



# Compass Water Solutions® Delivers Cost-Efficient and Sustainable Continuous Bilge Water Separation for the Offshore Oil and Gas Industry

## CHALLENGE

A prominent provider of marine transportation to the oil and gas industry required a continuously operable bilge water separator for its service fleet. Their vessels, which support exploration, production, oilfield services and offshore construction, must safely discharge water that meets strict IMO MEPC requirements. The systems are critical for preventing unsafe, overboard oil discharge during the cleaning of oil tanks and the pumping out of bilges.

Operating in harsh environmental conditions, these vessels encounter challenges that can impact the performance of an oily water separator (OWS). The fleet often services oil rigs drilling through mud, which can affect the system's media. Additionally, the presence of ROVs, various oils, and lubricants onboard introduces complications that the separation system must handle effectively.

The industry presents three main options: centrifuge separators, absorptive media or bilge water separators. Centrifuge separators come with high costs, while absorptive media fail to provide continuous or efficient separation. The company needed a reliable, low-maintenance solution that could thrive in harsh environments and handle variable influent without significant downtime or high operational expenses.

## PROJECT DETAILS



### PRODUCT AND PROJECT

Leading Oil and Gas Marine  
Services Provider



### PURCHASER AND END USER

Installation of 1000-G Bilge  
Water Separator



## SOLUTION

After extensive testing and comparison of industry OWS systems, the company selected the Compass Water Solutions® ULTRA-SEP® 1000-G bilge water separator. This system was chosen for its reliability, minimal maintenance requirements and economical cost per unit. The ULTRA-SEP® 1000-G is a customized separator, and its technology can be tailored to meet the specific needs of any customer.

The ULTRA-SEP® 1000-G addresses separation challenges through a sophisticated dual-stage process.



### 1 FREE OIL REMOVAL

Free oils are removed through the combined action of a permanent coalescing matrix and a polishing pack. This coagulation matrix efficiently creates larger oil droplets that rise and are expelled by the system, ensuring continuous and effective separation.

### 2 EMULSIFIED OIL REMOVAL

Bilge water is directed across proprietary membranes designed to reject oil while allowing water to pass through. The result is a virtually oil-free discharge.

To further reduce maintenance and operational oversight, the ULTRA-SEP® 1000-G features integrated oil-sensing probes that automatically transfer collected oil to the ship's slop tank. An automatic flush cycle using clean water is triggered to maintain membrane performance whenever low flow is detected or the system shuts down. The system also electronically monitors and records its operational status for up to 18 months, providing valuable data and peace of mind.

The installation process was engineered with specific performance goals tailored to the vessel's size, operating environment and required flow rate. Since the vessels carry new bearing technology with dry shafts, the ULTRA-SEP® 1000-G's capacity was perfectly matched to handle the expected volume of bilge water, ensuring effective and compliant operation without the need for a larger, more costly system.

## RESULTS AND ENVIRONMENTAL BENEFITS

For over a decade, this oil and gas marine services provider has outfitted its service fleet with the Compass® ULTRA-SEP® 1000-G. The system has become an integral part of the company's Environmental Management System, helping them uphold the high standards of their environmental sustainability goals.

By using the ULTRA-SEP® 1000-G, the company ensures all its vessels comply with MARPOL regulations established by the International Convention for the Prevention of Pollution from Ships. The long-standing partnership has seen the installation of nearly 50 ULTRA-SEP® 1000-G systems across the fleet, a testament to the product's success and reliability.

The adaptable and efficient design of the ULTRA-SEP® 1000-G has provided a cost-effective and sustainable solution for complex oily water separation scenarios. It has enabled the company to meet and exceed its sustainability goals while maintaining efficient and continuous operations across its diverse fleet.

## THE COMPASS® ADVANTAGE

The expansion and continued success of a major oil and gas fleet were significantly supported by the Compass® ULTRA-SEP® 1000-G. By providing a continuous, low-maintenance and cost-efficient bilge water separation solution, Compass® demonstrated its ability to meet the rigorous demands of the marine industry. The adaptability of the ULTRA-SEP® 1000-G to address complex oily water challenges proves its value for any company committed to operational excellence and environmental stewardship. The success of this long-term project highlights Compass® as a key partner in achieving sustainability and compliance.