

FRAMO SUBMERGED FUEL PUMP

# The next-generation pump for future fuels



TOGETHER FOR  
SUSTAINABLE  
SHIPPING

# Together for sustainable shipping



For more than half a century, Framo has been on a shared journey with our marine customers, working to secure lasting prosperity both for marine businesses and the environment. Now our business ecosystem is changing rapidly, and the maritime industry is facing increasing pressure to decarbonize its operations.

In response to the Paris Climate Accord, the International Maritime Organization has defined the ambitious goal of halving greenhouse gas emissions by 2050, compared with 2008, while at the same time reducing carbon dioxide emissions 40% by 2030, and 70% by 2050.

## **Framo is here to help**

Not only with pumps, but also with the expertise our customers need to meet their growing challenges. Just as we have been for the past 50 years, Framo is dedicated to provide unique solutions that enable sustainable shipping, and make it possible to maintain the delicate balance between the interests of marine business and the interests of the planet.

And we are even more dedicated to strengthening and deepening our customer relationships as we all work together for sustainable shipping.



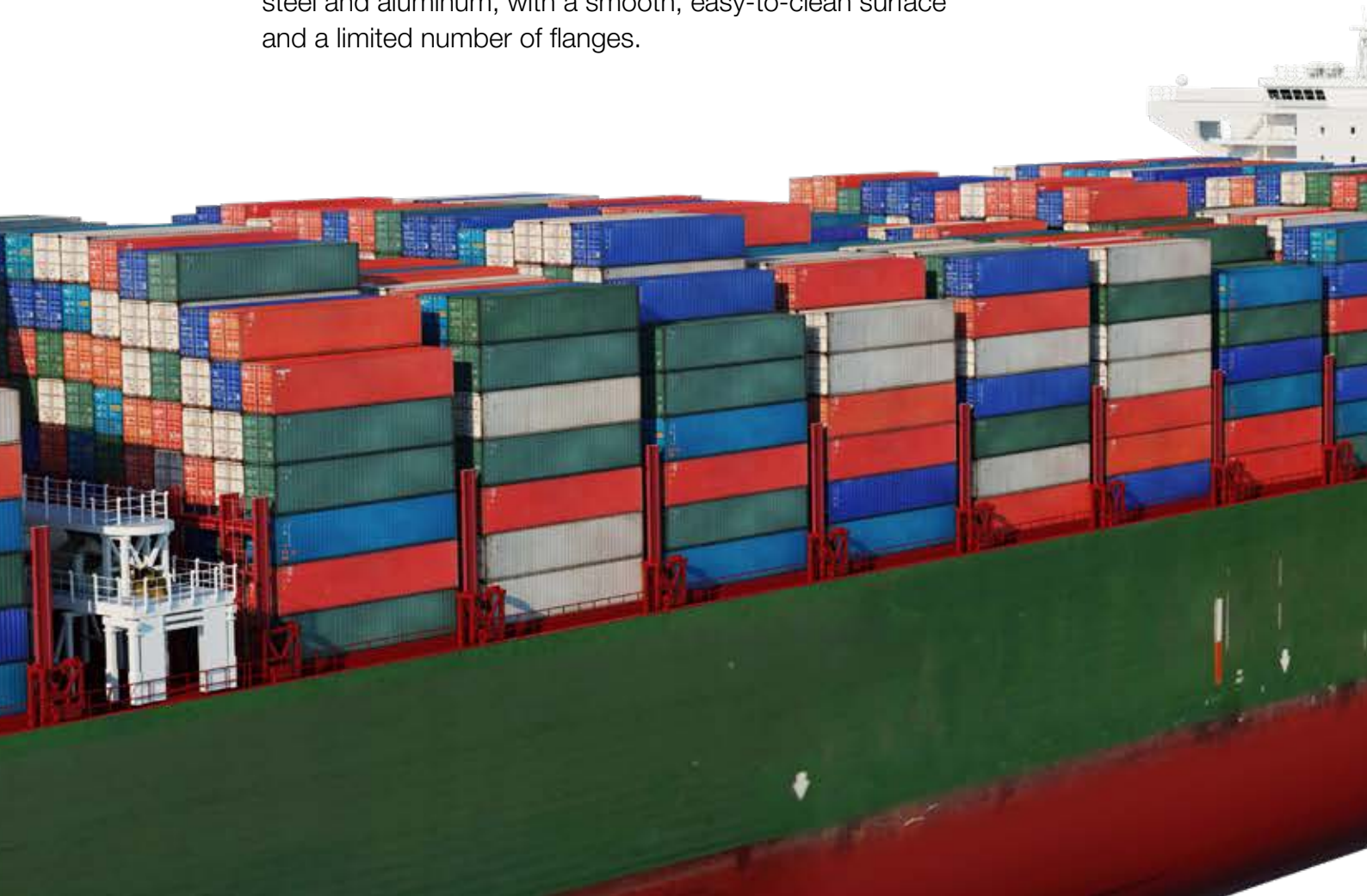
# A next-generation fuel pump, for ships that run on next-generation fuels

Framo is the recognized leader in pumping systems for the marine industry. Today, our submerged cargo pump offers a superior solution with the unique ability to handle any type of liquid, no matter how sensitive. Our pumps have earned a reputation as the most reliable and efficient tool available, ensuring safe and uninterrupted vessel operation while at the same time supporting sustainable shipping.

## **The Framo submerged fuel pump**

Now, we've taken the next step forward, using our expertise and experience to innovate a new fuel pump, designed for low-GWP fuels, including LNG, LPG, and NH<sub>3</sub>.

The Framo fuel pump is a vertical, single- or double-stage centrifugal pump, powered by an electric motor for safe and efficient operation. All our fuel pumps are made of stainless steel and aluminum, with a smooth, easy-to-clean surface and a limited number of flanges.



## FEATURES

### **Maximum performance in any weather**

The vertical, axially balanced, single or double-stage, single suction impeller(s) is driven by a electric motor with a unique cable-free design. A robust, short-shaft power transition ensures optimal performance at all times. Neither the motor nor the drive is exposed to the weather and the marine environment.

### **Reliable fuel supply at any engine loads and operational condition**

The fail-safe pump design includes forced lubrication and cooling from the discharge fuel.

### **No contribution to boil-off gas inside the fuel tank**

All pump-generated heat is discharged, and no heat remains inside the fuel tank.

### **Applicable for all liquified gas storage tanks and pumping applications**

All connections go through the top plate, above the liquid level, maintaining the structural integrity of the fuel tank. The robust stainless steel and aluminum construction makes the pump suitable for all cryogenic applications.

### **Dual fuel capability**

Including LNG, LPG, and NH<sub>3</sub>. Superior and reliable fuel supply, no matter the engine load.



### **Optional casing with service valve**

Enables removal of the pump during normal operation.

### **5 year-service interval**

The standard service interval is 5 years or a minimum of 30,000 hours.

### **50 years of supplying more than pumps**

Based in Bergen, Norway, Framo has supplied safe, efficient, reliable pumping systems to the majority of chemical and product tankers worldwide. Built on our world-leading pump technology, Framo solutions have revolutionized marine cargo pumping.

Now we are dedicated to offering our customers more. Our aim is to ensure that the reliability of our pumps is equalled only by our reliability as your partner. Our service experts are available 24/7, anywhere in the world, ready to be dispatched within hours of your call. Without exception, our focus is keeping pumps – and your business – running smoothly at all times.

### **Unbeatable performance**

Framo pumps offer unbeatable performance in challenging operations. We drive greater profitability for our customers, in both the short and long term, by continuously developing unique pumping concepts, based on high-quality engineering, and supported by dedicated service.

We are working toward a carbon-neutral future for ourselves and for you. By focusing our latest development on LNG, LPG, and NH<sub>3</sub>, we're helping all of our partners rapidly progress down their own paths toward CO<sub>2</sub> neutrality.





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