

ELASTEC

X150

Grooved Disc Skimmer



Oil Spill Equipment | Floating Barriers | Incinerators

Elastec won the \$1m Wendy Schmidt Oil Cleanup X CHALLENGE with this innovative design. The award winning system was able to recover 4,670 gpm / 1060 cu.m per hour at an average 90% efficiency when officially and independently tested at the Ohmsett facility in New Jersey. It was tested both in calm conditions and in waves. It beat competitive designs from around the world to win top honor. Copies of test reports and X Prize competition results are available on request.



OSKIMUN153

The X150 was tested at Ohmsett in May 2012 and proved that the technology is scalable. Results from the X Prize challenge were replicated in this smaller more readily transportable version. The X150 was tested in advancing and stationary modes.

Tested speed - Stationary, Advancing 1-3 knots



The X150 is a scaled down version of this system. It integrates the same design concepts and takes a systematic approach to recovering oil;

- 1 - Encounter Rate – The X150 may be towed through the water at speeds higher than conventional booms, meaning more oil is encountered for a given sweeping width.
- 2 - Containment – Our patent pending design features a unique oil retention hull that retains the oil and expels water.

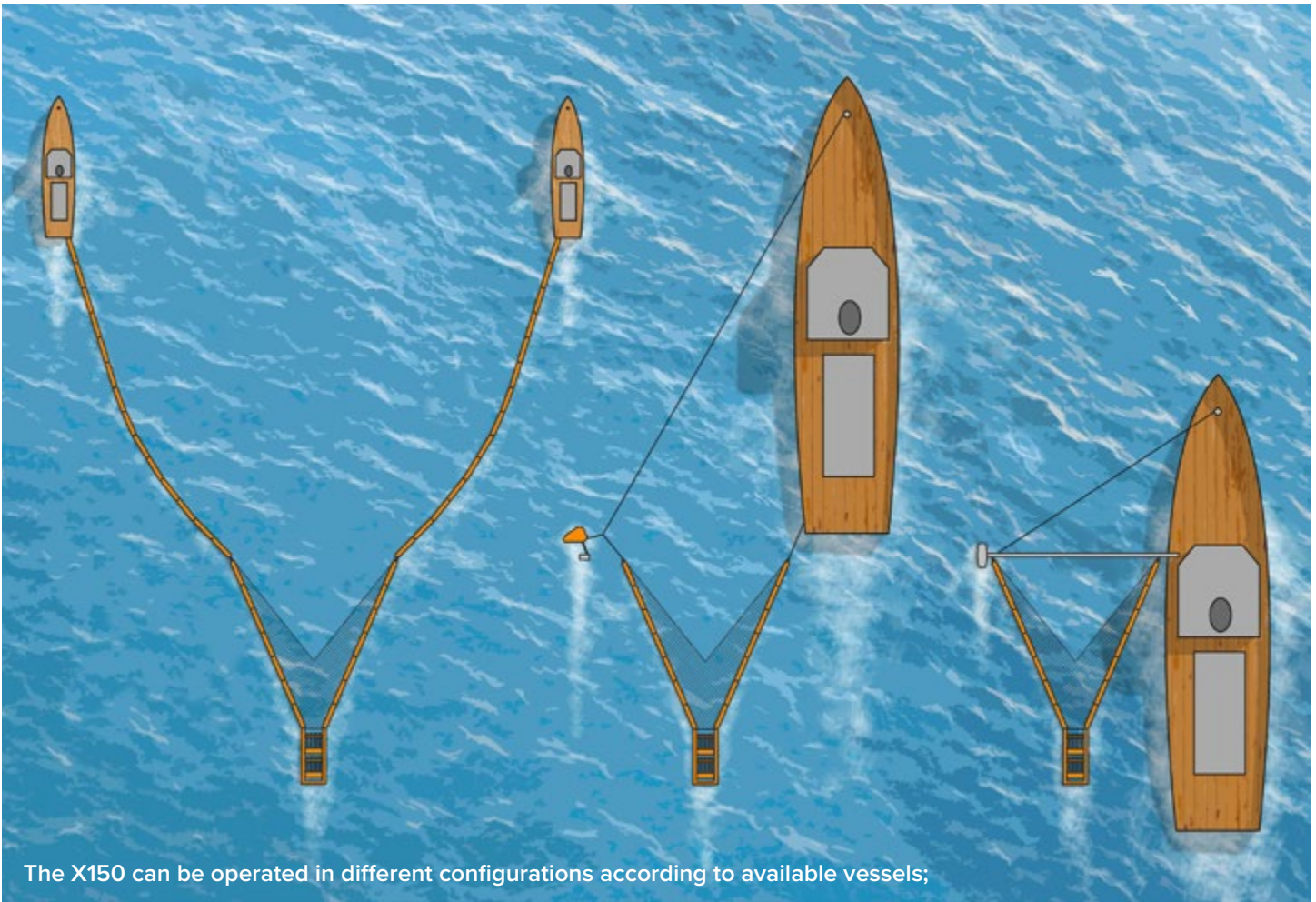
3 - Recovery – The unique patented Grooved Discs are a development of the well proven Grooved Drum design. These discs are totally unique and are able to recover oil at unheard of rates. This is achieved through a greater surface area that traps the oil, allowing discs to run faster than conventional smooth discs. Placing grooves on the surface of drums, discs or belts is internationally patented.

4 - Transfer – We have matched the recovery rate with a lightweight and powerful submersible pump. This feature alone is somewhat revolutionary as many skimming systems have mismatched pump and recovery rates.

Advancing Results*

Oil Recovery Rate (Calm)	646 gpm / 146.8 m ³ /hr with 87.6 Recovery Efficiency
Oil Recovery Rate (Wave)	551 gpm / 125 m ³ /hr with 89.7% Recovery Efficiency
Max Oil Recovery Rate	671.9 gpm / 152.7 m ³ /hr
Max Recovery Efficiency	95.3%
Max Throughput Efficiency	91.8%

*Nameplate capacity of the X150 has been ratified by the U.S. Coast Guard.



The X150 can be operated in different configurations according to available vessels;

X150 Skimmer Specification

Disc Nameplate Capacity	660 gpm / 150 m ³ /hr
Number of Discs	Two banks of five high speed Grooved Discs
Boom Connection / Towing	Pad eyes mounted inside the hull
Application	Harbor, river and coastal
Operational Mode	Stationary / advancing up to 3 knots
Dimensions (LxWxH)	108 x 59 x 55 inches / 2.74 x 1.5 x 1.4 m
Weight	1,341 lb / 608 kg (note: crane or launcher required)
Construction	Painted marine grade aluminum
Handling	Fork pockets, lifting points
Draft	32 inch / 0.82 m (operating)
Recovered Oil Pump	High capacity salvage pump
Recovered Oil Pump Capacity	660 gpm @ 40 psi / 150 m ³ /hr @ 3 bar
Pump Casing	Seawater resistant aluminum
Pump Weight	62 lb / 28 kg
Discharge Connection	4 inch / 100 mm with Camlock coupling
Pump Diameter	305 mm (fits through 12.5 inch Butterworth hatch)
Debris Management	Included
Hydraulic Hose	15 m / 50 ft hydraulic hose set, rated to requirement

Power Unit Specification (OPOWEKU348)



The D50 is a compact but powerful diesel driven hydraulic power unit for operating a range of equipment. Typically, it is packaged with our X150 Grooved Disc skimmer. It can also operate other equipment. It features a quiet running water-cooled electric start diesel engine mounted in a steel cage frame fitted with controls. Four large anti-vibration feet are installed at the corners of the frame. The open style allows excellent access for maintenance. The D50 has a laser cut control panel with valves to control flow to hydraulic circuits. Three hydraulic pressure gauges show the working pressures. A large capacity fuel tank is installed in the base of the frame. A hydraulic tank is mounted above the hydraulic pump and fitted with level / temperature gauge, filter and filler/strainer.

Drive	48.1 hp / 35.9 kW Int. Tier 4 Stage 111A 38.5 hp / 28.7 kW Net cont. @ 2800 rpm water cooled diesel engine with 12 volt electric start variable speed controls
Frame	Skid mount with lifting bracket
Hydraulic Tank	40 gallon / 151 litre. Spin on return filter, fluid level and temp. gauges, tank top filler/strainer
Fuel Tank	25 gallon / 94 litre
Hydraulic Quick Couplings	Stainless steel
Lifting	Central lift point
Fabric Cover	Included
Dimensions	69 x 27 x 48 inch / 1.75 x 0.68 x 1.22 m
Weight	1,611 lb / 731 kg wet

Oil Boom Specification



Included with the system is Sweep boom with 100ft / 30m of rugged air-inflatable oil boom, that incorporates the hydraulic and discharge hoses. This single point inflation boom chambers are fitted with foam panels that act as reserve buoyancy and integrated netting assists in retaining the sweep configuration.

The boom is stored and deployed from a hydraulically operated boom reel with diesel power pack. High capacity diesel driven air blower for boom inflation / deflation.

Freeboard	18 inch / 0.46 m
Draft	10 inch / 0.25 m
Length	100 ft / 30 m
Bottom Tension	1/2 inch / 12 mm Galvanized Chain

Optional Launching System (OSYSTLA150)

The Elastec X150 Skimmer is now available with a fully integrated Launching System. It does all the heavy lifting by hydraulically telescoping the X150 skimmer from the stern of the vessel, hoisting and winching it into the ocean. All of the system components (skimmer, boom, reel, power pack, BoomVane™) are stored within the steel frame which fits into a 20ft container for storage and shipping.



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