



INNOVATION EFFICIENCY ORIGINALITY

Supplier of environmental products that make a difference

HIGH SPEED SINGLE-VESSEL
SWEEP SYSTEM



NORMAR OFFSHORE
SKIMMER SYSTEM



NOFI BOOMBAG
FOR FAST RESPONSE



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Our history



AllMaritim was established in 1988 and has become a market leader in Norway supplying oil spill response products.

Today, we are one of the leading international suppliers of quality products. Our aim is to satisfy a demanding oil industry in their continuing goal of zero spills and protection of the environment.

Our most prominent associates are NOFI Tromsø AS and NOREN Bergen AS, manufacturers of a wide range of high quality oil containment booms and oil recovery systems, respectively. In addition, AllMaritim is also a full scale supplier of a variety of absorbent products, beach cleaning equipment and industrial spill kits primarily for the domestic market.



AllMaritim is headed by a highly dedicated sales management team with a wide range of marine experience. We strive to meet our clients' demands in search for the best possible response solutions. We have participated in a number of oil-on-water exercises and severe spill incidents, from the EKOFISK BRAVO blowout in 1977 to the Deepwater Horizon blowout in 2010.

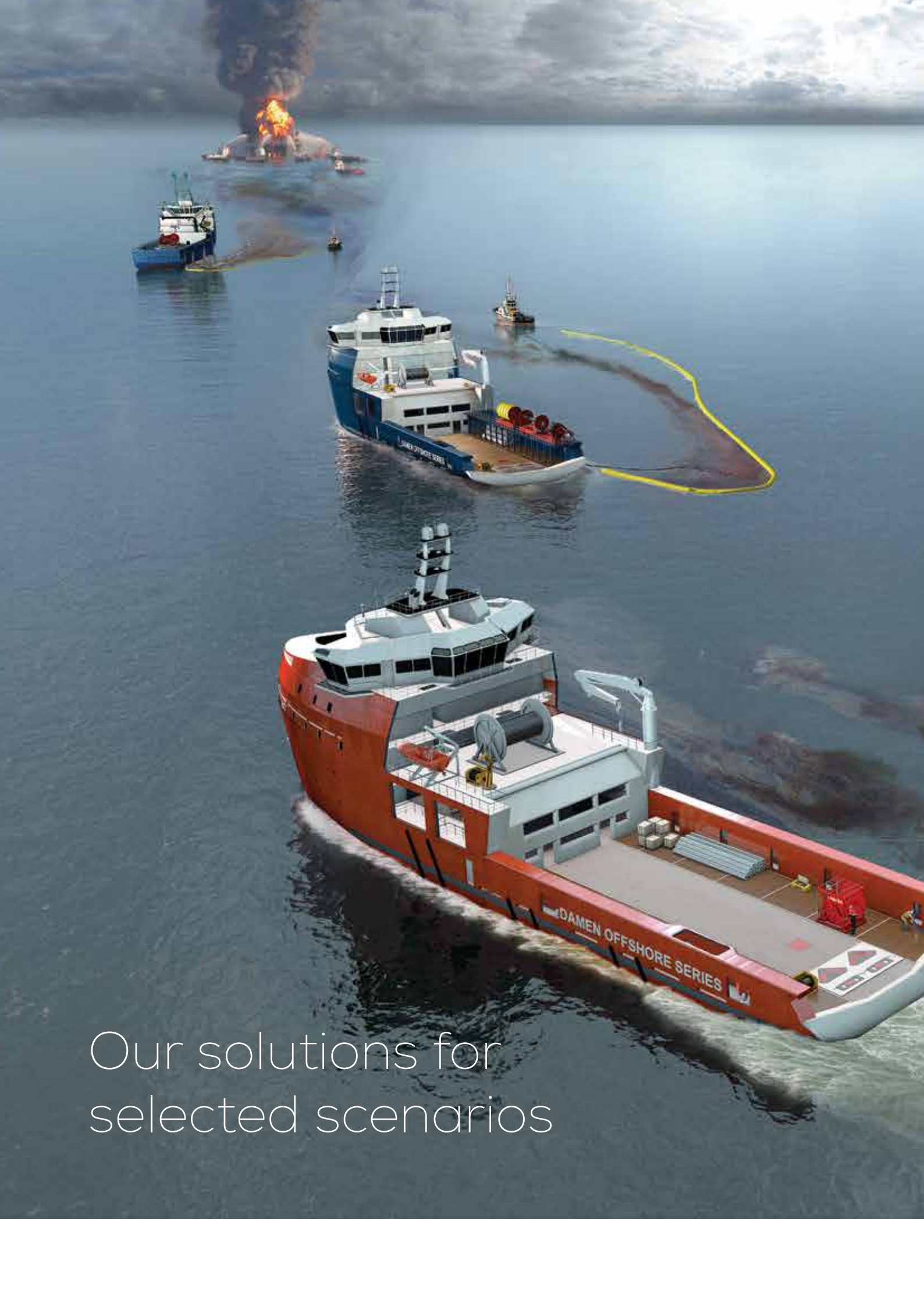
Looking back at the past 25 years in the business, AllMaritim has managed to build up a good reputation and has developed a high level of experience through regular exports to more than 30

countries.

We offer a wide range of NorMar oil recovery systems and NOFI oil containment booms for all operations from coastal zones to offshore waters.

With a focus on high quality, ease of operation and little to no maintenance requirements, the systems have proven themselves in a high number of oil spills worldwide. The products we provide are among the best on the world market when it comes to technical innovation and quality, as well as operational efficiency.

Our aim is to continuously contribute to the constant development of products and custom-made solutions with a high degree of engineering know-how. Our goal is to provide our customers with environmental products that make a difference.



Our solutions for
selected scenarios



NorMar offshore high capacity skimmer system

NorMar Offshore High Capacity Skimmer System holds a recovery capacity at 200-350m³/hr and is designed with a focus on quality and cost-efficiency. Depending on the customers' specifications, these systems have a double barrel free-floating umbilical, which is available in different sizes 4", 5" and 6" dia. and lengths to match any given requirement. With continuous focus on ease of operation, an integrated

crane handles the umbilical operated by either a manual control panel or a radio remote control. The systems are 100% hydraulically operated to increase durability and to keep the lifespan maintenance cost to a minimum.

The NorMar Skimmer System has a built-in cassette with discs or brushes added to the weir base, which makes it possible to

efficiently recover a wide range of oil viscosities. The need for multiple skimmer heads is eliminated as well as the overall costs and storage for the benefit of increased efficiency.

Our systems are based upon customers' requests. The table below shows an example of a NorMar 350 Total Integrated with crane.



Operators fully proportional manoeuvre valves, Statoil Peregrino



NorMar 250 Total Integrated with crane

TECHNICAL SPECIFICATIONS | NorMar 350 Total Integrated with crane

Model	Normar 350 TI
Length (mm)	2990
Width (mm)	2510
Height (mm)	3371
Weight (kg)	10 500
Capacity (m ³ /h)	0-350
Power pack DHPP 280 (Liter per. min)	280
Footprint (Ft)	10' or 20'
Hosereel (m)	50 m, 5'/6' or 80 m, 5'/6'
Cassette	Brush/Disc

NOFI offshore oil containment booms

AllMaritim is well-recognized worldwide for its high quality offshore conventional oil booms, both the NOFI 1000 series (manual inflatable) and the NOFI Spill Raider series (automatic inflatable). The NOFI Spill Raider technology has gone through a significant change, in which the size of the freeboard ranges from 600mm to 1200mm. Designed with focus on operational efficiency i.e. deployment speed, inflation method, less manpower needed and wave following characteristics, the NOFI Spill Raider Boom has gained a huge competitive advantage in the market.

Operated by one person, a 400 m long/1200 mm boom is deployed in less than 20 minutes without pre-pressuring. The NOFI Spill Raider technology also includes a redundancy system, allowing the system to be operated in situations with no functional inflation system. Built with a sealed freeboard, the

system can be transferred from one vessel to another. The sealed freeboard significantly lowers maintenance- and lifespan costs of the oil boom as no oil penetrates into the boom and only exterior cleaning is needed. The NOFI Spill Raider System performs to the best standards in the market and meets all international requirements.

In order to be able to offer a complete offshore package, AllMaritim has entered into alliances with other well-known Norwegian manufacturers of complimentary products such as;

- MIROS OSD – Oil Spill Detection system including IR camera and Radar Detection system allowing for oil recovery operations 24/7.
- Dispersant Spray arm Systems
- Doppler Log - Measuring the speed through water.
- Towboats 26" and 30" dimensioned for the NOFI Spill Raider.



NOFI Spill Raider 1200, Tromsø



NOFI Spill Raider 1200, Bergen



NOFI Spill Raider 1200 on board Norskan's Skandi Leblon in Brazil

TECHNICAL SPECIFICATIONS | NOFI Spill Raider

Model	600	SR800	SR1000	SR1200
Freeboard size (mm)	600	800	1000	1200
Skirt depth (mm)	750	950	1460	1560
Towing speed, STW (Knots)	1,0-1,2	1,0-1,2	1,1-1,2	1,1-1,2
Wave height (m)	4	5	6-7	6-7
Deployment time (min. per. m)	12/250	12/250	20/400	20/400
Air supply during operation	NO	NO	NO	NO
Redundancy system	YES	YES	YES	YES

Inflation system, single point inflation by high capacity air blower.

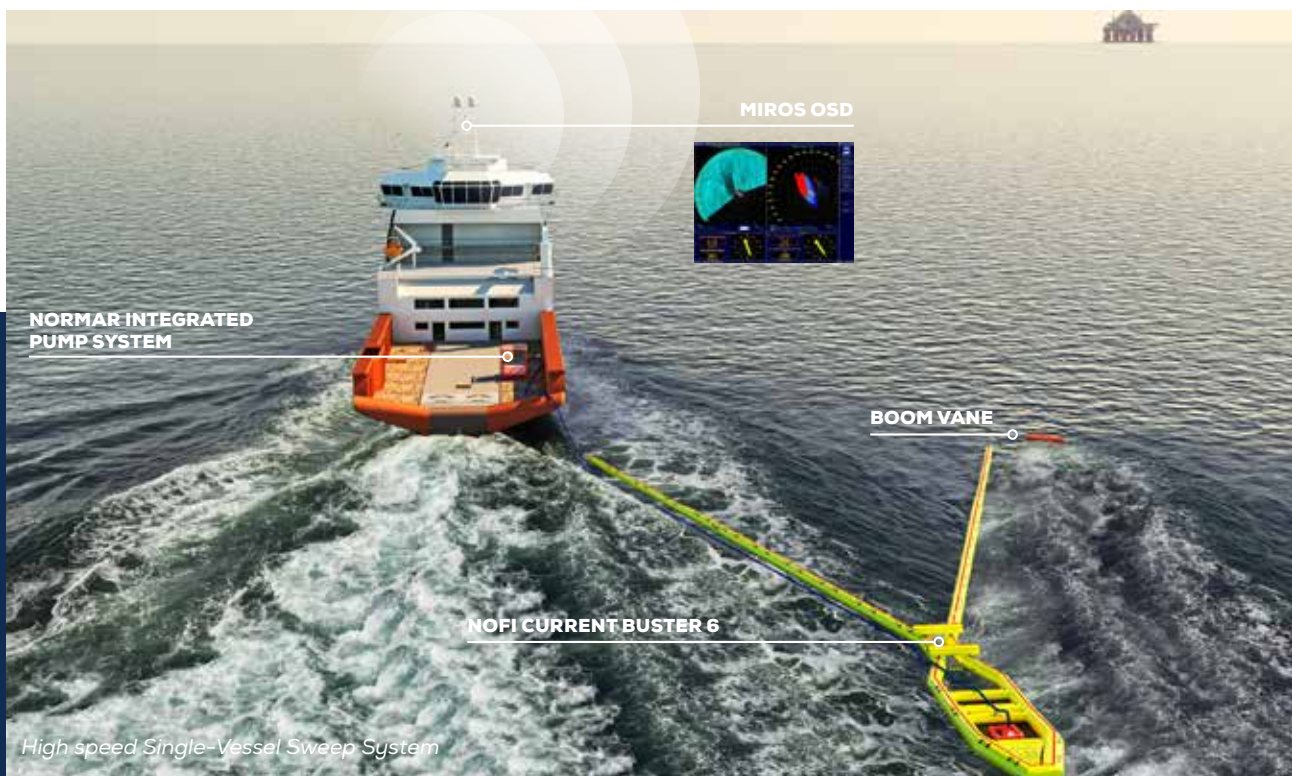
Fabric freeboard (on all models): NOFI X-22, PU/PVC blend, coated polyester, 1400 g/m².

High speed single-vessel sweep system

The Offshore Single-Vessel Sweep System is a self contained system allowing the vessel to operate single handed without any backup from other parties. A cost efficient system that gives the operator great flexibility and a substantial increase in performance.

NOFI Current Buster® 6 developed with an improved hydrodynamic shape, which reduces the drag force and allows the system to move easier through water in up to 5 knots towing speed.

The BoomVane system is a unique system when used together with a NOFI Current Buster. It is easy and cost efficient to use, as well it reduces the operator's response time significantly. Safety is also an important factor as there is only one vessel involved, eliminating communication between two vessels and the risk of damaging the equipment.



High speed Single-Vessel Sweep System

NorMar Integrated pump is a system for continuous discharge of the Current Buster while collecting oil as a single-vessel sweep operation. The system is based on a “plug and play” version that can be used on existing models of the NOFI Current Buster series. An important feature is that the system may be converted to an offloading system, for transfer of collected oil to shore or other vessels.

NorMar Discharge system is another option which is built on a 10’ platform equipped with a pump head, hose reel and crane. The system is designed to efficiently pump the recovered oil from the separator tank of the NOFI Current Buster systems. It may be used with a larger vessel in combination with a NOFI Current Buster as a “one vessel system”, or as a designated pump vessel that goes between NOFI Current Busters, emptying one separator tank at a

time.

The NorMar Multipurpose Skimmer system is designed upon a cassette system, to fit directly to the NorMar weir skimmer frame. The operator can have the option of using either disc or brushes depending on the viscosity of the oil; being light or heavy.

- No need for multiple skimmer heads
- Ease of operation
- Low-maintenance
- Reduced costs.

Containerized solution

AllMaritim offers an all-in-one solution including the NOFI Current Buster oil booms winded onto the NorMar Boom Reel, diesel hydraulic power pack, BoomVane system and spare parts. The NorMar boom reels come in different sizes depending on the size of the NOFI Current Buster.

The 5 m³ are delivered in 10ft containers and 8, 10 and 12 m³ in 20ft containers. The containers are delivered with lifting ISO corners and are built with hydraulic power pack mounted in a separate noise reduction room.

In addition, AllMaritim AS offers a variety of skimmers that are included in the containerized solution.



10’ containerized NOFI Current Buster 4 system



NOFI Current Buster 6 with NorMar Discharge system, Statoil Mozambique



20’ containerized NOFI Current Buster 6 system

NOFI Current Buster technology

The NOFI Current Buster® technology is probably the world's most efficient and advanced oil containment and recovery system, capable of containing and controlling oil in up to 5 knots towing speed without losing any of the contained oil.

Innovation development and testing

The NOFI Current Buster Technology represents a revolution in oil spill containment systems and holds an international patent. It has the unique ability to collect and concentrate spilled oil in current exposed waters or when being towed at high speed. The system is designed to separate contained oil from water, and to retain the oil inside the separator. The process results in a thicker layer of oil which in turn offers greater advantages when pumping the collected oil on board vessels

or into storage tanks. Later in the nineties the NOFI Current Buster prototype was thoroughly tested in full scale with oil and in waves at the OHMSETT test tank, NJ, US. Both from the initial test and later test at Ohmset, the conclusion has been the same. The NOFI Current Buster technology is most probably the best proven technology for high speed conditions.

Performance

The NOFI Current Buster has demonstrated in real life conditions that it is capable of sweeping, containing and separating oil from seawater at towing speeds up to 5 knots. As many as 48 systems were in operation during the Deepwater Horizon blowout in the Gulf of Mexico in 2010. On one occasion, physical measurements showed that the oil in the separator measured as much as 1m.

Single-vessel sweep system

Supported by a boomvane system, it allows any NOFI Current Buster system to operate single-handedly without any need for a second vessel. This is a breakthrough in any oil spill operations as it eliminates the need for a second vessel. The combination of technologies has proven to be significantly more cost-efficient and productive when operated as a Single-Vessel Sweep System. In the light of keeping everything simple and safe, components and accessories can be stored into containerized systems. These systems are available in 10' and 20' containers, depending on the size of the NOFI Current Buster. AllMaritim offers an all-in-one solution including the NorMar Boom Reel, diesel hydraulic power pack, BoomVane system and spare parts.

TECHNICAL SPECIFICATIONS | NOFI Current Buster Series

Model	NCB2	NCB4	NCB6	NCB8
Freeboard size (Ø mm)	600	800	1000	1200
Total length (m)	27	32,5	62,9	64,8
Total width, front opening (m)	15	22	34	50
Separator (m³)	15	32	70	70
Towing speed, STW (Knots)	3	4	5	5
Deployment time (min)	10	10-20	25-30	35-40
Boom Vane type	BV shallow water	BV standard	BV standard/BV 1,5	BV 1,5/BV ocean 2

Fabric freeboard (on all models) : NOFI X-15, PU/PVC, 1150 g/m².



NOFI Current Buster 4, Server, Bergen



NOFI Current Buster 2, Bergen



NOFI Current Buster 2, Salsha River, Alaska

Risk reduction from conventional oil booms – an illusion, due to speed through water challenges

BY **DAG NILSEN**, R&D MANAGER AT NOFI

In contrast to what one may believe, most of the oil lost from a conventional oil boom disappears under the skirt, and not over it, when the Speed Through Water (STW) becomes excessive. Unfortunately, the speed limit is low. There are three types of losses that occur under the skirt: Firstly, there is oil entrainment from the front wave at a speed of 0,3 – 0,7 knots STW. Secondly, drainage failure occurs due to hydrodynamic suction at a speed of 0,5 – 0,9 knots STW. Thirdly, the less known critical accumulation, applicable to oils with viscosity between 3000 – 20000 cSt, causes the entire oil slick to go under the skirt at 0,3 – 0,4 knots STW. All three oil loss types may be applicable simultaneously. It is fair to say that even the weakest currents may cause a malfunction of conventional oil booms.

Noting that the operational limit is well below 1 knot STW, all seas are full of unpredictable and, for the oil boom, potential oil loss-inducing currents. The familiar coastal and the constantly changing tidal currents often reach much more than 1 knot. The less recognized, but almost always present, wind-generated surface currents cause in this context strong surface currents even in weak wind. Waves, and especially breaking waves, generate strong and complex orbital, front and horizontal

currents. In addition there are many other current-related challenges such as propeller wash, horizontal moving fresh water surface layers, local small vortexes, larger area vortexes, rip currents etc. Finally, in addition to sea currents, STW caused by vessel towing adds to these.

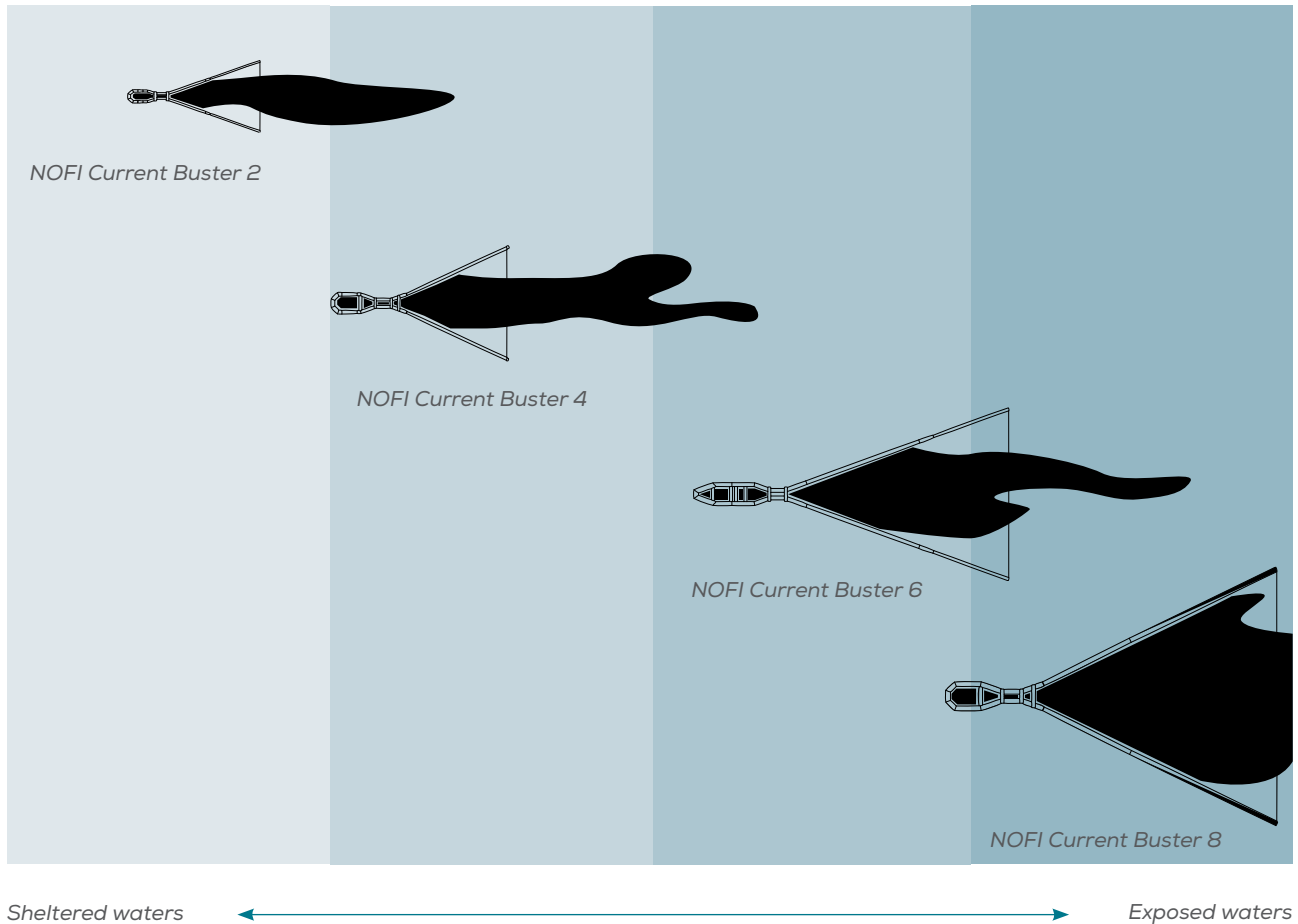
Consequently, in the field, responders towing oil booms are faced with three major challenges: Firstly, they do not know at what speed the oil passes under the oil boom except for that it is around 0,3 – 0,9 knots. Secondly, they seldom know the STW they actually operate at, as GPS does not indicate the correct STW and current conditions change continuously. Thirdly, they do not know exactly when they lose oil since lost oil will resurface far behind the oil boom. To add to this, it is almost impossible to maneuver a vessel at such a low speed. In the case of fixed/moored oil booms, they may initially be successfully installed from an STW point of view, but changes in tidal current and or wind direction may cause it to rapidly malfunction.

Thus, many of our best oil spill responders are equipped with a primary cleanup tool, the conventional oil boom, that is difficult to get to function as intended when towed or moored in areas with current, wind or waves.

This is relevant to many operational scenarios. It is hard to reach any other conclusion than some of the risk-reducing effect, which is planned for in risk analysis and spill contingency plans by conventional oil booms, may in many cases be an illusion due to STW challenges.

Since 1994, NOFI has applied large resources in solving STW challenges. Verification and improvements of the active oil boom NOFI Current Buster have been ongoing since the first prototype was manufactured in 1996. The system is capable of effectively collecting oil at up to 5 knots STW, which with an operational buffer included is 10+ times faster than conventional oil booms. Our opinion is that for the majority of oil spill cleanup operations, this technology which handles most STW issues, will significantly improve the likelihood of a successful spill cleanup according to plan.

Specifications and optimized area of operation



TECHNICAL SPECIFICATIONS | NOFI Current Buster Series

NOFI Current Buster 2

Front opening (m)	15
Total length (m)	27
Temp. storage tank volume (m ³)	15
Max. towing speed (knots)	3

NOFI Current Buster 4

Front opening (m)	22
Total length (m)	35
Temp. storage tank volume (m ³)	32
Max. towing speed (knots)	4

NOFI Current Buster 6

Front opening (m)	34
Total length (m)	63
Temp. storage tank volume (m ³)	70
Max. towing speed (knots)	5

NOFI Current Buster 8

Front opening (m)	50
Total length (m)	65
Temp. storage tank volume (m ³)	70
Max. towing speed (knots)	5

NorMar skimmer system 65-100 M3/HR

NorMar Skimmer System is

designed with a focus on quality and cost efficiency. The systems are hydraulically operated to increase durability and keep the lifespan maintenance cost to a minimum.

We design the skimmer systems according to the customers' specifications and capacity requirements. The range of medium size skimmer systems is designed to handle light to heavy oil types.



NorMar 100m3 Skimmer System, MS Northern Admiral

TECHNICAL SPECIFICATIONS | NorMar Skimmer System

Model	NorMar 65	NorMar 100
Lenght (mm)	1600	1600
Width (mm)	700	700
Height (mm)	1100	1100
Pump	Centrifugal	Archimedes Screw
Hydraulic oil flow (l/min)	50	160
Hydraulic pressure (bar)	250	210
Capacity (m ³)	0-65	0-100
Power pack (DHPP)	20	100
Weight incl. Powerpack, dry (kg)	387	1169

NOFI oil containment booms

NOFI Oil Containment Booms are available in an extensive range of sizes/lengths, either manual or automatic inflation. A great deal of effort has been put into the design, making the products as robust as possible while focusing on operational efficiency.

NOFI Oil Containment Booms are designed with the use of «feather net» as an extension to the length of the skirt. The design and use of the feather net has been tested by Ohmsett and confirms an improvement in speed through water with as much as 25%, before

significant oil loss.

The booms are stored and operated on hydraulically driven NorMar boom reels, all in compliance with the client's requirements.



NOFI 600



NOFI 450 XL

TECHNICAL SPECIFICATIONS | NOFI 1000 series

Model	450	600	800*	1000*	1200*
Freeboard size (mm)	450	600	800	1000	1200
Skirt depth (mm)	600	750	950	950	1200
Standard section length (m)	100	100	100	100	100
Towing speed, STW (knots)	1,2	1,2	1,2	1,2	1,2
Wave height (m)	1	1,5-2	2-2,5	6	6-8
Deployment time (min/m)	10/200	12-15/200	17-22/200	25/200	30/200

*Inflation system (on all models): High capacity air blower. * For offshore use.*

NOFI BoomBag

NOFI BoomBag is the most rapid deployment oil boom system available. Designed for fast response, and it requires a minimal number of boats and personnel.

The response time for the first line response often determines whether the oil spill remains a minor incident, or if it develops into a major oil spill cleanup.

The NOFI BoomBag is designed to be towed to the spill site at 15 - 20 knots. Deployment of a 300 m of NOFI 250EP solid floatation boom takes an impressive 45 seconds only!

The NOFI BoomBag is stored ready-to-go on dock sides or on transport trailers to access remote areas.



TECHNICAL SPECIFICATIONS | NOFI BoomBag

Model	150M/250EP	200M/250EP	300M/250EP	150M/350EP	200M/350EP
Freeboard size (mm)	250	250	250	350	350
Skirt depth (mm)	350	350	350	500	500
Towing speed, STW (knots)	15	15	15	15	15
Wave height (m)	1,5	1,5	1,5	2	2

Internal floatation system (on all models): Expanded polystyrene. Fabric freeboard (on all models): PU/PVC, 680g/m²

NOFI Oil Barge

NOFI Oil Barge is an important contribution to the challenges of temporary storage. In addition to storage of liquid oil and emulsions, the easy access through the removable roof makes the barge suitable for contaminated solid materials like flotsam, seaweed, kelp etc.

The NOFI Inflatable Oil Barge is made from a very strong oil resistant PVC fabric and a specially

engineered fabric in 50/50 PU/PVC coated polyester, with two layers of fabric and double hull, in the entire freeboard. The double layer of fabric ensures optimal puncture resistance - especially during near shore and beach cleaning operations.

The NOFI Oil Barge can be towed at 15 knots empty and reduced to 5 knots when loaded.



NOFI Inflatable Oil Barge with cover



NOFI Inflatable Oil Barge without cover

TECHNICAL SPECIFICATIONS | NOFI Oil Barge

Model	25	50	75
Volume (m ³)	25	50	75
Towing speed, STW: empty/loaded (knots)	15/5	15/5	15/5
Wave height, over x m with caution (m)	0,6	0,6	0,6
Deployment time (min)	7	7	7

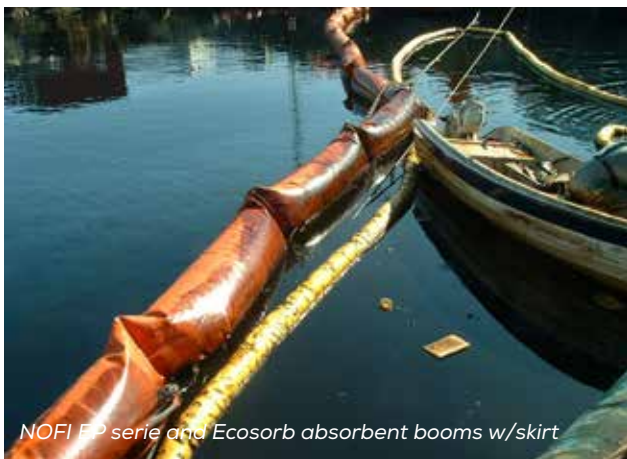
Inflation system (on all models): High capacity air blower. 100 m³ is available upon request.

Ecosorb absorbent booms

The ECOSORB Absorbent booms with skirts have the same performance and provide the same protection as conventional oil containment booms. They absorb oil and not water. Low weight and unique design make quick deployment possible. 250 meters of absorbent booms can be deployed in less than 5 minutes. The booms can be linked up to any length, using the quick connectors

made of carbine hooks and Velcro. The excellent absorption capacity and ease of handling make the booms an effective and economic tool for the control and recovery of small to medium size oil spills. The booms are manufactured from polypropylene fabric and net, and are available in hydrophobic cotton fiber or melt-blown polypropylene absorbent fibers. The booms are supplied in a robust bigbag, making

storage, transport and handling easy. In the last 15 years, the ECOSORB Absorbent boom with skirt has proven its unique quality and performance, and has become the preferred absorbent boom in the Norwegian market.



NOFI FP serie and Ecosorb absorbent booms w/skirt



Ecosorb oil absorbent boom w/skirt

TECHNICAL SPECIFICATIONS | Ecosorb Absorbents Booms

Model	Ecosorb absorbent oil boom std	Ecosorb absorbent oil boom w/skirt
Freeboard (mm)	100, 120 or 200	200
Skirt depth (mm)	no skirt	250
Length (m)	3,5 , 5, 12,5 or 25	12,5 x 2 pr big bag
Towing speed, STW (knots)	0,3	0,5
Wave height (m)	still water	0,5

NOFI EP – series

NOFI Solid flotation booms (the EP-Series) are designed for use in shorelines, harbors and fjords. Thousands of meters of EP series booms have been sold worldwide during the past 27 years.

The combination of a bottom-tensioned boom and flexible segmented freeboard elements gives the NOFI EP-series excellent wave-following characteristics.

We also provide oil booms for everyday deployment and recovery, as well as permanent installations, for example during rig- and docking services.



NOFI 250EP surrounding Full City



NOFI 500EP during Crete Cement response operation

TECHNICAL SPECIFICATIONS | NOFI EP Series

Model	NOFI 250 EP	NOFI 350 EP	NOFI 400 EP	NOFI 500 EP
Freeboard size (mm)	250	350	400	500
Skirt depth (mm)	350	500	600	830
Towing speed, STW (knots)	0,7-0,9	0,7-0,9	0,7-0,9	0,7-0,9
Wave height (m)	1	2	2,5	3,5

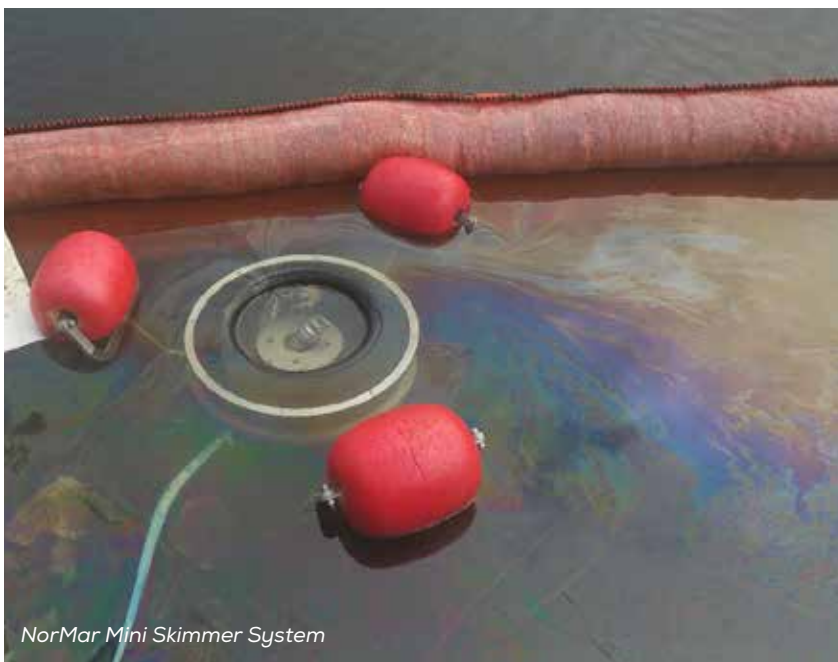
Internal floatation system (on all models): Expanded polystyrene.

NorMar Miniskimmer system

NorMar Miniskimmer system is a light and portable oil skimmer, designed to recover oil from shorelines, harbors and fjords.

The system includes the well-proven NOREN brush and disc system, which combines high oil recovery capacity with a low

free water pick-up rate for light and heavy oils. Preferably, the unit should be connected to an efficient diesel power pack with an integrated suction pump on wheels. For a complete miniskimmer package, we also offer a weir skimmer that may be connected directly to a vacuum truck.



NorMar Mini Skimmer System



TECHNICAL SPECIFICATIONS | NorMar Mini Skimmer System

NorMar Disk & Brush

Length (mm)	900
Width (mm)	1150
Dim disc	473
Dim brush (Ø)	350
Weight w/disc (kg)	45
Weight w/brush (kg)	41
Material	Alu. seawater res.
Material floats	PE
Capacity w/disc (m ³ /h)	10
Capacity w/brush (m ³ /h)	15

NorMar Mini Weir Skimmer

Dim. storage (Ø mm)	425 x 620
Dim. operation (mm)	975 x 375
Conn. dir. to external vacuum pump	473
Coupling (")	1" Camlock
Capacity (m ³ /h)	20
Weight (kg)	10

NorMar Powerpack Kombi

Length (mm)	850
Width (mm)	735
Height (mm)	700
Material	Alu. seawater res.
Diesel Motor	Yanmar L48V
Pump w/electric starter	Spate PD 75
Diesel tank capacity (ltr.)	5
Weight (kg)	125
2 x wheel	



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