

NEW TECHNOLOGY SYSTEM INTERNATIONAL OIL CONTAINMENT BOOMS



PROTECTION-SEA Division of NEW TECHNOLOGY SYSTEM INTERNATIONAL

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NEW TECHNOLOGY SYSTEM INTERNATIONAL OIL DRUM SKIMMERS



Air Max

Inflatable Containment Boom





AirMax is a versatile, inflatable oil containment boom, manufactured from high quality Urethane fabric. The AirMax range of booms are designed for compact storage and quick deployment. The high visibility orange fabric greatly assists mariners and vessel operators to avoid a potential navigational hazard. As an added safety feature, the hot galvanized steel ballast chain is enclosed in a reinforced fabric pocket to prevent entanglements and pinch points for operators. This chain also acts as a tension member for added strength and resistance of towing forces. NTS offers a full range of boom reels that can be delivered for all sizes of AirMax boom. These reels are available mounted on trailers or in storage containers. We also offer a full range of boom accessories including blowers, bridles, anchor sets, boom lights, choice of connectors, and tidal compensators. AirMax is available in six sizes. The size required will depend on the sea conditions or water body where the boom will be deployed.



As standard, the AirMax range of booms are supplied in manageable section lengths. These shorter sections allow for a greater flexibility of deployment configurations. If one part of the boom is damaged, only a small section is removed for service. As an option, AirMax can be fitted with foam panels that act as reserve buoyancy in the event of a puncture.

AirMax has individually filled air chambers, and each chamber is equipped with the patented Monsun MVXG valve. This valve has a built-in non-return valve.

High capacity air blowers are available to rapidly fill the individual air chambers as the boom is deployed into the water

Model Specification

	River	Harbor	Nearshore	Offshore	Open Water	Deep Sea
Connector Height	17.5 in 0.44 m	24 in 0.61 m	38 in 0.96 m	50 in 1.27 m	57 in 1.44 m	75 in 1.9 m
Operational Height	16 in / 0.4 m	22 in / 0.56 m	32 in / 0.81 m	43 in / 1.1 m	48 in / 1.22 m	64 in / 1.63 m
Freeboard	8 in / 0.2 m	8 in / 0.2m	14 in / 0.35 m	18 in / 0.46 m	20 in / 0.51 m	24 in / 0.61 m
Draft	8 in / 0.2 m	14 in / 0.35 m	18 in / 0.46 m	25 in / 0.64 m	28 in / 0.71 m	40 in / 1.01 m
Air Chamber Length	50 ft / 15 m	10ft / 3 m				
Section Length	50 ft / 15 m	100 ft / 30 m (other on request)				
Bottom Tension	5/16 in Galv. Chain	5/16 in Galv. Chain	3/8 in Galv. Chain	1/2 in Galv. Chain	1/2 in Galv. Chain	1/2 in Galv. Chain
Weight 28 oz	1.56 lb/ft 2.3 kg/m	1.85 lb/ft 2.75 kg/m	2.75 lb/ft 4.1 kg/m	4.25 lb/ft 6.3 kg/m	4.45 lb/ft 6.6 kg/m	4.9 lb/ft 7.3 kg/m

General Specification

Connectors:	ASTM Universal Slide*
Time to Deploy	Approximately 15 minutes using reels
Section Length	100 ft / 30 m
Fabric	8 oz / 950 gsm (Optional 36oz / 1,220 gsm) Urethane (+/-2)
	ASTM G155 1500hrs UV Resistance
	Tensile strength, 600 lbs / 2670 N
	Puncture resistance 900 lbs / 4,000 N
	Abrasion Resistance ASTM D 751 7000 cycles
	High temp Resistance 180F / 82 C Cont
Splash Over Prevention:	Top fin
Standard Inflation Pressure	0.75 psi / 0.05 bar
Valves:	Monsun MVXG type
Shipping Information	Normally supplied on reel
Anchoring Points:	At every section connector
Cleaning:	Industrial detergents, pressure washing

Optional: Reels, blowers, anchor sets, repair kits, carry bags, lights, boom stand-off unit.

*Other connectors available on request.



ReelPak

Self Auto-Inflation Containment Boom



ReelPak is an self auto-inflating containment boom that can be easily and quickly deployed and retrieved. With an integrated coil structure and compartmented float sections, the boom will stay inflated and buoyant even if a fabric tear or light damage occurs.

Available in both 250 ft / 76 m and 125 ft / 38 m sections and multiple sizes, ReelPak is suitable for most scenarios.

Model	Inland/ Choppy	Open Harbor	Light Ocean	Offshore	Hi-Seas 600	Hi-Seas 800
Float Diameter	8 inch / 20 cm	11 inch / 28 cm	14 inch / 36 cm	18 inch / 46 cm	24 inch / 61 cm	32 inch / 81 cm
Freeboard	7 inch / 18 cm	10 inch / 25 cm	13 inch / 33 cm	16 inch / 41 cm	22 inch / 56 cm	30 inch / 76 cm
Draft	13 inch / 33 cm	16 inch / 41 cm	20 inch / 51 cm	26 inch / 66 cm	35 inch / 88 cm	44 inch / 112 cm
Buoyancy	22 lb / 33 kg	41 lb / 63 kg	67 lb / 98 kg	110 lb / 164 kg	195 lb / 291 kg	345 lb / 514 kg
Weight	1.7 lb/ft / 2.5 kg/m	2.7 lb/ft / 4.0 kg/m	3.4 lb/ft / 5.1 kg/m	6 lb/ft / 9 kg/m	8.5 lb/ft / 12.7 kg/m	11.5 lb/ft / 17.2 kg/m
Storage Volume	.11 ft ³ / .003 m ³	.21 ft ³ / .006 m ³	.28 ft ³ / .008 m ³	.41 ft ³ / .012 m ³	.67 ft ³ / .019 m ³	1.0 ft ³ / .028 m ³
Tensile Strength (in thousands)	25 lb / 11 kg	35 lb / 16 kg	45 lb / 21 kg	60 lb / 27 kg	70 lb / 32 kg	100+ lb / 46 kg
Temp. Range	-65° to +170°F / -54° to +77°C on all models					



Float Information

ReelPak Booms are constructed of heavy duty, 100% polyurethane coated, high visibility yellow fabric with RF welded seams for maximum strength. The boom is also constructed of high quality stainless steel coils that automatically expand the boom to its full, continuous cylindrical shape as it is reeled from the storage spool. These coils also assure continuous freeboard without pressure.

Closed cell foam flotation provides reserve buoyancy of more than 150% of the boom weight, assuring working freeboard and survival of the boom even if damaged extensively.

Float compartmentation prevents boom flooding from local damage; and even then, the boom is automatically self-bailing during recovery to drain any incidental water. ReelPak Boom does not depend on hermetic sealing of air chambers to maintain freeboard since the reserve buoyancy foam flotation and stainless steel coils work together to ensure working freeboard at atmospheric pressure, even if the boom is damaged.

Continuous Handles

ReelPak is provided with continuous handles on both sides of the boom on models with 18 inch floats and above. These handles provide a great convenience for handling on shore and in the water as well as during recovery to the reel. Located mid-point alongside like rubbing strakes or continuous side fenders, they are ideal for attaching anchor buoys, lights or positioning signals. The handles also provide some additional stand-off abrasion resistance against contact with vessels, docks, pilings, platforms, etc. Continuous handles are available as an option on models smaller than 18 inches.

Markings

Anchor points are physically located on the ballast chain. The location of each anchor point is clearly marked on the float section of the boom.



Skirt Information

ReelPak Boom skirts are constructed of the same heavy duty, 100% polyurethane coated fabric as the float section. Inside a fabric pocket at the bottom or ballast part of the skirt is a high-test galvanized proof coil chain. This chain serves as the main tension member of the boom. Anchor connection locations are heavily reinforced and stabilized in position.

High Load Webbing Strap (optional)

10,000 lbs of additional tensile strength can be added by including a High Load Webbing Strap running the full length of the boom and joined at each section with shackles. Standard on models 24 inches and above. Optional on models smaller than 24 inches.

Connectors

ReelPak boom sections are joined together by a series of easy operating, stainless steel HingeLok Connectors. These strong, flexible connectors allow the boom to maintain its cylindrical shape from terminal end to terminal end in operation, transferring all of the fabric tensile strength along the full length of the connected boom sections and providing the best configuration for maintaining containment and a constant freeboard with the highest articulation in wind and waves.

ASTM design straight bar end connectors are installed at both the tow end Foam Filled Tow Adaptor (FTA) and the reel end Compacting Tow Adaptor (CTA).

Each tow bridle (TB) has a compatible ASTM end connector to assure interchangeability and adequate strength in towing. The bridles are secured to the ASTM connector ends of the FTA or CTA with stainless toggle pins.



Deployment & Recovery

ReelPak Boom Systems are rapidly deployed and recovered at atmospheric pressure. Both boom deployment and recovery are continuous operations. There is no need to halt either process to inflate or deflate air chambers, open or close valves. ReelPak booms do not require any auxiliary inflation equipment to achieve and maintain full operational performance.

Performance

Since the flotation chamber is a continuous, flexible, cylindrical configuration, ReelPak Booms maintain constant freeboard and provide best articulation and conformance in wind and waves. The section connectors are also flexible and have the same shape and strength as the boom. The continuous, uniform, cylindrical flotation throughout the float and end connections provide the best possible shape for containing and diverting oil without creating agitation and emulsification of oil. ReelPak Booms have exceptional wave conformance in turbulent and confused seas.

The boom is easily towable for extended periods of time at over 10 knots in 300 meter strings and longer. The boom resists current forces of 4 or 5 knots relative velocity while anchored or in catenary towing without detectable reduction of flotation chamber volume and performance.



Support Equipment

Boom Reel

Each boom reel will accommodate the required quantity of ReelPak Boom with consideration for all installation location parameters. ReelPak reels feature a solid flange aluminum spool, steel A-frame prepared for offshore service, hydraulic motor drive, gear reducer, brake, and cover.

Diesel Hydraulic Power Unit

The diesel hydraulic power unit is an independent source of hydraulic power to the reel. The diesel hydraulic power unit features a diesel engine, hydraulic pump, control panel with directional and speed controls, reservoir, filter, hoses, brake bypass, brake release, spark arrestor on the diesel engine exhaust to make the system compatible in a Gas Zone 2 operating environment and cover. Controls located where the operator can see the reel.

Options

Hydraulic Power Control Console

Separate control console for Reel and is compatible with ship's hydraulic power system and still required if hydraulic power supply is by others.

Electric Hydraulic Power Unit

The electric hydraulic power unit is an independent source of hydraulic power to the reel. The electric hydraulic power unit features an explosion proof electric motor, hydraulic pump, control panel with directional and speed controls, reservoir, filter, hoses, brake bypass, brake release and cover. Voltage to be specified by end use customer and controls located where operator can see the reel.



Durability Demonstration



The sequence above shows a boat colliding with a ReelPak system. The boat cleared the boom but the outboard motor got caught on the boom, abruptly stopping the boat. While the boat was resting on the boom, air was forced out of the flotation chambers through the self-regulating vents until the vessel had settled to the water line. Once the motor was cleared of the boom, the boat was able to continue without issue.

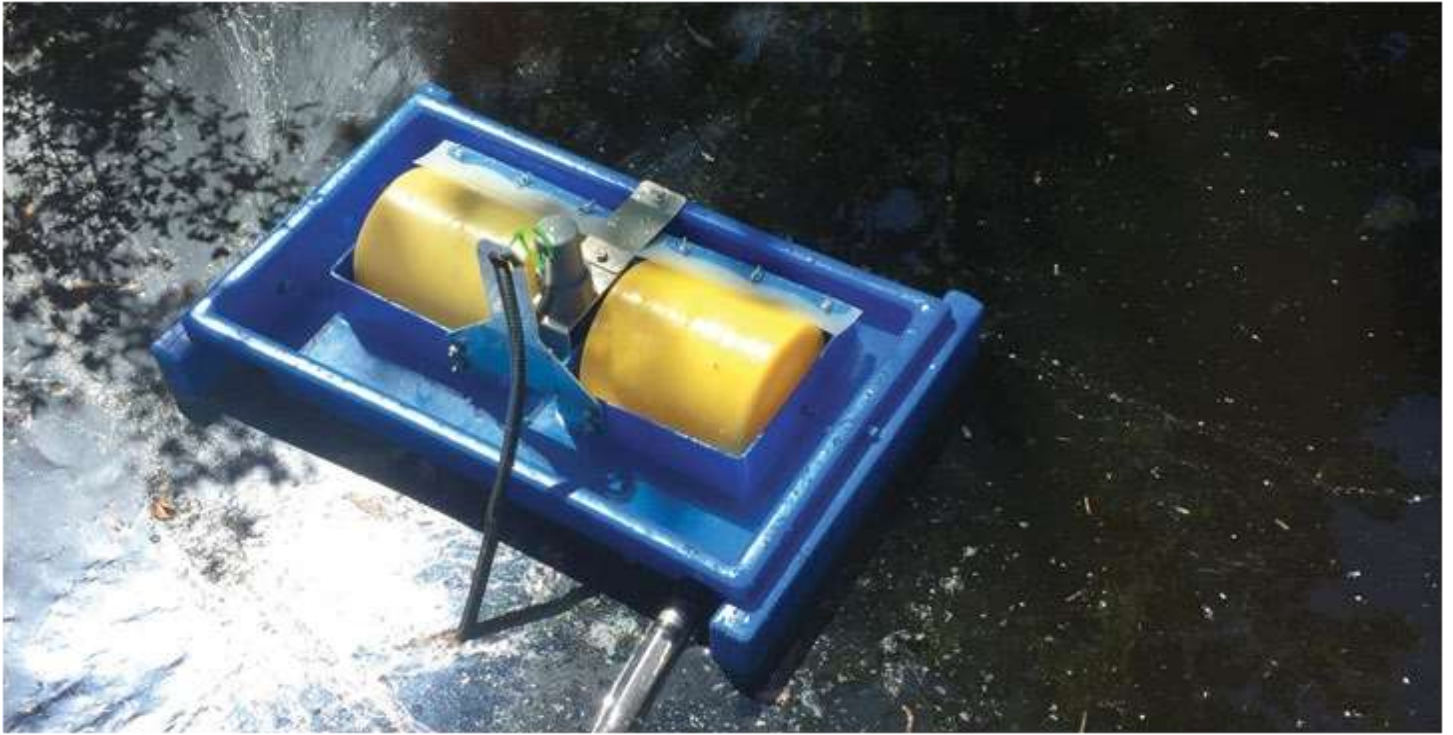
There was no damage to the boom fabric or internal structure. The stainless steel coils immediately re-gained shape allowing air to be drawn in through the vents on the top of the boom and re-inflated the boom section to its standard operating form.



DRUM SKIMMERS



12v Mini Skimmer



Variable Recovery Rate
12 lb / 5.4 kg

The **NTS 12V Mini Drum Skimmer** is a small and lightweight oil skimmer for industrial applications or small inland spills. Powered by a 12V DC motor, it can run for long periods from a standard car battery or continuous 110 / 220v power supply.

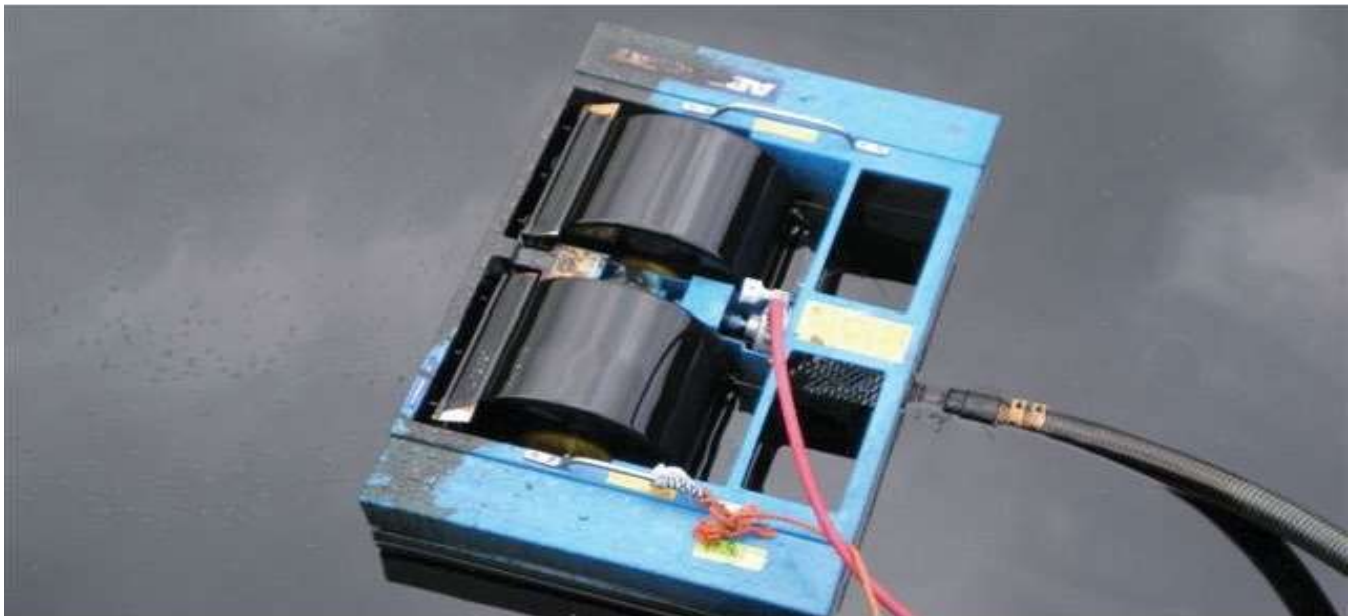


MiniMax



³ 20 gpm / 5 m3h
50 lb / 23 kg
Industrial and Inland

The **NTS Mini Max Drum Skimmer** is manufactured in HDPE, making it resistant to many chemicals found in industrial pits, sumps, separators and tanks. Special versions are available for high temperature and highly acidic environments.





90 gpm / 20 m3h*
83 lb / 37.6 kg
Industrial, Inland, Harbor
Smooth or Grooved Drums

The **NTS TDS118 Drum Skimmer** is available in pneumatic or hydraulic drive for oil spill response or industrial use. Due to its shallow ideal for cleanup in creeks, rivers and lakes. Brush and Disc versions are available.



TDS 136

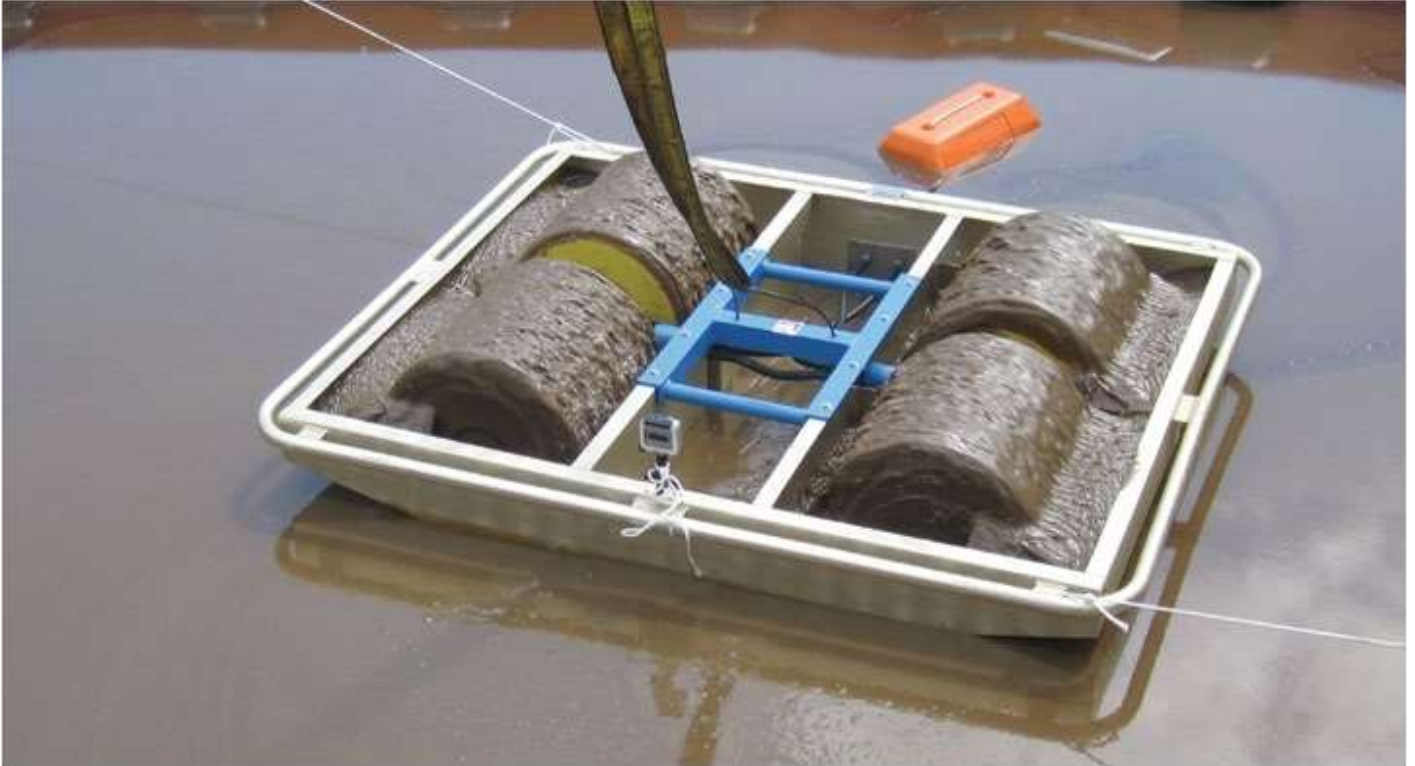


1170 gpm / 38 m3h*
135 lb / 61 kg
industrial, Inland, Harbor, Coastal
Smooth or Grooved Drums

The **NTS TDS 136 Drum Skimmer** is widely used in continuous duty industrial applications, as well as near shore response. This lightweight skimmer mixes high recovery rates with portability as it can be easily handled by two people.

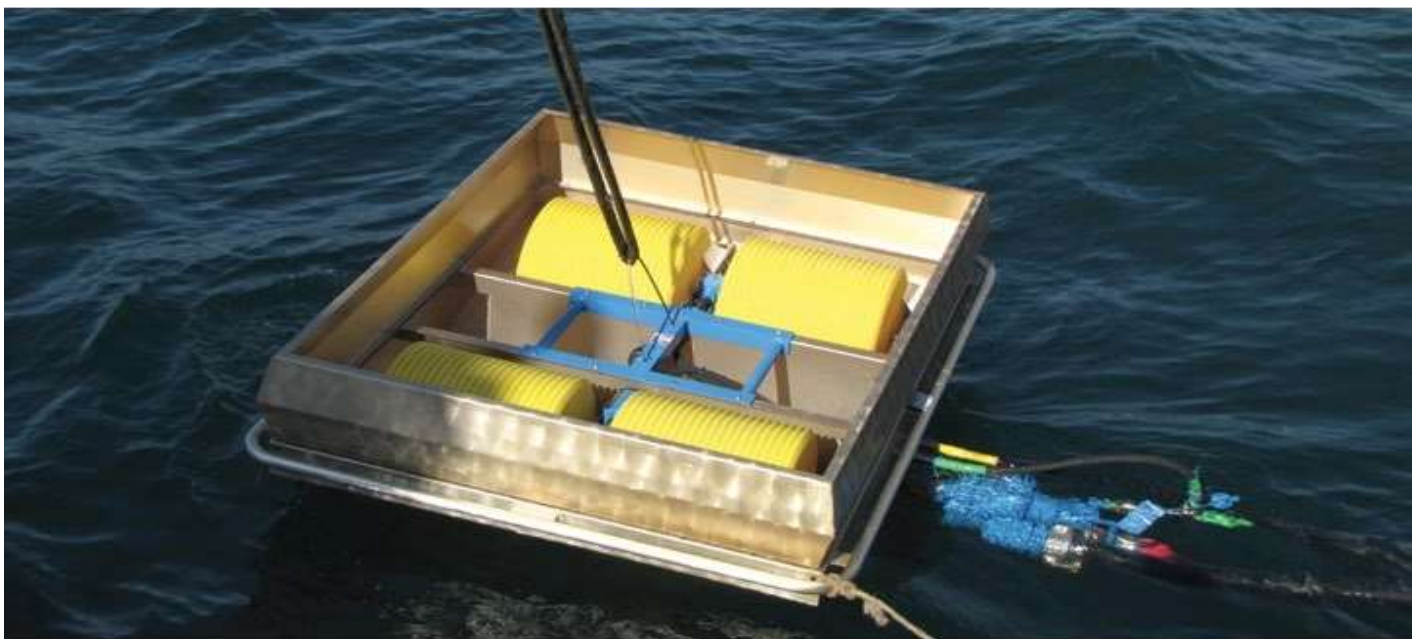


Magnum 100



251 gpm / 56 m3h*
202 lb / 92 kg
Industrial, Harbor, Coastal
Smooth or Grooved Drums

The **NTS Magnum 100 Drum Skimmer** is suited for larger spills in inland and coastal waters. The four drums provide more stability in open water, while an optional Wave Breaker increases the free board. Steam coils can be fitted for cold environments.



Magnum 200



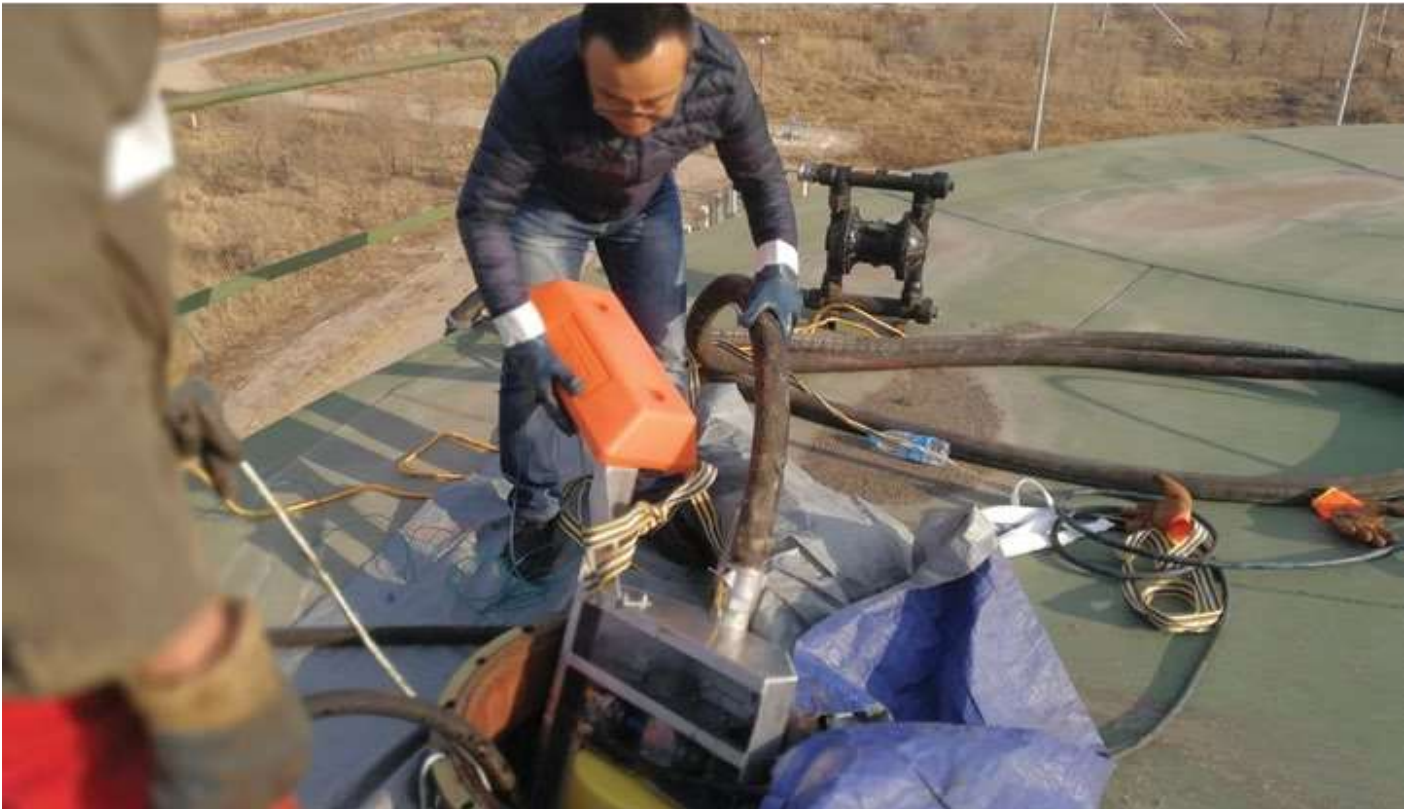
356 gpm / 81 m3h*
300 lb / 136 kg
Industrial, Coastal, Open Water
Smooth or Grooved Drums

The **NTS Magnum 200 Drum Skimmer** can be deployed from boats for open water response. In the photo, a Wave Breaker is attached, which increases the free board of the skimmer.





The **NTS Hermit Skimmer** is designed to fit inside tanks with small openings. This lightweight skimmer is capable of fitting through a 20 inch / 50 cm hatch in waste oil tanks, sumps or manholes. The pneumatic motor can be operated with a small compressor or plant air. Supplied with an optional air operated diaphragm pump, it can recover a wide range of oils. Note: Not for hazardous locations.



Steam Heat Systems



Our Drum Skimmers are available with a **Steam Heating System** for cold environments. Steam coils can be installed in the collection troughs on new or existing skimmers. The heat transferred by the steam helps the skimmer to function by melting the snow and ice surrounding the skimmer, allowing the oil to flow onto the collection drums. It also warms the oil that is being picked up, aiding the flow to the transfer pump and preventing the hoses from freezing.

Brush & Disc (Drum) Skimmers



NTS offers a lineup of Disc and Brush inserts for our well-proven range of drum skimmers. These inserts represent patented technology that not only enhance recovery rates, but also expand the viscosity range that can be collected. All inserts retain the lightweight and shallow draft features of the skimmer head that is so popular with responders. Drum inserts are interchangeable in the field with minimal tools and efforts.

System Configurations



Diesel Hydraulic



Pneumatic



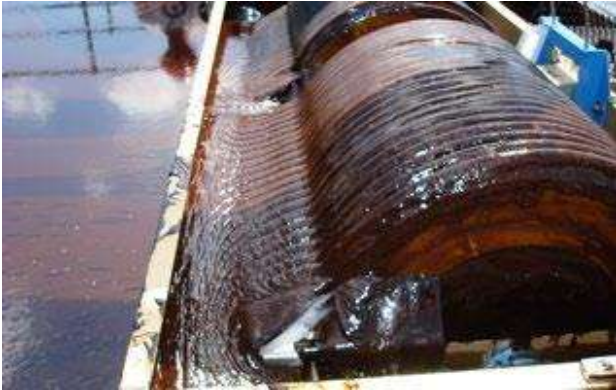
Electric Hydraulic

TDS118

Drum Skimmer



The **NTS TDS118** floating drum oil skimmer is available in pneumatic or hydraulic motor for oil spill response or industrial use. Due to its shallow draft and light weight, the TDS118 is ideal for cleanup in creeks, rivers and lakes. It is equally at home in an industrial American Petroleum Institute (API) separator. It is capable of recovering a wide range of oils. The TDS118 has been tested at Ohmsett to substantiate its nameplate capacity and efficiency. (Ohmsett is the largest outdoor saltwater wave/tow tank facility in North America and is the only facility where full-scale oil spill response equipment testing, research, and training can be conducted in a marine environment with oil under controlled environmental conditions)



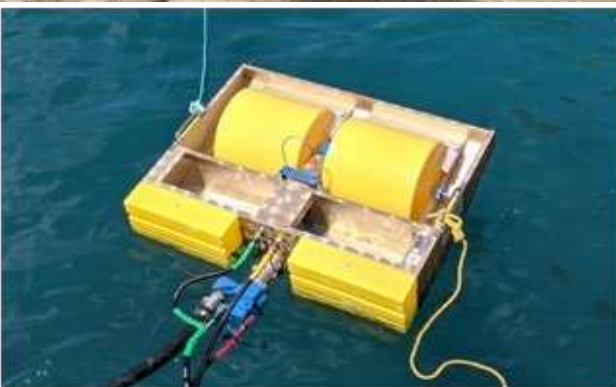
The TDS118 skimmer features heavy-duty high density polyethylene drums, which are resistant to impact and abrasion. They not only serve as the rotating oleophilic element that selectively recovers the oil from water, they also provide buoyancy for the skimmer. The skimmer can draw oil in from all directions. The drum material is resistant to many chemicals found in industrial pits, sumps, separators and tanks. The self-adjusting wiper blades recover oil from the face and side of the drums as they rotate. The wipers can easily be replaced without tools



Drive is provided for the drums by a centrally mounted gearbox (provides even weight distribution), this gearbox provides the torque necessary to turn the drums in heavy oils as well as allowing for fine control of the drum speed. The drum shafts are supported by self-aligning bearings. This is all mounted in a lightweight anodized marine grade aluminum frame, or a polyethylene HD frame- which adds further chemical and acid resistance; the open and steeply inclined pathways, the recovered oil is directed to the collection sump. The open design facilitates cleaning and removal of any debris or trash. A removable trash screen prevents larger items entering the recovered oil pump



The TDS118 is capable of recovering both light and heavy oils with very low water content - typically around only 3%. It may be fitted with either an air or hydraulic drive motor. We offer a choice of pumps in different materials to suit the Application.



The aluminum frame skimmer may be fitted with steam coils as an option to provide heat that warms the oil that's being recovered) to aid pumping and prevent freezing) as well as melting ice surrounding the skimmer.

Skimmer Variants

Two frame materials are available depending on the nature of your application.

Materials	Standard	PE	CRX
Frame	Anodized Aluminium	Polyethylene HD	Polyethylene HD
Drums (Smooth & Grooved)	Polyethylene HD	Polyethylene HD	Polyethylene HD
Drum Shafts	Aluminium	Aluminium	Stainless Steel
Gearbox	Epoxy Painted	Epoxy Painted	Powder coated
Bearing / U joint	Steel	Steel	Stainless Steel
Wiper Retainer	Aluminium	Aluminium	Stainless Steel
Suction Hose Coupling	Aluminium	Poly	Poly



Anodized Aluminum

TDS118 may be supplied with an Anodized Aluminum or Polyethylene HD frame.

This skimmer is widely used in the Palm Oil industry for the recovery of waste oils. TDS118 is capable of withstanding these temperatures as well as the corrosive conditions.



PE / CRX

For acidic environments the polyethylene construction may be used while the shafts and bearings are upgraded to stainless steel. For the copper mining industry, recovering organic oils in acidic ponds, we offer the CRX model, which has upgraded components.

Drum Configurations



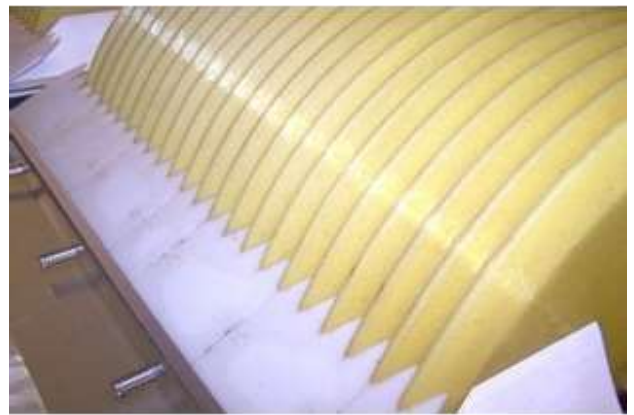
NTS offers a full lineup of innovative Grooved Drum, Brush and Discs inserts for our well proven range of skimmers.

These inserts represent patented technology that not only enhance recovery rates, but also expand the viscosity range that can be collected.

All inserts retain the lightweight and shallow draft features of the skimmer head that is so popular with responders. Drum insert are interchangeable in the field with minimal tools and effort. The skimmers can be supplied with just brush or disc or drum setup as per preference and requirement. Brush and disc assemblies can be dismantled for decontamination / cleaning.



Smooth Drum



Grooved Drum



Brush Drum



Disc Drum

The TDS 118 has been extensively tested by the Ohmsett test facility and researched by the University of California, Santa Barbara. This skimmer has also been independently tested by Environment are available on request

Specification

Smooth Drum Nameplate Capacity:	35 gpm / 8 cu.m per hour
Grooved Drum Nameplate Capacity:	102 gpm / 23 cu.m per hour*
Number of Drums:	2 (Polyethylene HD)
Frame:	Anodized marine grade aluminium / polyethylene HD
Handles and Tether Points:	Included
Wiper Blades:	Self – adjusting (spring loaded) Spare wiper blades included
Wiper Retainer:	Mounted with stainless steel pins & springs
Dimensions:	52.5 x 40.5 x 18 inch / 1.33 x 1.02 x 0.46 m
Weight:	83 lb / 37.6 kg
Drive:	Pneumatic or Hydraulic
Max. Operating Temp.:	130oF/54oC
Sump Coupling:	3 inch female camlock
Draft Light:	3 inch / 75 mm (may vary according to pump)
Lifting point:	Certified Wire
Air requirements (for pneumatic models)	
Skimmer only:	5 – 15 cfm, 50 – 100 psi 10 – 35 cfm, 50 – 100 psi

Optional: Spares kit, disc and brush inserts, trough guard, steam coils

* Nameplate capacity verified by the US Coast Guard



Pumps

Below are the most commonly used pumps with the TDS118 skimmer. Other pump options are available. Contact us for more details.



E150 Submersible Pump (Hydraulic)



M4 Diaphragm



E1 Diaphragm



Lobe Pump (Diesel)

Power and Pump Configurations

Hydraulically Driven Skimmer and Pump



NTS manufactures a wide range of hydraulic power units to operate boom reels, oil skimmers and pumps. These power units are available with both diesel or electric drives. The electric models may also be delivered in explosion-proof configuration for use in oil refineries and other hazardous locations. Based on your needs, we can build the perfect HPU / Skimmer / Pump configuration.

Air Operated Skimmer and Pump



NTS pneumatic skimmers are fitted with air motors that conform to EC Directive 94/9EC (ATEX 100a) for zones 1 and 2 (Group II, category 2, Gas and Dust Atmospheres) and a maximum surface temperature of 275 F/135 C.

Air requirements:

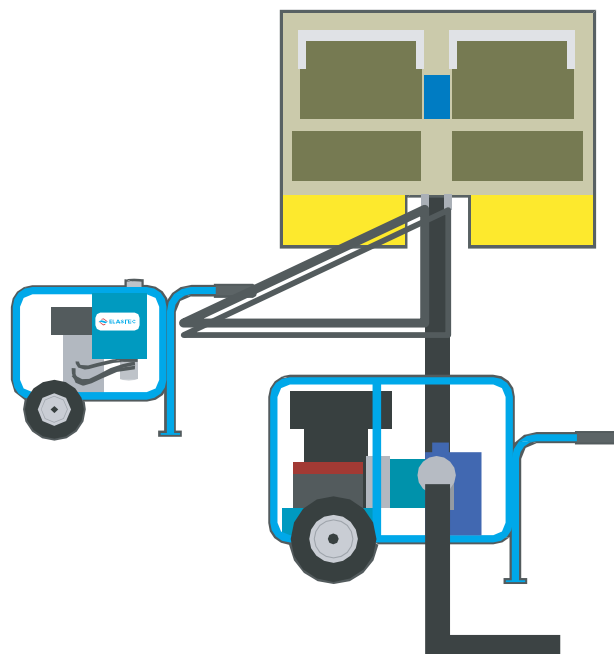
Skimmer only: 10 to 15 cfm, 50 to 100 psi.

Skimmer and E1 pump : 10 to 35 cfm, 50 to 100 psi.

Recovered Oil Pumping



Oil recovered by the skimmer can be transferred by Lobe Pumps, vacuum systems or on-site pumping methods. A vacuum truck can operate NTS skimmers with auxiliary hydraulic or pneumatic circuits. Recovered oil can be vacuumed into the truck.



Hydraulic Power Units

Below are the most commonly used power units with the TDS118 skimmer. *External suction pump required



D10 Kubota Diesel - 2 Circuits



D10 Yanmar Diesel - 2 Circuits



D10 Yanmar Diesel - 2 Circuits (with hi-flo tires and drop handles)



***D7 Yanmar Diesel - 1 Circuit**



***D7 Yanmar Diesel - 1 Circuit (with hi-flo tires and drop handles)**



E10 Electric - 2 Circuits



***E7 Electric - 1 Circuit**

TDS136

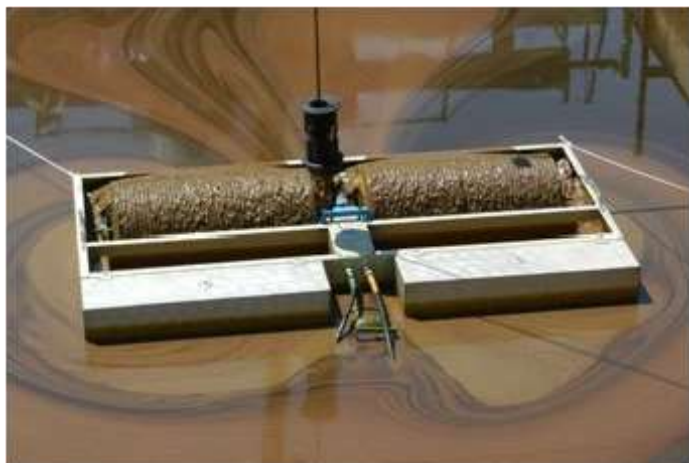
Drum Skimmer



Oil Spill Equipment / Floating Barriers / Control / Containment / Recovery

The **NTS TDS136** is a skimmer that has been used in countless oil spills; its performance has been certified and independently tested. Its skimming capacity has been verified by the US Coast Guard. The original design concept was patented in 1990.

Thousands of NTS drum skimmers have been sold worldwide and proven themselves both in emergency response but also industrial applications. The fact that the skimmer is suitable for continuous duty is a testament to the design concept. It is suitable for oil spill response or industrial use. Due to its shallow draft and lightweight design (135 lbs /61 kg), the TDS136 skimmer is ideal for cleanup in shallow waters such as creeks, rivers and lakes as well as harbors and near shore.



The TDS136 skimmer features heavy-duty high density Polyethylene drums, which are resistant to impact and abrasion. They not only serve as the rotating oleophilic element that selectively recovers the oil from water, they also provide buoyancy for the skimmer. The skimmer can draw oil from all directions. The drum material is resistant to many chemicals found in industrial pits, sumps, separators and tanks. The self-adjusting wiper blades recover oil from the face and side of the drums as they rotate. The wipers can easily be replaced without tools.



Drive is provided for the drums by a centrally mounted gearbox (provides even weight distribution), this gearbox provides the torque necessary to turn the drums in heavy oils as well as allowing for fine control of the drum speed.

The drum shafts are supported by self aligning bearings.

This is all mounted in a lightweight anodized marine grade aluminum frame. The open and steeply inclined pathways, the recovered oil is directed to the collection sump. The open design facilitates cleaning and removal of any debris or trash. A removable trash screen prevents larger items entering the recovered oil pump.



The TDS136 is capable of recovering both light and heavy oils with very low water content - typically around only 3%.

It may be fitted with either an air or hydraulic drive motor. We offer a choice of pumps in different materials to suit the application.

The aluminum frame skimmer may be fitted with steam coils as an option to provide heat that warms the oil that's being recovered (to aid pumping and prevent freezing) as well as melting ice surrounding the skimmer.

Drum Configurations



Smooth Drum



Grooved Drum



Brush Drum



Disc Drum

NTS offers a full lineup of innovative Grooved Drum, Brush and Discs inserts for our well-proven range of skimmers. These inserts represent patented technology that not only enhance recovery rates, but also expand the viscosity range that can be collected. The Grooved Drum design has been extensively tested by the Ohmsett test facility and researched by the University of California, Santa Barbara.

Test reports are available on request. All inserts retain the lightweight and shallow draft features of the skimmer head that is so popular with responders. Drum inserts are interchangeable in the field with minimal tools and effort. The skimmers can be supplied with just brush or disc or drum setup as per preference and requirement.

Brush and disc assemblies can be dismantled for decontamination / cleaning.

NTS pneumatic skimmers are fitted with air motors that conform to EC Directive 94/9EC (ATEX 100a) for zones 1 and 2 (Group II, category 2, Gas and Dust Atmospheres) and a maximum surface temperature of 275 F / 135 C.

Specification

Smooth Drum Nameplate Capacity:	77 gpm / 17 cu.m per hour*
Grooved Drum Nameplate Capacity:	170 gpm / 38 cu.m per hour**
Number of Drums:	2 (Polyethylene HD)
Frame:	Anodized marine grade aluminium***
Handles and Tether Points:	Included
Wiper Blades:	Self – adjusting) spring loaded) Spare wiper blades included
Wiper Retainer:	Mounted with stainless steel pins & springs
Dimensions:	92 x 42 x 18 inch / 2.34 x 1.07 x 0.46 m
Weight:	136 lb / 61 kg
Drive:	Pneumatic or Hydraulic
Max. Operating Temp.:	130°F/54°C
Sump Coupling:	4 inch female camlock
Draft Light:	3 inch / 75 mm)may vary according to pump)
Lifting point:	Certified Wire

Air requirements (for pneumatic models): 5 – 15 cfm, 50 – 100 psi
 Skimmer only: 20 – 70 cfm, 50 – 100 psi



Optional: Spares kit, disc and brush inserts, trough guard, steam coils
 *Nameplate capacity verified by the US Coast Guard
 **Tested at the Ohmsett facility according to ASTM F2709

Pumps

Below are the most commonly used pumps with the TDS136 skimmer. Other pump options are available. Contact us for more details.



**E150 Submersible Pump
(Hydraulic)**



**M4 Diaphragm Pump
(Pneumatic)**



**ES400 Submersible Pump
(Hydraulic)**



Lobe Pump (Diesel)

Power and Pump Configurations

Hydraulically Driven Skimmer and Pump



NTS manufactures a wide range of hydraulic power units to operate boom reels, oil skimmers and pumps. These power units are available with both diesel or electric drives.

The electric models may also be delivered in explosion-proof configuration for use in oil refineries and other hazardous locations.

Based on your needs, we can build the perfect HPU / Skimmer / Pump configuration.

Air Operated Skimmer and Pump



NTS pneumatic skimmers are fitted with air motors that conform to EC Directive 94/9EC (ATEX 100a) for zones 1 and 2 (Group II, category 2, Gas and Dust Atmospheres) and a maximum surface temperature of 275 F/135 C
Air requirements:

Skimmer only: 10 to 15 cfm, 50 to 100 psi.

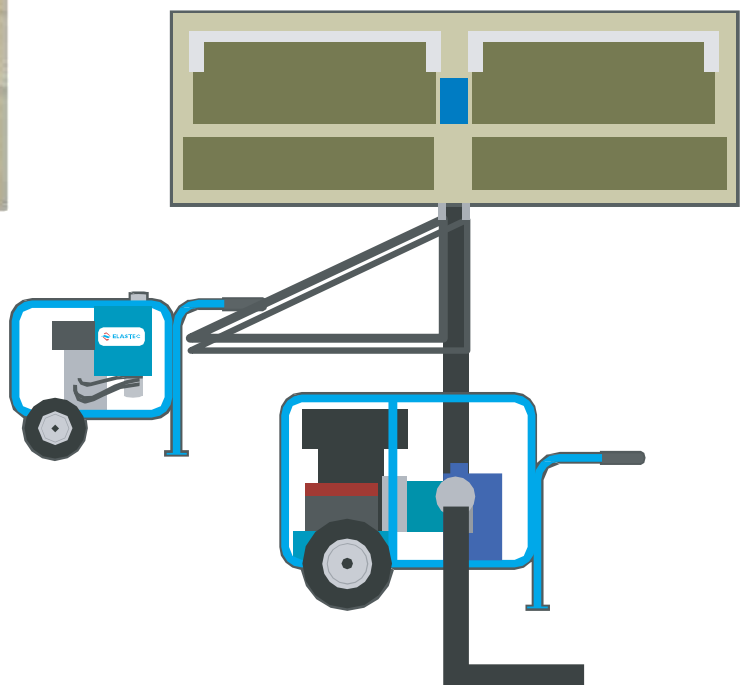
Skimmer and M4 pump: 20 to 70 cfm, 50 to 100 psi.

Recovered Oil Pumping



Oil recovered by the skimmer can be transferred by Lobe Pumps, vacuum systems or on-site pumping methods.

A vacuum truck can operate NTS skimmers with auxiliary hydraulic or pneumatic circuits. Recovered oil can be vacuumed into the truck.



QUICKTANK

Portable Recovery Tank

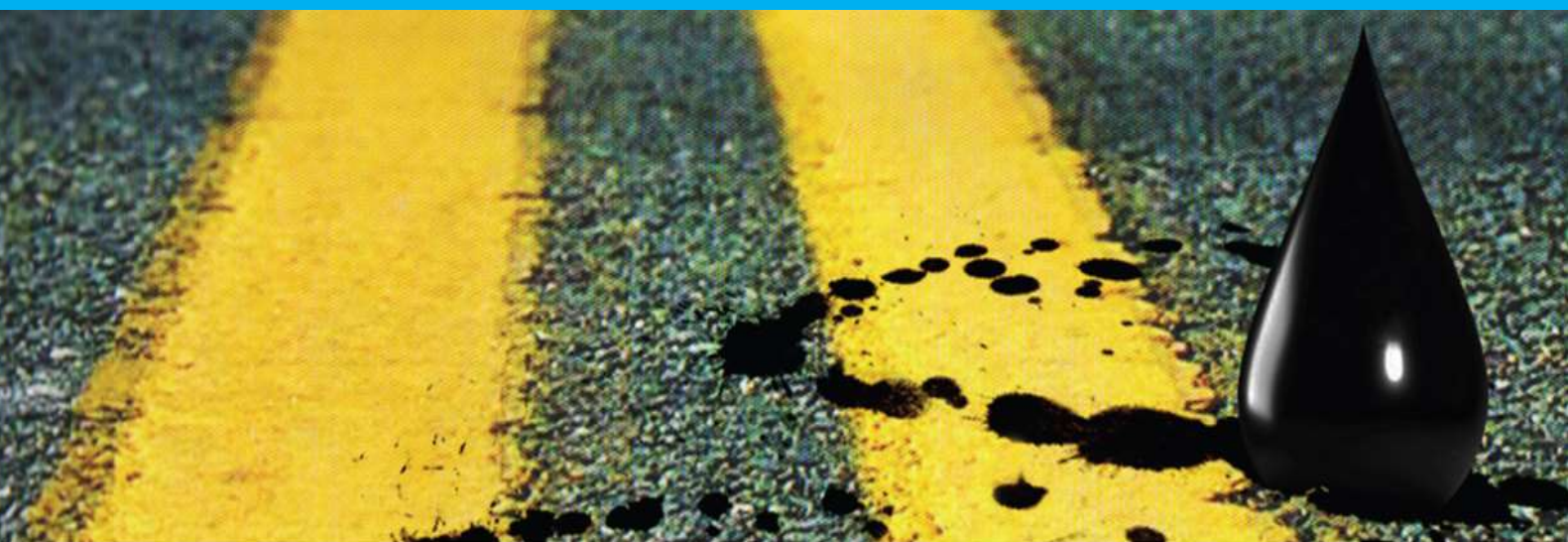




The NTS QuickTank is a portable open top tank that can be quickly deployed for the temporary storage of liquids and other types of waste. It may be used in a wide variety of applications for oils, water, waste water, contaminated trash. They are a useful tool for decontaminating people and equipment. The low sides provide easy access to the contents.

Standard Sizes	Open Dimensions	Folded Dimensions	Weight (Steel Frame)	Weight (Alum. Frame)
500 gal / 1,893 L	5'8" x 5'8" x 29"	7" x 5'8" x 29"	90 lbs.	68 lbs.
750 gal / 2,839 L	7'0" x 7'0" x 29"	7" x 7'0" x 29"	97 lbs.	79 lbs.
1,000 gal / 3,785 L	8'3" x 8'3" x 29"	7" x 8'3" x 29"	116 lbs	96 lbs.
1,500 gal / 5,678 L	10'3" x 10'3" x 29"	7" x 10'3" x 29"	138 lbs	109 lbs
2,100 gal / 7,949 L	11'3" x 11'3" x 29"	7" x 11'3" x 29"	154 lbs	124 lbs.
2,500 gal / 9,463 L	12'3" x 12'3" x 29"	7" x 12'3" x 29"	169 lbs	135 lbs
3,000 gal / 11,356 L	13'3" x 13'3" x 29"	7" x 13'3" x 29"	185 lbs.	149 lbs
3,500 gal / 13,249 L	14'3" x 14'3" x 29"	7" x 14'3" x 29"	205 lbs.	167 lbs
4,000 gal / 15,141 L	15'3" x 15'3" x 29"	7" x 15'3" x 29"	223 lbs	178 lbs
5,000 gal / 18,927 L	17'3" x 17'3" x 29"	7" x 17'3" x 29"	269 lbs	215 lbs.

- Type I
- 500-5000 gallon capacities
- Quick & easy assembly
- Materials: XR-5, XR-5B, XR-3PW, all Urethanes, PVCs, and PVC/Urethane blends, EXLON
- Replaceable liners



- NOT TOXIC
- NOT DANGEROUS
- NOT INFLAMMABLE
- NOT SLIPPERY
- 100% NATURAL
- BIODEGRADABLE

OIL SORBER QS QUERCUS SUBER 1:4

DESCRIPTION:

OIL SORBER QS this are selected and treated cork granules
- Particularly suitable for rapid absorption of oils and hydrocarbons from road surfaces.

OIL SORBER QS is 100% NATURAL product –
BIODEGRADABLE – BIOCOMPATIBLE-NON-SLIP with **HIGH CAPACITY OF THE ABSORPTION OIL AND HYDROCARBONS=1:4**
GRANULOMETRY: 0-1,5 mm



SAFETY DATA SHEET:

OIL-SORBER QS: It offers safety for the operator and for road traffic. It is not dangerous for humans or the environment. **IT HAS NO OBLIGATION TO CLASSIFICATION AND CANNOT BE CLASSIFIED AS A DANGEROUS SUBSTANCE**

OIL SORBER QS : DOES NOT CONTAIN SILICA; NON ABRAZIVE - NON TOXIC

However, **AVOID** contact with the skin and breathing of fine dust by wearing gloves, dust masks and protective glasses **DISPOSAL AS ABSORBED SUBSTANCES**



ENVIROMENT AND ECOLOGY OIL SORBER

SEA PROTECTION BARRIERS



**THE CORK IS A 100% NATURAL PRODUCT,
COMPLETELY RENOVABLE, EXTRACTED FROM
THE BARK OF THE CORK OAK**

HIGH ABSORBENT OIL CAPACITY

100% BIODEGRADABLE 100% RECYCLABLE

**EUROPEAN ENVIRONMENTAL PROTECTION
AGENCY APPROVED**

SUSTAINABLE ABSORBENTS

The **OIL SORBER** products are absorbents designed to deal with any kind of hydrocarbons, oils, solvents and organic compounds spills.



Disposal Options

Landfill Disposal

OIL SORBER has been tested to the USEPA Leachate standards for landfill disposal.

Incineration

When saturated, the special **OIL SORBER** granules have high calorific power and burn to less than 3% ash. These elements makes it ideal to be incinerated.

Alternative Fuel Source

The BTU value of used **OIL SORBER** special granules is very high.

Biodegradation

OIL SORBER special cork granules are biologically stable and free of harmful micro-organisms. When they are disposed of, they provide the environment needed for the development of bio-degrading organisms that can oxidize the absorbed hydrocarbons faster than the biodegradation of the special cork granules themselves.

ADVANTAGES

Why use OIL SORBER?

- 100% Natural, Sustainable and renewable – Special cork granules
- Production process: STRICTLY 100% NATURAL
- NO health risks – No additives, No toxic
- Instantly absorbs oils / hydrocarbons / chemical spills
- High absorption capacity
- Hydrophobic (Does not absorb water)
- Economical (less product is needed and only absorbs the contaminant)
- Super lightweight – very easy to handle and use, therefore the operators' efficiency is increased and the risks of accidents drastically reduced.
- Does not pass through (The contaminant is retained inside the material)
- It is not abrasive
- It is not reactive
- Controlled granulometry (avoid dust concentration – potentially explosive)
- Reduces waste generated (cork granules are reused several times)
- Ideal for land or water spills (they do not sink. They remain on the surface for long periods of time, if necessary)
- No health risks
- Without additives
- Not toxic
- Unlimited validity period
- Comes from a safe, hazard-free workplace
- Produced in Portugal

Products

OIL SORBER Granules - Act quickly and effectively



Act quickly and effectively. Regardless of the type of oil that has polluted both porous and rough surfaces, the **OIL SORBER** granules provide a complete and thorough cleaning of the surface. **OIL SORBER** granules not only offers benefits for the workplace and workers, but also keeps the disposal costs low.

HYDROPHOBIC REF.

- 25 LITER BAG
- 75 LITER BAG
- 250 LITER BAG

UNIVERSAL REF.

- 25 LITER BAG

NEUTRALIZING OIL SORBER 200 N Granules - effectively absorbs both petroleum products and substances containing acids



Dimensions: Granules with a diameter of up to 1.5 mm approximately and bulk weight 0.80 – 0.95 g/cm³.

Storage: The product is rot-proof and yes keeps intact for up to 5 years if kept indoors dry and protected from the sun.

Safety: It does not produce harmful dust, it is not flammable. For use, wear simple gloves and dust masks.

Code:

Oil Sorber 200 N

Package: Bags or buckets: 10 kg

OIL SORBER Socks - Allows a fast absorption



Super absorbent socks for spills, to protect sensitive areas. OIL SORBER socks have a durable, tear, tough resistant cover.

HYDROPHOBIC REF.

- 1.2 M LENGTH
- 3.0 M LENGTH

UNIVERSAL REF

- 1.2 M LENGTH
- 3.0 M LENGTH



OIL SORBER Pillows - Terrestrial and Marine Pillows



Super absorbent pillows for spills, to be used for everyday maintenance, repair and general operations. Use on land and water. Allows a fast absorption. One box of the product with Code 30x30 contains 40 pillows; 1 pillows contains 0,27 kg **OIL SORBER** and have absorption capacity 2,6 L. One box of the product with Code 45x45 contains 12 pillows; 1 pillows contains 0,8 kg **OIL SORBER** and have absorption capacity 7,7 L.

Code	Dimensions	Box	Absorption/ box	OIL SORBER weight
P30x30	30x30	No 40 / 11 kg	2,6 l / 103 l / box	0.27 kg pillows
P45x45	45x45	no12 / 10 kg	7,7 l / 92 l / box	0,8 kg / pillows

OIL SORBER Booms Super and fast absorption, high retention capacity



Super and fast absorption, high retention capacity (non-leaching), repels water and floats on water even after saturation. Strong mesh outer sleeve encases a poly sock skin filled with highly absorbent special cork. Filler won't shed and booms will not sink when saturated with oil. Sturdy hardware with polyester multifilament yarn rope to ensure durability and easy retrieval. Booms can be linked together.

Composition: Cork (*Quercus suber*) 90,8 – 96,0 %. (N.CAS261789-98-8) Casing external: polypropylene 2,5–5,9% % (CASn.9003-07-0) Net: polyester multifilament yarn.

One box of the product with Code B12300 contains 4 booms; 1 boom have absorption capacity 26 L of oil. Code B20300 contains 4 booms and 1 boom have absorption capacity 63 L of oil. The Code B20600 contains 2 booms with a summary mass of 23,3 kg. Every booms has absorption capacity of the 124 L of oil

Code	Dimensions	Box	Absorption / box
B12300	ø 12,5cm; length 3,0 m	No4/ 11.5 kg	28 l / 111 l / box
B20300	ø 20cm; length 3,0 m	No4/ 25.2 kg	63 l / 252 l / box
B20600	Ø 20cm; length 6,0 m	No2/ 23.3 kg	124 l / 248 l / bo



Products

Complementary Products - Repels water based fluids and absorbs oil based fluids



Oil absorbent, dimpled, bonded oil absorbent pads and rolls are appropriate for use in traffic areas, industrial plants, machine and maintenance shops. Repels water based fluids and absorbs oil based fluids. Suitable for industrial and environmental applications for quick absorption of oil. Bonded, high performance universal absorbent pads and rolls. Great for oil and water based liquids. These high performance absorbent pads are dimpled to soak up more liquids in less time. Bonded for strength and high absorbency.

- Oleophilic and hydrophilic properties active on hydrocarbons and derivatives, oil engine, hydraulic fluids, coolants, mineral oils, solvents and wastewater. Reduction of disposal costs.
- When incinerated it does not release toxic gases and the ash rate is less than 0.02
- Gray in color to adapt to the working environment and hide leaks and drips.

HYDROPHOBIC REF.



Mines

Absorb and contain diesel fuel and other chemicals



Diesel fuel, lubricants, solvents, and other chemicals are all used and stored at project sites. Contractors that are responsible for transporting and using such materials are aware of the associated environmental hazards, and should have **OIL SORBER** products to deal, efficiently and safely, with a major or a minor spill.

Industry, Factories and Workshops

Prevent small spills from becoming big spills



OIL SORBER spill kits and **OIL SORBER** special granules are very handy in factories for a fast and efficient response when a spill occurs. Best way to prevent small spills from becoming big spills.

Airports

Incredible performance with Jet fuel and other types of fuels



In case of a spill, it must be cleaned immediately. Fixed Based Operators and Aircraft Rescue and Fire Fighting are always concerned about the safety on their airports and maintenance facilities. **OIL SORBER** has an incredible performance with Jet fuel and other types of fuels. It reduces vapors drastically.

Applications

Dams, Ports, Harbors and Marinas *Long floatation capacity*



OIL SORBER products are 100% natural, hydrophobic and super absorbent, which are ideal to be used in waters and by port authorities. Prevent any spill from happening or contain it immediately with our very special and resistant **OIL SORBER** booms with various lengths, easy deployment and long floatation capacity (even after saturation).



Truck Fleet / Maintenance Cars *OIL SORBER backpack spill kits to deal with minor spills*



OIL SORBER backpack spill kits are very light, easy to handle and fit properly in a small space. If any minor spill happens, now you can deal with it fast, efficiently and with no environmental concerns.

Petrol Stations *Clear spills at Petrol Stations*



Small spills happen constantly in petrol stations. Be ready and have **OIL SORBER** products in hand to clean the spill right away.

Refineries

To clean up helping preventing any natural disasters



OIL SORBER special granules are super absorbent and also suppress vapors. Spills are now easier and safer to clean up helping preventing any natural disasters.

Fire Departments

Fast, easy and environmental friendly clean-up



OIL SORBER special granules are very useful on a fire truck for a fast, easy and environmental friendly clean-up.



On-Shore Off-Shore Oil Drilling Companies

Quickly absorb and contain the oil

When drilling, crude can sometimes be spilled onto the surface. **OIL SORBER** special granules are then sprayed on the spill to quickly absorb and contain the oil from spreading.

Beach / Rock Cleaning

Minimize contamination to fur and feathers

Environmental friendly **OIL SORBER** special cork granules can be applied / sprayed on rocky shores and beaches of importance to wildlife (e.g. penguins and seals), to minimize contamination to fur and feathers as they come ashore.





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