KOVALUS Separation Solutions™

CASE STUDY

Frigoríficos Costa Brava MBR (OEM: Corpi, Spain)

Overview

Costa Brava Mediterranean Foods (Grup Cañigueral) is a major food-processing company located in Riudellots de la Selva, Girona, Spain. Founded in 1965, the company is recognized as a leader in high-quality Mediterranean food products and is especially notable in the regional meat sector, including pig cutting room operations.

To support its production activities, the site operates a membrane bioreactor (MBR) wastewater treatment plant. Prior to this project, the MBR was equipped with two hollow-fiber membrane cassettes from another supplier. Over time, rising treatment demands and the limitations of the legacy membranes created a need to improve capacity and performance without expanding footprint.

In 2020, Corpi SL (a long-term Kovalus partner) initiated a retrofit program to modernize the existing MBR system — improving solids separation efficiency and enabling higher treatment throughput within the same space.

Key Highlights

Smart PURON® retrofit creates new capacity and creates future-ready water reuse opportunities.

1. +50% capacity within the same footprint
2. PURON retrofit upgrade
3. Reuse-ready, low suspended solids <1 mg/L effluent

Objective

The project's objective was to produce consistently high-quality treated water that could be:

- **Safely discharged into public waterways**
- **Reused in future water-reuse applications**, depending on site needs

This required both, improved filtration quality and additional treatment capacity while maintaining existing civil infrastructure.

Solution

KSS supported Corpi SL by supplying PURON submerged membrane technology for the retrofit.

The upgrade involved installation of a new membrane filtration system that expanded overall MBR capacity by **50%**, using the **same footprint** — a key requirement for the plant.

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Solution (Cont.)

Project configuration:

- **Two (2) x PURON LE16-16 membrane modules**
- **Membrane area: 696 m² per module (total 1,392 m²)**
- **Average daily treatment flow: 400 m³/day**
- **Peak hourly flow: 26 m³/h**

Performance outcomes:

- **Permeate suspended solids: < 1 mg/L**
- **Effluent quality suitable for both compliant discharge and reuse-grade applications**

The PURON system enabled a direct swap-in retrofit approach, delivering higher flux and better solids control without structural expansion.

Achievements

KSS membranes were selected based on OEM confidence and proven results. CORPI GIA has extensive experience designing and operating MBR systems, and PURON technology is already well known to Corpi through successful installations across multiple industries.

Key customer benefits include:

- **+50% treatment capacity increase** without changing plant footprint
- **Near-zero suspended solids permeate**, improving discharge reliability
- **Reuse-ready effluent quality**, supporting long-term sustainability plans
- **Reduced operational risk**, thanks to a familiar and validated membrane platform

Takeaways

This retrofit demonstrates how KSS membranes enable industrial food and meat processors to expand wastewater treatment capacity inside existing infrastructure while also raising effluent quality to reuse standards.

The Frigoríficos Costa Brava project highlights KSS capabilities in:

- **MBR retrofits replacing legacy hollow-fiber systems**
- **High-strength industrial food/meat wastewater**
- **Footprint-limited upgrades requiring major capacity gains**
- **Producing ultrafiltered effluent suitable for discharge and reuse**

Overall, the project reinforces KSS as a trusted membrane partner for OEM-led MBR modernization in demanding industrial applications.

KOVALUS Separation Solutions™

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