

Seabed Conditioning and Route Preparation

SCAR Seabed System



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

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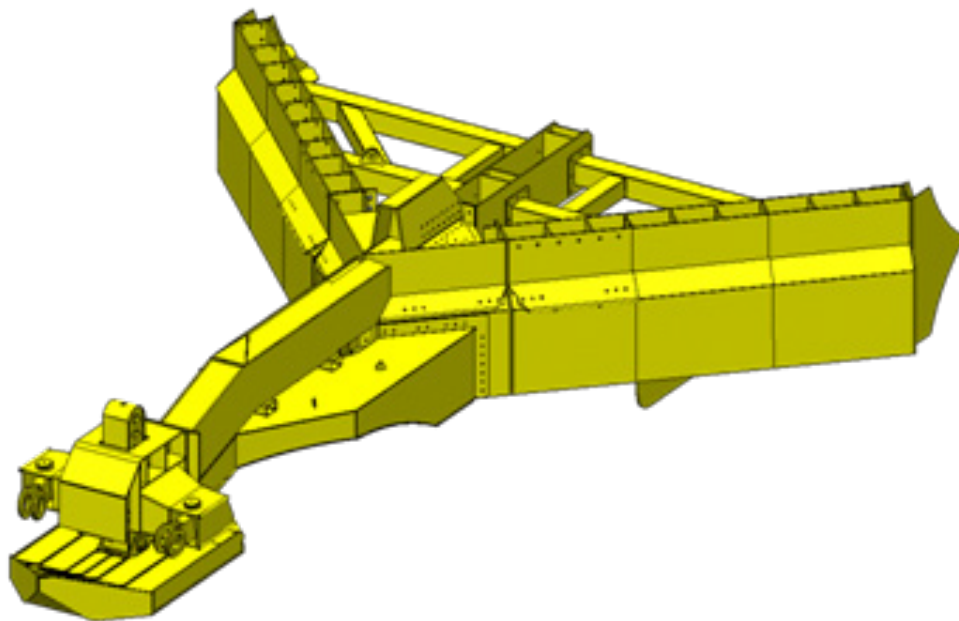
Capabilities

In route preparation configurations, the SCAR system can clear boulders and other mobile surface obstacles from predefined route corridors. Two system tools are available: 32.8-ft (10-m) and 50.8-ft (15.5-m) clearance widths to suit project requirements. Wider corridors can be created by using the tool's extensively proven multi-pass functionality.

This SCAR system is configurable to operate successfully over a wide range of seabed materials. Its robust design allows operations involving extremely arduous types of seabeds (such as gravel, cobble, and boulder seabeds). Additionally, this system can operate with very low bearing pressure on weaker seabed materials.

SCAR Seabed System key features and benefits

- » Highly effective and efficient functionality for route corridor preparation and seabed conditioning
- » Proven capacity to handle large boulders, rough terrain, mega-ripples, and sandwaves
- » 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)
- » Low bollard pull (typically, 40–60 t); hence, low fuel consumption, and more efficient and reduced carbon dioxide emissions
- » Rapid mobilization, deployment/recovery, and demobilization
- » Proven ability to follow vessel routes accurately, even on complex route tracks



System Specifications

Systems	32.8 ft / 10 m or 49.2 ft / 15 -Foot (10-Meter)	49.2-Foot (15-Meter) System
Max. Operating depth	10,000 ft+ / 3000 m+ .5 ft+ (3000 m+)	
Speed range	Up to 3,281 ft/hr (1000 m/hr)	
Mass (in air)	45 Te	85 Te
Dimensions (WxLxH)	33.5 x 41.3 x 6.5 ft / 10.2 x 12.6 x 1.98 m	51.8 x 47.8 x 12.1 ft / 15.8 x 14.58 x 3.7 m

Positioning and Monitoring

Standard Equipment

Operating depth	10,000 ft+ (3000 m+)	
Clearance width (single pass)	32.8-Foot (10-Meter) System	
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	

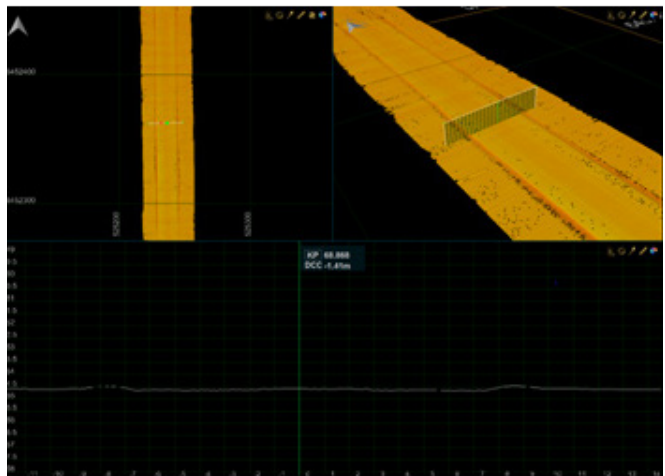
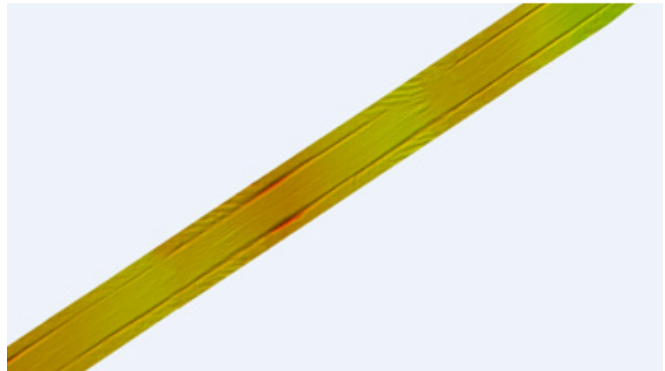
Optional Equipment

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.



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