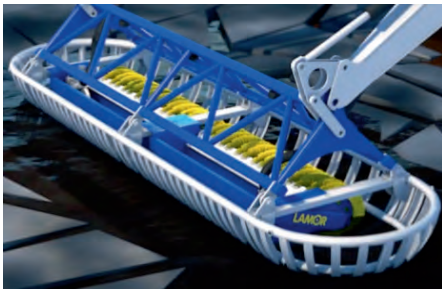


The groundbreaking Sternmax is a high capacity advancing Arctic skimmer designed to separate oil from the drifting ice with a high recovery rate of 230 m³/h (1013 gpm). The 28 brush wheel skimmer system has two oil transfer GTA 115 pumps and an ice and oil separating grate that collect oil with excellent ice handling capabilities in harsh Arctic climatic conditions.

As the vessel with ice breaking capabilities crushes the ice, the Sternmax is deployed from the rear of the vessel. The isolation grate pushes the large pieces of drifting crushed ice under the water, separating the oil and water from ice. The grate can be lifted and tilted to remove ice and debris. The oil is collected by the brush skimmer that separates the oil from the water and transfers the oil into a hopper equipped with two GTA 115 pumps.

The Sternmax is supported by an A-frame that deploys the skimmer off the stern of the vessel from its storage cradle. It is a robust and durable vessel mounted, hydraulically driven system that utilizes Lamor's proven technology to enable successful Arctic oil spill response operations. The Sternmax is designed and certified in accordance with DNV 22.2 Lifting Appliances and it is Ex-Zone 1.



Technical Specifications:

Length (isolation grate)	9000 mm	354 in
Width (isolation grate)	2400 mm	94 in
Height (isolation grate)	1060 mm	42 in
Weight (system)	32 tonnes	35 tons
Capacity	230 m ³ /h	1013 gpm
Hydraulic flow	240 l/min	63 gpm
Hydraulic pressure	210 bar	3045 psi
Power	110 kW	148 hp
Operational reach	7 m	23 ft
Oil transfer pumps	2xGTA115	2xGTA115

Benefits:

- Excellent crushed and drifting ice handling capabilities
- Max. ice thickness 1.1 m (43.3 in)
- Ice, water and oil separation
- Hot water injection
- Steam heated isolation grate
- A-frame mounted maneuverable system
- 28 stiff brush wheel system
- Storage cradle for easy maintenance , cleaning and de-icing
- Dual positive Archimedes pumps
- Removable isolation grate for non-Arctic operations
- Remote control Ex Zone 1
- Single operator

The system is winterized with a hot water injection which e.g. keeps the screen, hopper, brush scraper and pump warm and provides lubrication to support the flow of oil back to the vessel.

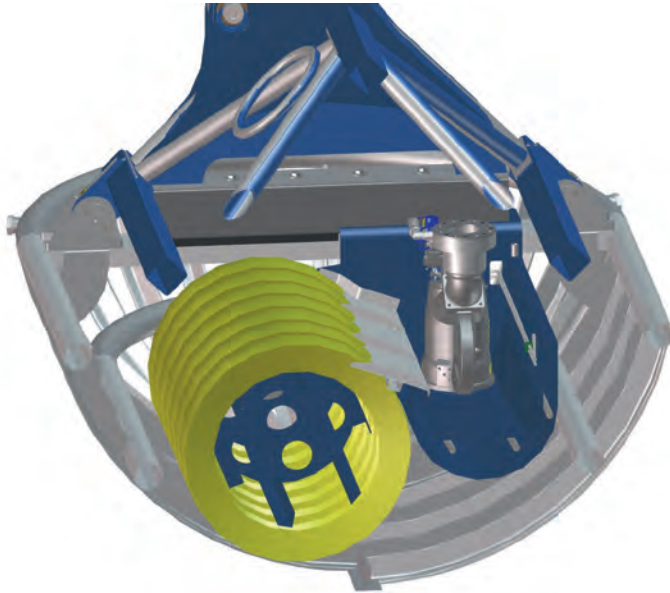
The system is stored on a support cradle on the dedicated vessel allowing easy maintenance and de-icing. The system is equipped with pivoting hinges powered by hydraulic cylinders and is easily lowered and deployed into the recovery zone. The A-frame is an easily maneuverable system that enables correct balancing of screen regardless of vertical distance from waterline.

A significant feature is that the tilt/tipping cylinders can be used to adjust the screen so the dense side of the screen is used for pushing blocks of ice down. The innovative placement of the Sternmax on the vessel allows normal functions without the hindrances and complications that other vessel mounted systems can cause, and protects the equipment from abrasion and weather damage.

Other features include a hollow frame equipped with steam inlets allowing the frame to be pre-heated prior to deployment. A hot water injection line keeps the system warm including the hopper and brush scraper and moreover provides lubrication to support the flow of oil back to the vessel.

The whole system can be operated by one person from the vessel creating a safe and efficient oil spill recovery environment. The Sternmax minimizes the use of resources and man power, while providing ultimate control, combined with ice and oil handling and separation techniques that make this skimmer system a perfect solution for reliability, dependability, productivity, and cost effectiveness in Arctic conditions.





Cross section view of skimmer and isolation grate



Skimmer on storage cradle; system in transit mode



Front view of system



Side view of system