

FRAMO SUBMERGED LIQUEFIED GAS PUMP – SLG SERIES

The next-generation pump for liquefied gases



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 pump for liquefied gases

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 liquefied gas pump (SLG)

Now, we've taken the next step forward, using our expertise and experience to innovate a new gas pump, designed for LNG, LPG, CO₂ and NH₃.

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

Combining the best from two worlds, with unmatched experience from 80.000 short-shafted submerged pumps in both Marine and Offshore.



**Framo hydraulic
cargo pump**



Framo gas pump



**Framo electric
seawater lift pump**

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 and cargo discharge 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 or cargo tank

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

Applicable for all liquefied 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_3 . 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 liquefied gases we're helping all of our partners rapidly progress down their own paths toward CO₂ neutrality.



Research and development

Framo aim to supply the safest cargo pumps there are, designed for handling the most difficult cargoes carried on tankers. Excellent performance will contribute to the improved profit for owners and charterers.

Safeguarding future improvements

Research and extensive testing is the very foundation for the development of Framo cargo pumping systems for tomorrow. The tanker industry's operational and safety requirements, as well as international maritime legislation, are getting stricter by the years. The awareness of the hazards of carrying liquid cargo in bulk, and the potential damage it can cause to people and environment in case of an accident has become a top priority issue.

Performance

We have a fully integrated company securing high and uncompromised quality in all areas of our business. We continuously work to improve system performance and reliability. In close dialogue with our customers world wide we learn and benefit from their vast operational experience from ships in service.

Testing

Full scale testing facilities and our in-house dry dock with stainless steel deep tanks give us the advantage of special testing or testing out new ideas in full.



24/7 support

With over half a century of experience Framo AS service organization provides technical support during the installation phase of a project, as well as professional service throughout the lifetime of the vessels. Condition based maintenance and correct operation are the best ways of ensuring optimal equipment performance. The Framo service organization is the to support you 24/7.



Technical data on upcoming models

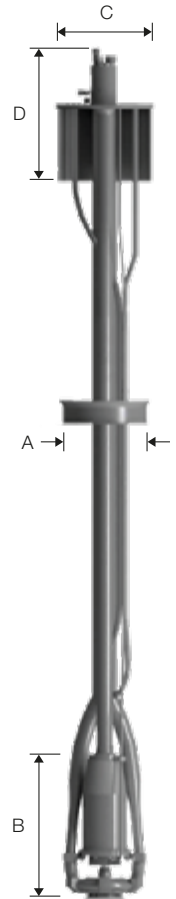
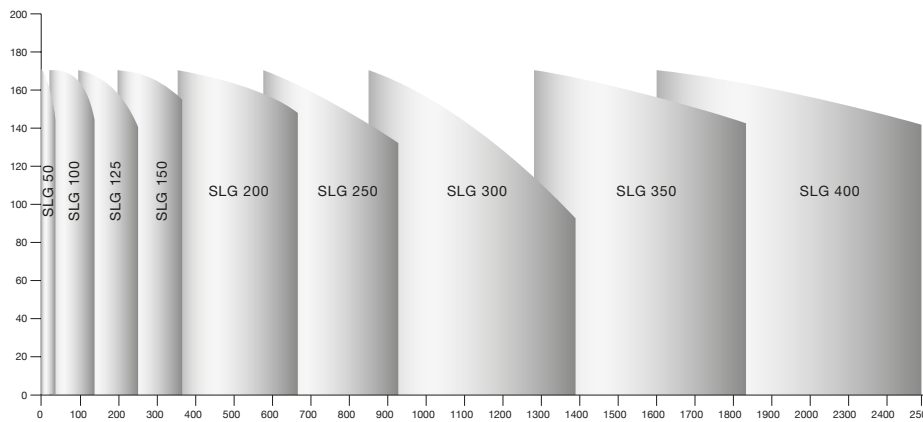
Gas pumps

	Supp. ring (A)	Pump head (B)	Top Plate (C)	Above deck (D)	Cargo flange
SLG50	300	550	565	250	DN50
SLG100	350	600	605	350	DN100
SLG150	450	650	655	450	DN150
SLG200	550	700	770	550	DN200
SLG250	550	750	770	650	DN250
SLG300	600	800	825	750	DN300
SLG350	650	950	875	850	DN350
SLG400	700	1000	945	950	DN400

Measurements in mm

Capacity range

Specific gravity = 1.0



Chronology of pump development*



LNG Fuel pump ready for delivery in Q2/2024
Other models and sizes on request.

* Subject to change acc. to market needs



framo.com

Head office FRAMO AS

P.O. Box 23, NO-5329 Florvåg, Norway
Phone: +47 55 99 90 00
E-mail: marine@framo.no

FRAMO Nederland

Edisonweg 18
P.O. Box 305
NL-3200 AH Spijkenisse
The Netherlands
Phone: +31 181 619311
nederland@framo.no

FRAMO Houston

3002 East 13th Street
La Porte, Texas 77571, USA
Phone: +1 281 884 4800
houston@framo.no

FRAMO Singapore

17 Tuas View Circuit
Singapore 637575
Republic of Singapore
Phone: +65 6210 2400
singapore@framo.no

FRAMO Nippon

Kotsu Building 5F, 15-5
Shinbashi, 5-chome
Minato-ku
Tokyo 105-0004, Japan
Phone: +81 3 5776 2405
tokyo@framo.no

FRAMO Korea

Rm 608, Centum Sh Valley
35, Centum Dong – Ro
Haeundae – Gu, Busan
Korea, 612-020
Phone: +82 51 743 6942/3
busan@framo.no

FRAMO Shanghai

Building No.5, 123
Lane 1165, Jin Du Road
Min Hang District, Shanghai
China 201108
Phone: +86 21 6115 5000
shanghai@framo.no

FRAMO do Brasil

Av. Presidente Vargas, 463
/19º andar, Rio de Janeiro
CEP 20071-003, Brazil
Phone: +55 21 2507 7898
brasil@framo.no

**FRAMO Services Branch
Office Dubai**

Al Quoz Industrial Area
P.O. Box 21467
Dubai, United Arab Emirates
Phone: +971 4 346 9143
dubai@framo.no

FRAMO Service

P.O. Box 44
NO-5329 Florvåg, Norway
Phone: +47 55 99 92 00
service@framo.no

FRAMO Fusa

Venjanaset
NO-5641 Fusa, Norway
Phone: +47 55 99 96 00
marine@framo.no

FRAMO Holsnøy

Rosslandsvegen 933
NO-5918 Frekhaug, Norway
Phone: +47 55 99 75 00
piping.marine@framo.no

FRAMO Flatøy

Flatøyvegen 24
NO-5918 Frekhaug, Norway
Phone: +47 55 99 94 00
oil&gas@framo.no

Rune Sakslo
Sales Manager,
Liquefied Gas Pumps,
Marine Pumping Systems
Direct: +4755999013
Mobile: +4741634306
rsak@framo.no

