



SUPREME[®] SEALS

High quality
Innovative solutions
Your peace of mind



"The Supreme seal is one of the best shaft seals available in the market. We have a good cooperation with Lagervit. The team is easy to work with and you always get a fast response when parts and technical support are needed."

CAT Propulsion

SUPREME ADVANTAGES

We believe a seal should deliver top performance, keep you going and offer you peace of mind. This idea led to the development of the Supreme seal. Introduced in the 1980's and further developed ever since, the Supreme seal offers you the following advantages.

Supreme seals deliver a Supreme plus to many propulsion systems and vessels of worldwide ship owners. While operating your vessel worldwide, 24/7 you must be able to rely on your equipment. Supreme seals add to the quality and reliability of your propulsion system, effectively separating water and lubricants. The unique design of our Supreme seals means superior durability and best Mean Time Between Maintenance (MTBM). So you can keep going while reducing costs to a minimum.

Our team of professionals helps you to find the right modular, made-to-measure options matching your own needs.



"Our motivation to choose Supreme is obvious. Improvement in design for long-term trouble free operations."

Maersk Ship Management

ROBUST DESIGN

Proven technology, using high quality housing parts, lip seals and liners and experience of over 35,000 seals

ADVANCED OPTIONS

- Supreme Ventus and Athmos, for zero-emission and Condition Monitoring
- Supreme SeaGuard for extra safety
- HML coating for extra durable liners
- EAL compatible lip seals

MODULAR, MADE-TO-MEASURE

- Standardized modules
- Customer specific design
- Short quotation lead and delivery times

LOW COST OF OWNERSHIP

WARRANTY

- 1 year standard
- 5 year optional (Supreme Ventus, ask for details)

SUITABLE FOR EITHER NEW BUILD OR RETROFIT APPLICATIONS

SUPREME SEALS

EXPERTS IN SEALS SINCE 1856

Ever since it began, Lagersmit has responded to the needs of numerous sectors of industry where reliability is not a luxury, but a necessity.

The aim was long-term performance to meet promises, peace of mind to all involved and safety for the environment. This objective hasn't changed and a lot has been achieved. To date, Lagersmit serves a vast network of propulsion manufacturers, ship owners and yards benefiting from its products – over 35,000 seals are now in operation.

One of our beliefs is that there is always room for improvement. That is why we keep coming up with ideas to keep delivering the best seals according to our modular, made-to-measure philosophy.

Our dedicated service network covers your needs, 24 hours a day, 7 days a week, worldwide.

MODULAR, MADE-TO- MEASURE

All our seals are designed in close cooperation with our customer in our high-tech factory in the Netherlands. Our basic components are cleverly standardized modules which make unique customization possible. Our modular, made-to-measure philosophy offers you:

- Efficient made-to-measure solutions
- Short quotations and lead times
- Short delivery times
- Top quality

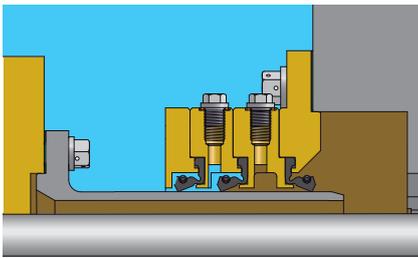
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*or via
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SUPREME SEALS FOR STERN TUBE SYSTEMS,

SUPREME SEALS FOR STERN TUBE SYSTEMS

SUPREME STANDARD



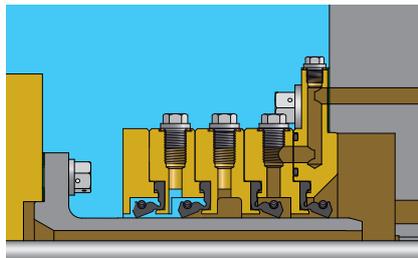
EFFECTIVE SEPARATION OF WATER & OIL

The Supreme forward and aft seal form the basic designs of the Supreme range. Consisting of bronze housing parts, the aft seal uses one oil and two water repellent NBR lip seals to effectively separate water and oil. The forward seal design contains two oil-repellent lip seals and is made of cast iron housing parts. Both seals use a chrome steel liner. The Supreme Standard is also available in a special cast iron design to fit inland vessels.

The Supreme standard is typically used on:

- Various types of seagoing vessels
- Inland vessels

SUPREME SEAGUARD



EXTRA SAFETY

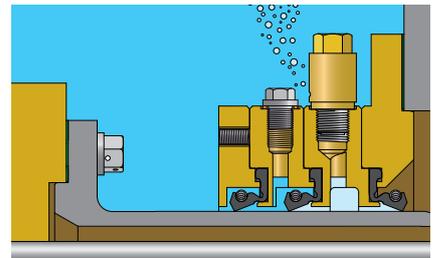
The Supreme SeaGuard builds on the Supreme Standard seal and adds an extra lip seal module. This module serves as a back-up seal in case of leakage. That way, docking and maintenance can be postponed by putting this fourth seal to work.

The Supreme SeaGuard consists of bronze housing parts, a chrome steel liner, two oil-repellent and two water-repellent NBR lip seals. The chamber between the two oil-repellent lip seals is filled with oil from the header tank. This way the pressure on both sides of the fourth lip seal remains equal. By closing off the oil supply to this chamber, this fourth lip seal can be used as a new oil-repellent lip seal, in case of leakage.

The Supreme SeaGuard is typically used on:

- Seagoing vessels

SUPREME VENTUS



ZERO-EMISSION, CONDITION MONITORING, ENHANCED DURABILITY

The Supreme Ventus enhances the Standard design with a sophisticated air system. Equipped with an air system and an internal drain tank the Supreme Ventus guarantees zero-emission and a minimum of wear. The air pressure inside the seal is effectively matched with the outside water pressure to minimize wear and avoid leakage. All fluids that enter the seal are drained into the drain tank. That way, zero-emission is guaranteed.

The Supreme Ventus consists of bronze housing parts including the Supreme Ventus valve, a chrome steel liner, one oil and two water-repellent NBR lip seals. In addition the system uses a compact self-regulatory air-control unit and a small drain tank. The Supreme Ventus comes with an optional five-year warranty (ask for details).

The Supreme Ventus is typically used on:

- Dredgers
- Bulk and container carriers
- Tankers

DNV GL has verified that this seal eliminates an oil-to-sea interface and is in compliance with EPA's VGP requirements.



EXTRA
SAFETY



ZERO
EMISSION

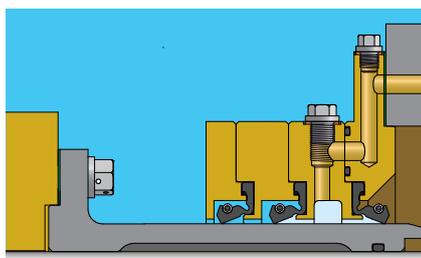


VARYING
DEPTHS

THRUSTERS AND PODS

SUPREME SEALS FOR THRUSTERS AND PODS

SUPREME ATHMOS



ZERO-EMISSION AND CONDITION MONITORING FOR SHIPS WITH A LIMITED DRAUGHT.

The Supreme Athmos prevents oil from being leaked into the environment. It features a fail-safe and Condition Monitoring function that delivers guaranteed peace of mind. The drain tank captures the little oil that the seal uses and the tank indicates when it should be emptied.

This allows the condition of the seal to be monitored at all times. If the system fails, the seal will switch to its normal sealing mode.

The Supreme Athmos consists of bronze housing parts, a chrome steel liner, one oil and two water-repellent NBR lip seals. In addition, the system uses a compact self-regulatory air-control unit and a small drain tank.

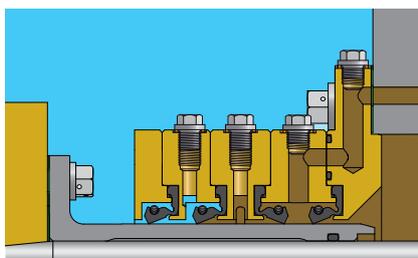
The Supreme Athmos is especially designed for:

- Ferries
- Inland water vessels
- Cruise ships and yachts

DNV GL has verified that this seal eliminates an oil-to-sea interface and is in compliance with EPA's VGP requirements.



SUPREME THRUSTER SEAL



SEALING OFF WATER AND OIL ON THRUSTERS

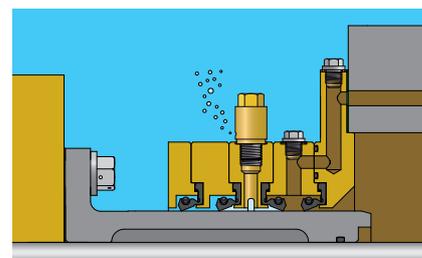
The Supreme Thruster Seal is especially developed to protect thrusters. The seal consists of bronze housing parts, a chrome steel liner, two oil-repellent and one water-repellent lip seals. It can be equipped with an extra water-repellent lip seal to fit heavy duty applications. (see cross-section)

The chamber between the two oil-repellent lip seals is filled with oil and the resulting pressure on the lip seals effectively keeps water outside, and oil inside, the thruster gearbox.

This design is typically used on:

- Tugboats
- Icebreakers
- Dredgers

SUPREME VENTUS THRUSTER



ZERO-EMISSION AND CONDITION MONITORING FOR THRUSTERS

The Supreme Ventus Thruster is specially developed for thruster systems that function at great (varying) depths. It works according to the Supreme Ventus principle and guarantees zero oil-emission and a minimum of wear. All fluids that enter the seal are effectively drained into the drain tank in the engine room. This enables its users to check the sealing conditions at any time from the engine room.

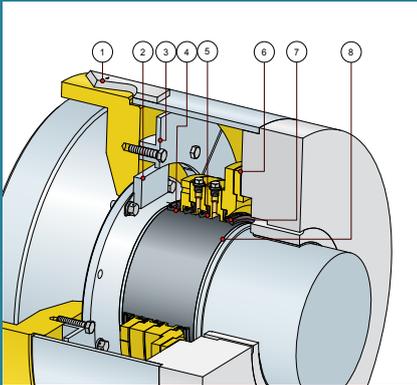
This seal is typically applied on:

- Tugboats
- Icebreakers
- Dredgers

DNV GL has verified that this seal eliminates an oil-to-sea interface and is in compliance with EPA's VGP requirements.



SUPREME OPTIONS



Supreme seals come with all the regular options available on the market. Think of net cutters (1), wire winders (2), cathodic protection (3), FKM/EAL lip seals (4), Hastelloy® C4 springs (5), a distance ring (6), dirt barriers (7) and a wear resistant coating for liners (8). Simply inform our team of experts of your sealing needs, so we can match your needs to the right solutions available.

SUPPORT 24/7

YOUR PEACE OF MIND

Our dedicated service network covers the globe, from Europe to Asia and the Americas. Available 24/7, our engineers and spare parts can be on site within 48 hours anywhere in the world. Reach us at any time by dialing +31 (0) 88 0216 300 or mailing to service@lagersmit.com and we ensure your peace of mind.

WHAT OUR ENGINEERS CAN ASSIST YOU WITH

- Installation
- Maintenance
- Overhaul
- Retrofit
- Troubleshooting
- Extended warranty (Supreme Ventus, ask for details)
- Commissioning

HOW OUR ENGINEERS ENABLE A TOP PERFORMANCE OF YOUR SEAL

- Skilled through extensive training and real-life experience
- Use of original Lagersmit tools
- One year of warranty on provided service and lip seals
- Front edge knowledge shared directly on site
- In-situ replacement if needed
- Use of original Lagersmit spare parts

WORLDWIDE
CUSTOMER SERVICE

24/7

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