

DEEPGRAB - CABLE RECOVERY TOOL



Overview:

The DeepGrab cable recovery tool is designed to be integrated to a subsea trenching ROV, for the purpose of recovering telecommunications cable which has been buried to a depth of up to 3 meters below the seabed. The tool was specifically designed for Global Marine System Ltd., who own the rights to the design.

The concept behind the DeepGrab tool is essentially a manipulative mechanical device that can be operated via the host trencher's control system. A simple mechanism for sweeping the tool through the soil and "grabbing" the cable is also provided so that recovery to the mud line can be achieved.

Consisting of two integral parts, the DeepGrab tool incorporates a recovery hook with a passive release mechanism from a 3m long burial arm. The soil penetration and traversing portion of the burial arm consists of two water supply pipes, one of which is studded with leading edge jetting nozzles. These pipes supply the leading edge nozzles and a "Turbo Eductor" at the center of the bottom of these pipes. The eductor, in turn, removes the soil swept down to it by the leading edge nozzles and downward directed nozzles. This effluent is directed up a central discharge pipe and away from the trencher itself.

The burial arm is driven into and out of the seabed using spring compressed pinch rollers and opposed drive rollers, which are driven by a direct-drive hydraulic motor. Attached to the leading edge of the piping assembly is the releasable hook assembly, which is used to capture the cable. Once the cable has been captured, the hook assembly is released from the burial arm with the application of sufficient downward force. The latched cable can then be lifted to the mud line using a lift line attached to the arm of the recovery hook.

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Specifications:

DEEPGRAB

- 3m Stroke
- Pitches vertical to 20° from horizontal
- Rolls +/- 20° from vertical
- Weight in Air: 800 lbs (363 Kg)
- Max Cable De-burial Depth: 3 meters
- Hydraulic requirements
 - 3000 psi (207 Bar)
 - 2 gpm (7.5 lpm)
 - 3 ea. solenoid valve functions
- Hook rating: 15 Tonnes
- Cable types:
 - Armored and unarmored
 - Senses cable to 3/8" O.D.
 - Max cable diameter of 4 1/4" O.D.



DeepGrab Fully Extended to 3 Meters



DeepGrab Jetting System
Shoreside Trials



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