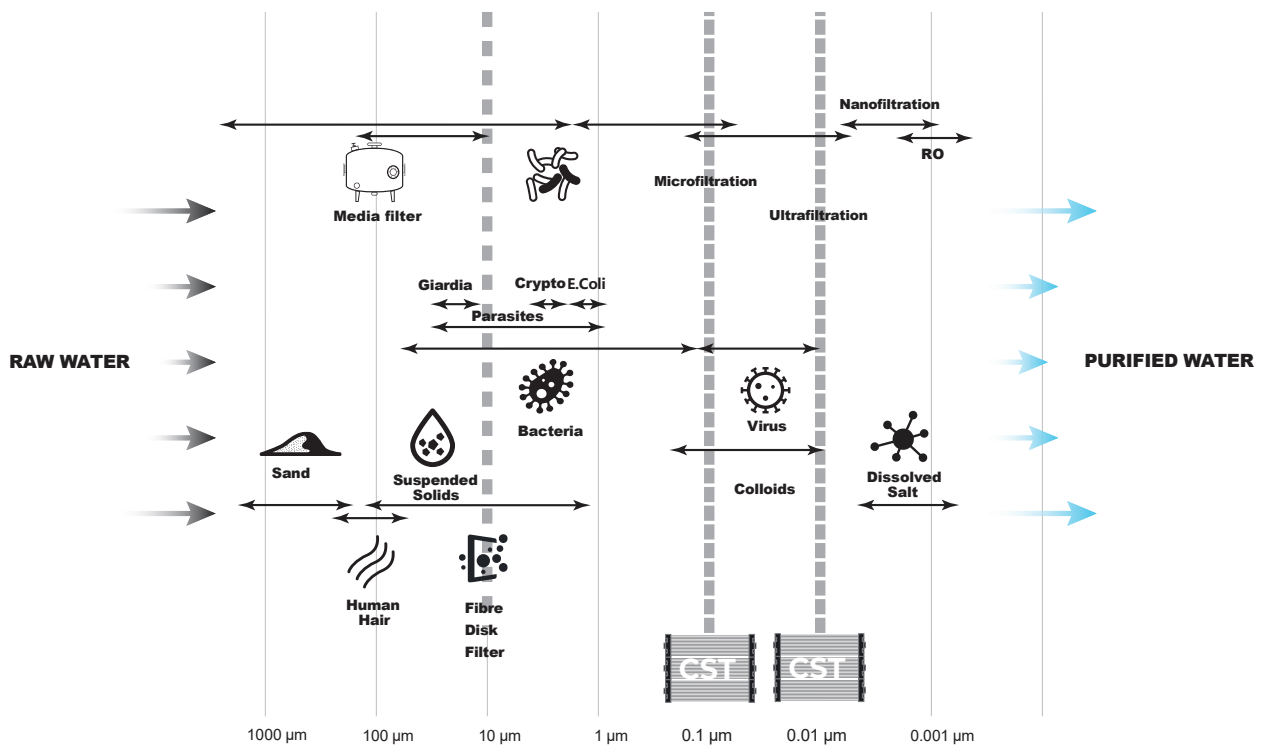


陶瓷膜与PVDF膜孔径分布对比图

Comparative diagram of the pore size distribution between ceramic membrane and PVDF membrane



## 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



**CONSEPTEC**



**Conseptec GmbH**

Am alten Leuchtfeuer 14, 24340 Eckernförde, Germany

Tel / Fax: 00 49 176 81385281

Web: [www.conseptec.net](http://www.conseptec.net)

E-mail : [info@conceptec.net](mailto:info@conceptec.net)