FRAMO ANTI-HEELING PUMPING SYSTEM

In-Line Reversible Pump

Independent and reliable
The Framo advantage

At Framo, we’re driven by the simple idea that pumps should never be isolated from the task they perform. It’s a belief that revolutionized marine cargo handling.

It’s also an idea backed up by experience. Framo has proud roots that stretch back to 1938, and marine customers have put their trust in our unique pumping technology for over 50 years.

But even more important is the trust that customers place in us. That’s why we see our designs through from start to finish at our own facilities in Norway, where we test each project in full scale before delivery.

Framo customers know they receive full support throughout the service life of their equipment. No matter the problem, our experts can be dispatched 24/7 to any location worldwide, and they stay until the issue is resolved.

With a global organization of 1000 dedicated employees, we are a partner you can rely on.

Independent and reliable

An anti-heeling pumping system for loading and unloading operations on various vessels. To safeguard efficient operation, the Framo anti-heeling system responds instantly to variations in load conditions.

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Framo Anti-Heeling Pumping System

System design
The system is operated automatically if the heeling angle exceeds a set value and continues until the vessel returns to a preset position.

The Framo anti-heeling pump will start only after the valve has left the closed position, thus eliminating pumping against a closed valve.

For maximum safety the valve closes automatically if the pump has not started within a few seconds after the signal is given from the inclinometer. This prevents water from flowing between heeling tanks when the pump is not in operation.

The Framo anti-heeling pump is of the in-line reversible propeller type, designed for maximum capacity in both directions. Only one crossover pipe between the heeling tanks is thus required. Low weight and compact design simplifies the installation.

A mechanical type shaft seal and a vented cofferdam with leakage detection system prevents water from entering the gear lubricating oil.

Operation
Heeling compensation is provided automatically by continuous measurement of heeling angle, given by a signal from the inclinometer to an analogue input module in the control cabinet.

The system is operated from the control panel, but can also be interfaced by ModBus to the vessel IAS for remote operation.

To compensate for extensive heeling moment, pre-heeling can be carried out. In systems with multiple pumps, automatic start delay can be implemented in order to avoid heavy starting current.

All settings can easily be changed on the control panel.
In-Line Reversible Pump

The Framo anti-heeling pump is of the in-line reversible propeller type, designed for maximum capacity in both directions.

Proven design
The proven Framo Anti-Heeling Pumping System design is approved by all international classification societies. It is recognised by major ship owners and yards as a quality product. The Framo Anti-Heeling Pumping System is in service in more than 3,000 vessels worldwide.

The Framo reversible propeller pump is supplied in three sizes, DN250, DN300 and DN400, with capacities ranging from approx. 200 m³/h to 2,200 m³/h.

The pump is cathodic protected by a zinc-anode.

Performance diagram here