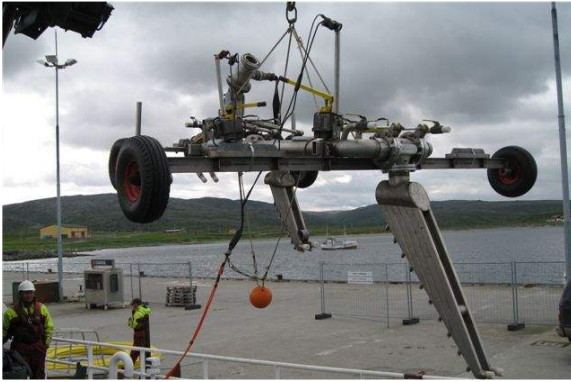


OTTER Specifications



Otter is a tracked underwater trenching vehicle capable of simultaneous lay and burial to a depth of up to 2m.

General

Description : Underwater Trenching System
 Owner : Aqua Diving Services Ltd

Capabilities

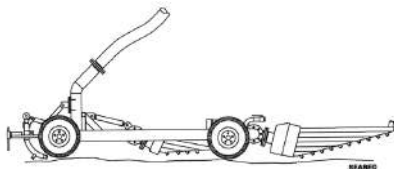
Cable/pipeline size : From 100mm to 300mm diameter
 Trench Depth : From 0.4 to 2.0 metres
 Trenching Speed : 4-5m per minute (at 1m trenching depth)

Suitable Seabed

Conditions : Mud
 : Clay
 : Sand
 : Fine Gravel
 : Mixtures of the above

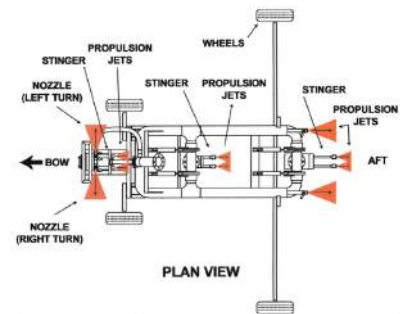
Operation

Positioning, docking and retrieval : Requires diver assistance
 During Trenching : Operated under surveillance of TV-cameras



Dimensions

Width : 1.2 m (excl wheels)
 Length : 4 m (adjustable)
 Weight : 500 kg in air
 : 500 kg in water



Water pump

Propulsion : Water jets – rear directed
 Capacity : 640m³/h = 180 l/sec
 Pressure : <20 Mpa
 Shear Pressure : 40kPa
 Voltage : 380/220 VAC, 3 phase 60hz
 Location : Pumps positioned onboard vessel, barge or pontoon

Method of Trenching : Hydrodynamic Fluidization

1 Trenching - Water jets directed at the seabed cause suspension of fluidized materials/particles and “cut” a narrow trench

2 Low Impact Burial - Once the seabed is fluidized to a pre-determined depth, heavy objects (e.g. cables & pipelines) sink to the bottom of the trench by their own weight, without being exposed to any hard forces

3 Covering - Rear water jets then blow the suspended soil particles backwards – to be deposited 10m to 15m behind the machine. As the fluidization process diminishes, the walls and fluidized materials collapse to cover the trench. In sand or silty sand seabeds there is usually no trace of the trench after a few days

