

SeaRhino

Surface Fed Amphibious Hi-Track Jetter Vehicle Spread



The Surface Fed Amphibious Hi-Traq Jetter is capable of trenching subsea and on land. The use of surface mounted jetting pumps and HPU means that the vehicle can seamlessly trench from the beach to below the surf zone without needing to stop and reconfigure the machine:

Key Features:

- Increased clearance under chassis allowing for easier travel over undulating terrain.
- Larger Tracks provide improved performance in soft grounds.
- Improved cable following capability.
- Significant reduction in weight 13Te in Air
- 4 Track Drive and Levelling System
- Jetting System
- Vehicle Control System

4-TRACK DRIVE AND LEVELLING SYSTEM

The innovative approach to the undercarriage provides a higher level of manoeuvrability and traction than conventional two-track, skid-steering vehicles. Each track provides independent functions for Track Drive, Pitch, Levelling, and Steering

The 4-track solution enables the vehicle to trench in even the most challenging terrain including extreme angles of undulating seabeds up to 20° slopes. Track Steering allows for 15m turning radius thru Crab, Wagon, and Skid Steering Modes.

JETTING SYSTEM

The Surface Fed Amphibious Hi-Traq Jetter comes with 2 PN16 swords which can cut a trench up to 1.5m deep suitable for Ø450mm cable. Jetting water is supplied by deck pumps. The swords height and width can be adjusted remotely allowing for variable trench depths (0 to 1.5m) and jet leg separation of between 0.2 and 0.6m. The vehicle is supplied with an independently controlled depressor. The depressor is designed to limit the loading on the cable while also ensuring target cable burial depth is maintained by guiding the cable into the bottom of the trench. Jetter Swords length can be increased to achieve depths of 3.3m, if required.

VEHICLE CONTROL SYSTEM

Subsea Control Network- All control and instrumentation on the vehicle is interfaced through remote input/output modules, these are networked using industry standard Ethernet

Electronics Pod- The electronics pod houses the main subsea control equipment, including the main control transformer, subsea multiplexer and all control power supplies. The pod pressure vessel is capable to depths to 1000m.

Thrusters - The vehicle's positioning thrusters can be automatically controlled to align the vehicle to a predetermined heading set by the operator.

Auto Heading / Cable Tracking Mode - The PLC control system is capable of automatically controlling the trencher tracks to follow a set course or the product itself.

Surveillance Equipment

The vehicle comes ready to interface with a wide range of industry standard surveillance equipment. The vehicle comes ready with:

- Teledyne blue view m900 imaging sonars
- 1 Kongsberg M3 sonar
- 1 Aris 1200 acoustic camera

VEHICLE DECK EQUIPMENT

Power & Control Cabin – SCADA Functionality, Dual Console, Touchscreen (Diagnostics, Data Logging, Trends, Alarms, etc.)

Umbilical Reeler – Automatic/Manual operation, 150m Capacity

Deck HPU – 100kW Safe Area Electric HPU to power track drives and Hydraulic Cylinders

VEHICLE SPECIFICATION

Environmental

DESCRIPTION	SPECIFICATION
Air Temperature	Max 40° C Min -10° C
Humidity	100%
Wind Speed	Max 20m/sec operational
Sea Water Temperature	Max 40° C
Operational Limit for Sea State Currents (knots)	3
Max Seabed Slope	+/- 20 degree
Max Seabed Step	+/- 1m
Min Operating Depth	0m Capable of shore work on land
Max Operating Depth	1000m Vehicle only. Operational depth limited by umbilical length, deck water hose length and deck mounted HPU capability.

Subsea Vehicle Specification

DESCRIPTION	SPECIFICATION
Dimensions (approx.)	L5.3m x W4m x H2.75m
Weight in Air	13Te
Installed Power	Jetting power provided by client supplied deck mounted water pumps. Hydraulic power supplied by Deck mounted HPU
Max. Seabed Slope	±45° (roll and pitch) drive capability (Design Capacity) ±20° (roll and pitch) levelling capability for vertical trenching
Max. Seabed Step	+/- 1m
Min. Water Depth	0m Capable of shore work on land
Jetting Power	Godwin HL260M Pump to provide flow rates of ~1200m³/hr =8 bar; sufficient for 30kPa clays
Trench Depth	0m – 1.5m (dependent upon available jetting power) Depth can be increased to 3.3m with optional 3.3m Swords
Jet Leg Separation	0.2m - 0.6m
Maximum Product	Ø450mm
Minimum Turning Circle	10m on product
Depressor MBR	3.0m (does not have to be fitted)
Eductor System	Optional system to fluidize sand & cut clay from trench

Tracks Specification

DESCRIPTION	SPECIFICATION
Number of Tracks	4 off 2.3m Long x 1.2m Wide
Type	Excavator type chain and support rollers on bogies
Pads/Shoes	Plastic rack shoes with available metal grousers for soft ground
Transmission	Hydraulic via track drive gearbox
Ground Pressure (submerged)	10kPa (Reduced further when addt'l buoyancy is used)
Transducers	Drive pressure, track speed
Steering Position	In Cylinder Transducers (ICTs)