

A Milestone on the Move: Final Deliveries Depart Saarbrücken for the World's Largest Ceramic MBR

Saarbrücken, Germany – October 2025

This week marks a proud milestone at **CERAFILTEC**: the **final shipment** of our advanced ceramic membrane modules is leaving **Saarbrücken, Germany**, on its way to **Memphis, Tennessee**, where **xAI** is building the **world's largest ceramic membrane bioreactor (MBR)**.

Once complete, this record-breaking installation will **reuse 49.2 million liters (13.0 million gallons) of municipal wastewater every day**, transforming it into high-quality water for cooling **xAI's next-generation supercomputing data center**, one of the most powerful AI infrastructures ever built.

The last deliveries mark the culmination of months of intense engineering and precision manufacturing at CERAFILTEC's production site. Each module represents the latest evolution of our **flat-sheet ceramic membrane technology**, engineered to deliver the **highest mechanical strength, extreme chemical resistance, and unmatched lifespan** in the industry.

Unlike polymeric membranes, CERAFILTEC's robust ceramic membrane solution consistently delivers **stable performance**, even when exposed to aggressive cleaning or fluctuating process conditions. They maintain full permeability and integrity over decades of use, enabling **energy-efficient filtration** even under high solids loads. This durability is key to xAI's goal of achieving continuous, low-maintenance water reuse operations on a mega scale, supporting 24/7 data processing with minimal environmental impact.

“Seeing the final shipment leave Saarbrücken is more than a logistical milestone, it is proof of how advanced materials and purposeful engineering can enable sustainability at scale,” said Torsten Wintergerste, CEO at CERAFILTEC. “Together with xAI, we are showing that reliable, circular water management is not only possible for critical infrastructure, it is essential.”

As the project advances toward completion, it stands as a defining example of how **ceramic membrane technology** is reshaping water treatment for the digital age, offering a solution that is not only more sustainable, but also more resilient and future-proof.

At CERAFILTEC, we believe that **every drop reused is a step toward a smarter, more sustainable planet** and this project is a bold step in that direction.

Image caption:



Image 1: The final shipment of our advanced ceramic membrane modules is leaving Saarbrücken, Germany.



Image 2: Each module represents the latest evolution of our flat-sheet ceramic membrane technology.



Image 3: The modules are carefully protected before making the journey to Memphis, Tennessee.

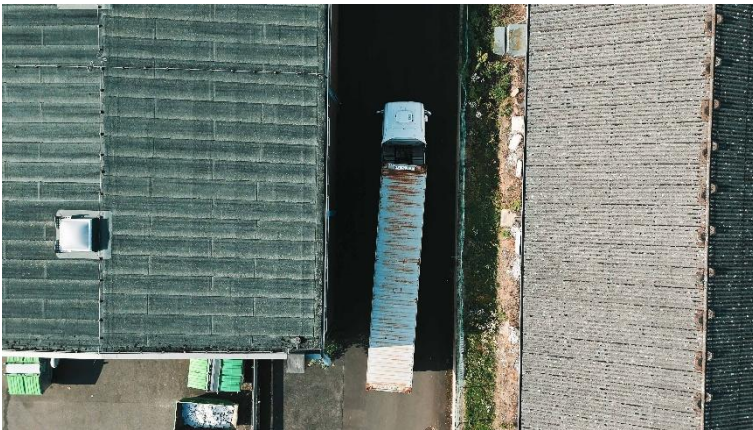


Image 4: The final shipment on its way to Memphis, Tennessee, where xAI is building the world's largest ceramic membrane bioreactor (MBR).



Image 5: Making the final shipment leave Saarbrücken isn't just a logistical milestone, it is proof of how advanced materials and purposeful engineering can enable sustainability at scale.

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About CERAFILTEC

CERAFILTEC is a global leader in ceramic ultrafiltration membrane technology, redefining how the world handles water and wastewater. Headquartered in Germany, we are at forefront of the transformation of water and wastewater treatment through ceramic membranes, which we build to last, resistant to the harshest conditions, and designed for true sustainability.

We combine advanced engineering with sustainable innovation to deliver reliable, high-performance filtration solutions that ensure cleaner water, higher plant capacity, and lower operational costs.

Driven by our vision of a water-secure planet, we are shaping the future of treatment systems - one drop at a time.

Press Contacts:

Press contact media relations:

CERAFILTEC

Dorota Zoldosova, Global Head of Marketing & Communication

Dubai Office

P.O. Box: 342074

Dubai Digital Park, A4-303,

Dubai, UAE

dorota.zoldosova@cerafiltec.com

www.cerafiltec.com/

PR agency:

DMA Europa

Zoe Taylor

Progress House, Great Western Avenue

Worcester, WR5 1AQ, UK

Tel.: +44 (0) 1905 917477

zoe.taylor@markettechgroup.com

news.dmaeuropa.com