

# Pre-Cut Trenching (1.4)

## SCAR Seabed System



The SCAR Seabed System has been developed to deliver an all-in-one solution for route preparation prior to the burial of subsea cables, pipelines, and umbilicals.

# Pre-Cut Trenching

## SCAR Seabed System

### SCAR pre-cut trenching system capabilities

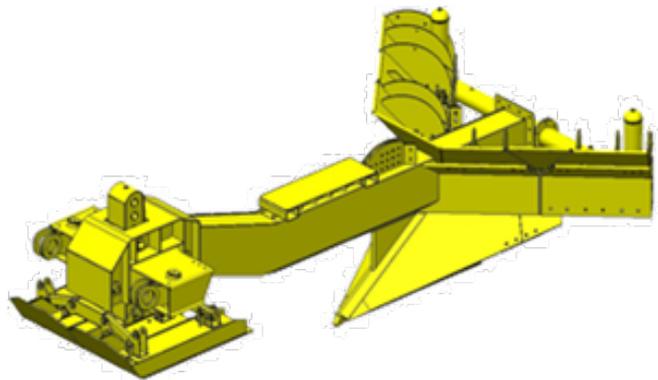
In its pre-cut trenching configuration, the SCAR system is designed to excavate trenches along a given product route in advance of the product lay campaign (separate to project critical path).

The SCAR Seabed System Pre-Cut Trenching Plough has been developed to operate in a wide range of soils. The system can excavate trenches up to 4.6 ft (1.4 m) in a single pass, or where soils dictate in a multipass configuration allowing a second trenching pass to take place within the initial trench. Due to its design, the plough can be pulled with a tow force less than any other trencher on the market, making it a very efficient system to operate.

The SCAR system, therefore, reflects the lowest-risk, highest-productivity option for shallower product routes such as array cables.

### SCAR Seabed System key features and benefits

- » Pre-cut trenching for cables, pipelines, and umbilicals
- » Compact system with single and multipass configurations
- » Variable soils capacity—clays, sands, gravel, and silt
- » Can be launched and recovered from a range of readily available anchor handling tug supply (AHTS) vessels (no crane or A-frame required)
- » Rapid mobilization, deployment/recovery, and demobilization
- » Proven ability to follow vessel routes accurately, even on complex route tracks



### System Specifications

Trench depth	2.0–4.6 ft / 0.6–1.4 m
Operating depth	9,842.5 ft / 3000 m
Typical speed range	820–1,968.5 ft/hour / 250–600 m/hour
Design tow force	150Te
Mass (in air)	45Te
Dimensions (WxLxH)	26.2 x 33.8 x 8.2 ft / 8.0 x 10.3 x 2.5 m

### Positioning and Monitoring

#### Standard Equipment

Vessel positioning equipment	Full independent DGPS positioning system with optional redundancy Onboard navigation suite, with option to display full seabed profile/ infrastructure where available
Tool mounted positioning equipment	2 x MT-832 beacons (for shallow water) Mini-tilt motion sensor 5 x c-node beacons

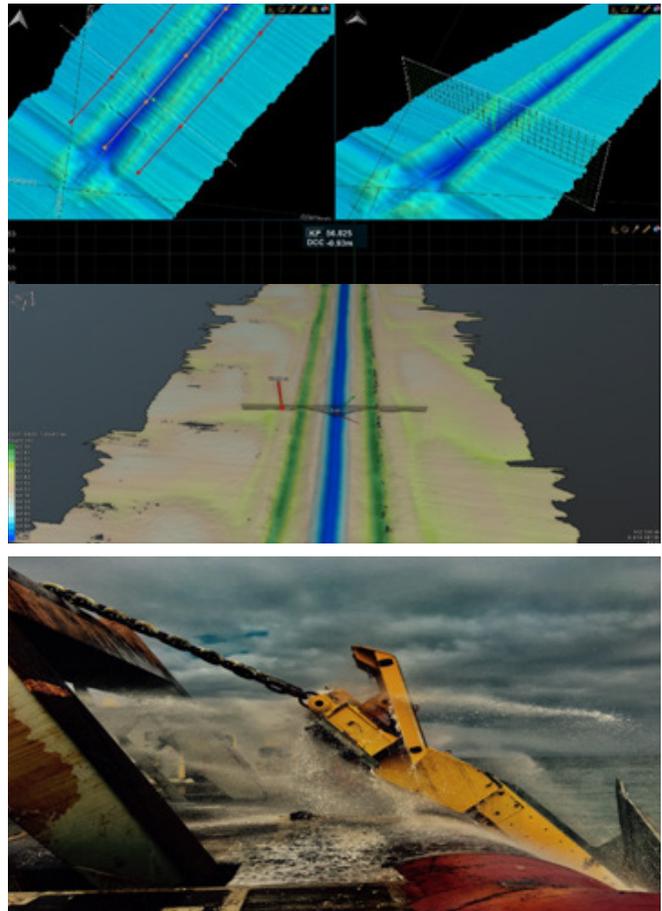
#### Optional Equipment

SCAR Instrumentation Module (SIM)	The SIM unit can be fitted to any SCAR system. The sensors within the SIM unit are interfaced to a multiplexer unit (MUX) with power and data telemetry to/from the topside module by an umbilical cable on a constant tension winch, therefore allowing sensor selection to suit specific project requirements. A standard system setup is shown below:
iXBLUE RovINS	All-in-one high-accuracy 3D positioning system, including heading, roll, and pitch measurements
Impact Subsea ISM3D	Highly accurate attitude and heading reference system
Valeport MiniIPS	Precision pressure sensor providing accurate real-time depth measurements
C-Node USBL Responder	Operating the Cymbal acoustic protocol for more accurate positioning
High-Resolution Scanning Sonar	BlueView or Gemini systems

#### Optional Equipment

##### Taut Wire

For shallow-water applications, a SCAR-specific taut wire system can be utilized to provide highly accurate positioning without the requirement for USBL positioning, or as a secondary position reference system



**To complement route preparation, the SCARGrab System can be used to move isolated objects, if required.**



[oceaneering.com](http://oceaneering.com)