



TRACKED TRENCHING MACHINE

BT 500

The BT 500 is a remote controlled tracked vehicle able to operate in any water depth ranging from 0m down to 1,000m. It is constructed for maximum ruggedness and reliability, whilst maintaining a large degree of versatility and maintainability. The machine includes a 1.25m depth wheel cutter and dredge pump for spoil side cast. The cable loading arms are used to load the cable into a fixed cable trough, located above the wheel cutter. This allows the operator to engage the trenching tools with one loading operation.

It can operate in post and simultaneous lay and burial modes. The trenching machine is specifically designed for safe handling of the product and includes release process for emergency recovery.



HIGHLIGHTS

- ▲ Manufactured by Soil Machine Dynamics Limited (SMD).
- ▲ Operating water depth range: 0m to 1,000m.
- ▲ Launch weight: 23te.
- ▲ 1.25m wheel cutter.
- ▲ Trench in soil strengths up to 35MPa.
- ▲ Able to handle products diameter of between 10 to 180mm.
- ▲ ROV/Diver intervention panel for emergency cable offloading and machine recovery.

All specifications presented within this document are subject to change without notice.

TRACTOR SPECIFICATIONS

Depth Rating:	1,000 m
Length:	9.4 m
Width:	6.3 m
Height:	5.8 m
Weight (in air):	23 Tons
Weight (in water):	20 Tons
Speed Range:	0 to 1,000 m /hr (no burial)
Track type:	1,000mm plastic track plates on a single chain.
Incline capability:	0 to 10 degrees
Ground pressure:	25 kPa
Turing radius:	40 m
Structure:	High strength steel chassis
Steering:	Through independent track control (manual or by auto-pilot from gyro)
Rotational positioning:	2 x Curvetech HTE500 thrusters

WHEEL CUTTER SPECIFICATIONS

Configuration:	Wheel type mechanical cutter mounted under centre of tractor
Wheel type:	Heavy duty rock cutting wheel
Power:	300 kW
Trench depth:	1.25 m
Trench width:	0.3m
Soil strength:	up to 35MPa (compressive strength)
Cable loading:	Two cable arms with grabs
Product diameter:	10 to 180mm

DREDGE SPECIFICATIONS

Configuration:	Centrifugal dredge pump mounted with wheel cutter assembly
Power:	40 Kw
Water flow:	1,250 m ³ /hr
Soil capability:	Handles soil, sand, gravel and pebbles up to 150mm

SUBSEA HYDRAULIC SPECIFICATIONS

Oil:	Panolin HLP Synth 46 biodegradable
Vehicle power:	1 x 400kW, 4.16kV, 60Hz, 4-pole submersible oil filled motor.
Wheel tool drive:	Hydraulically independent hydrostatic transmission connected to mechanical tool drive motor (radial piston motor).
Dredge pump drive:	Hydraulically independent hydrostatic transmission connected to dredge pump shaft (radial piston motor).
Cooling:	All purge flow and case drain flow pass through an oil/water heat exchanger.
Auxiliary pump:	1 x 1750 rpm fixed displacement gear pump (max 250 bar).
Valve tanks:	Oil filled and pressure compensated.

UMBILICAL CABLE SPECIFICATIONS

Type:	Double layer steel armoured with electrical and optical passes
Umbilical Length:	1,200 m
Diameter:	39.1mm

UMBILICAL WINCH SPECIFICATIONS

Operating speed:	Variable to 30 m/min
Dimensions:	3.8m long, 3m wide, 3.2m high
SWL:	6 Tons

UMBILICAL WINCH HPU

Type:	Built in hydraulic power unit - mounted within winch frame
Motor:	75kWm IP56
Cooling:	Seawater oil cooler

INTERVENTION DECK HPU

Capacity:	1 x 15kW diesel driven fixed displacement
Weight:	<1 Ton
Cooling:	Air cooled
Connection:	Intervention panel located on tractor. Can be connected using either ROV or Diver.

SURVEILLANCE EQUIPMENT

Cameras:	2 x Kongsberg OE14-367 Colour Zoom (PAL) 1 x Kongsberg OE13-125 Low Light (PAL) 4 x Kongsberg OE14-377 Mini Colour (PAL)
Lighting:	8 x 110V Bowtech Aqua Vision 4200
Pan and Tilt unit:	3 x Kongsberg OE10-102 pan and tilt 1 x Kongsberg OE10-103 rotator
Profiling Sonar:	4 x Kongsberg 1171 sonar
OA Sonar:	1 x Kongsberg obstacle avoidance sonar 1171
Echo Sounder:	1 x Kongsberg altimeter 1007D
Noise Sensor:	1 x Hydrophone QA-17
Positioning Beacon:	Interface for 2 x free issue responders
Cable tracker:	Optional (electrical interface at junction box ready for TSS 440 Dual track System)

SYSTEM POWER REQUIREMENTS

440 Volts AC, 3 Phase 60Hz, 700kVA

BEACH OPERATIONS CHILLER SYSTEM

Cooling capacity:	230kW
Ambient Temp.:	55 degrees C
Refrigerant:	R410A
Water flow rate:	300 litres per minute
Water hose:	1,200m of 2" water hose with tension member

SYSTEM CONTAINERS

Control Container	
Type:	Custom 20 ft, A60 rated offshore container
Certification:	BS EN12079-1
Weight:	12 Tons

Power Container	
Type:	Custom 20 ft, A60 rated offshore container
Certification:	BS EN12079-1
Weight:	12 Tons

Workshop Container	
Type:	Custom 20 ft, A60 rated offshore container
Certification:	BS EN12079-1
Weight:	12 Tons

Stores Container	
Type:	Custom 20 ft, offshore container
Certification:	BS EN12079-1
Weight:	12 Tons