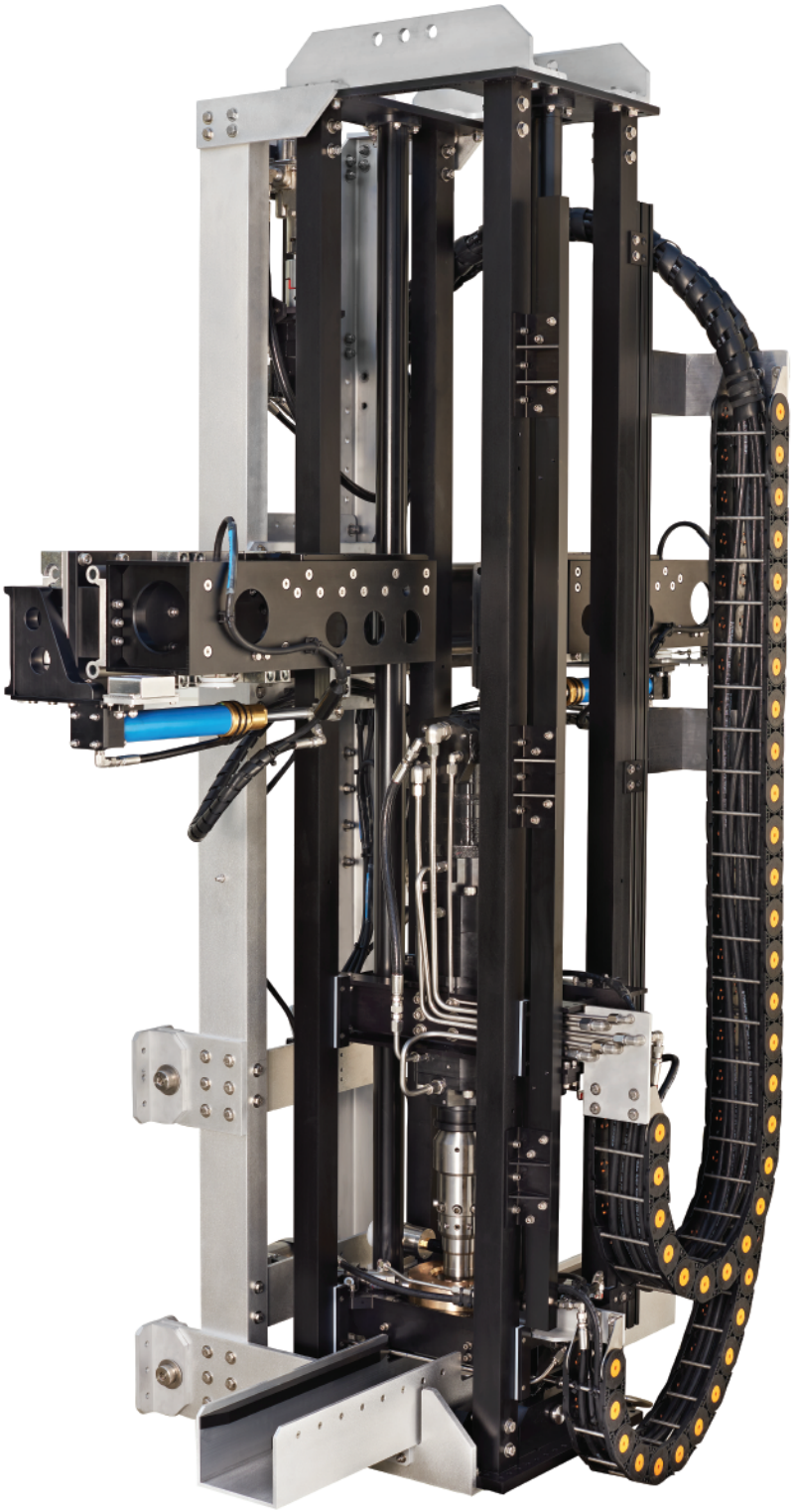
ROCS

REMOTELY OPERATED CORE SAMPLER

Specification Sheet

ROCS Multi-Core



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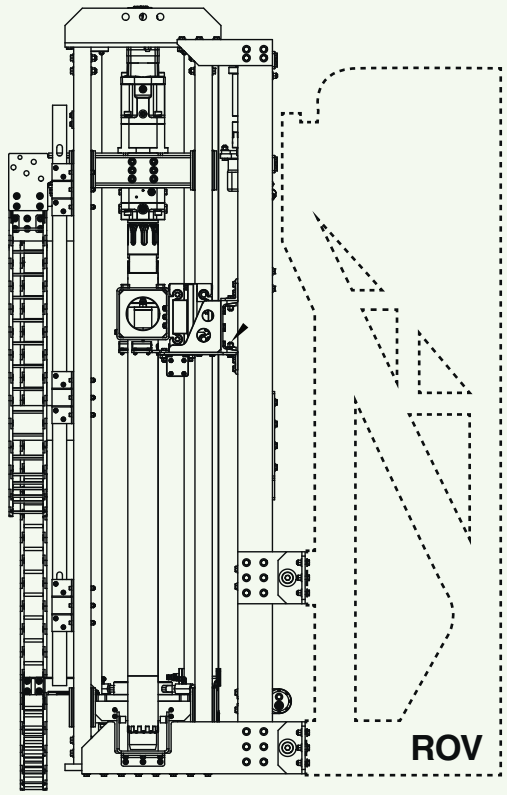
ROCS Multi-Core

Overview

The ROCS (Remotely Operated Core Sampler) is a compact subsea core drill designed to be mounted to and powered by a work class ROV or other subsea asset. The ROCS system is capable of core samples 70 to 100mm in diameter up to 1000mm in length. The ROCS can be built as a light weight single core system or a multi core system capable of up to four cores per deployment.

Key in the exploration of massive sulfides and other seabed mineral deposits, the ROCS is a truly bolt on implement turning any large hydraulically powered subsea asset into a highly portable subsea core drill. The ROCS has been deployed worldwide with a proven track record including sampling missions from the northwest Pacific Ocean, Mid Atlantic Ridge and Southern Ocean.



Features

4000 Meter Rated
Corrosion resistant anodized aluminum and stainless steel and polymer construction

Simple Tool Handling
Spline and detent tool connection method (simplified tool handling and emergency release capablities)

Precision Drill Feed
Integral hydraulic control manifold with precision "balanced" drill feed

Up to 4 Tools Per Dive
ROCS Multi Core Magazine assembly allows for up to four cores per dive

Sensor Package
Embedded sensor suite provides feedback on all parameters necessary for quality coring

Control Software
Intuative and adaptable Windows based control GUI

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Specifications

General

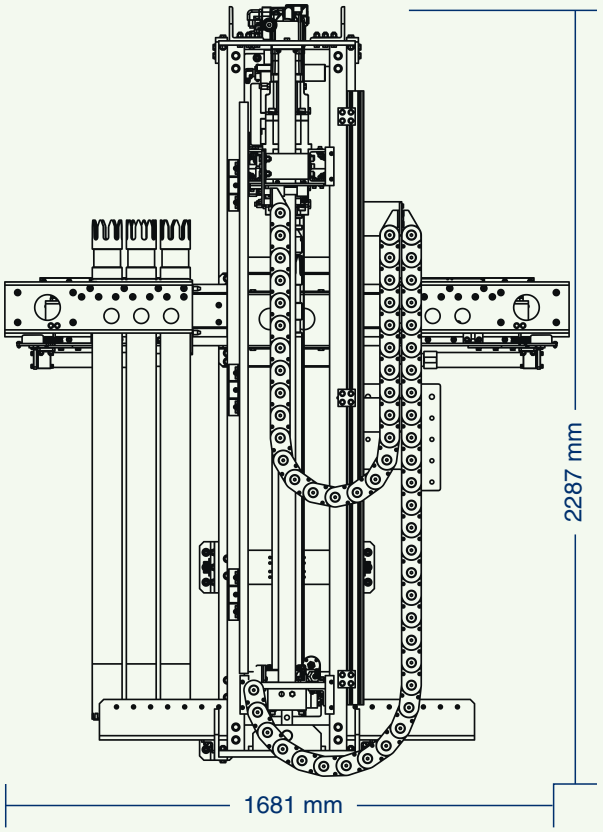
Depth Rating: 4000 m
Total Weight In Air: 300 Kg
Height: 2287 mm
Width: 1681mm (With Magazine)
Depth: 868 mm
Maximum RPM: 1000 RPM
Maximum Weight on Bit: 100 Kg
Maximum Core Breaking Force: 4500 Kg
Core Diameter: 70mm (Nominal)
Core Length: 1000mm (Nominal)
Maximum Sample Capacity: Four tools

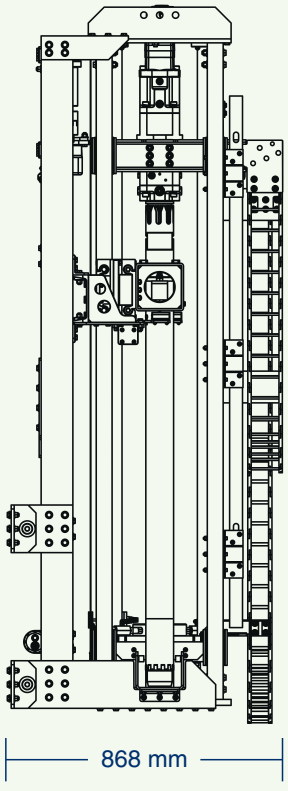
Hydraulic

Global flow requirement: 18-20 GPM
System Pressure: 3000 psi

Power and Telemetry

Power Requirement: 24VDC 8A
COMS: RS232





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QD Tech Tooling

The ROCS utilizes QD Tech tooling. The proprietary spline and detent connection method features reduced weight compared to a standard threaded connection and simplified tool handling while maintaining excellent core breaking force and emergency tool separation in the event of subsea systems power loss. All tools feature stainless steel or corrosion resistant materials where possible to limit sample/ rust contamination. The rotating portion of the tool features a compensated lubrication system designed specifically for the subsea environment. The ROCS tooling has the thinnest kerf in the industry resulting in good penetration rates in hard rock with sub 100kg bit weight.

350 C

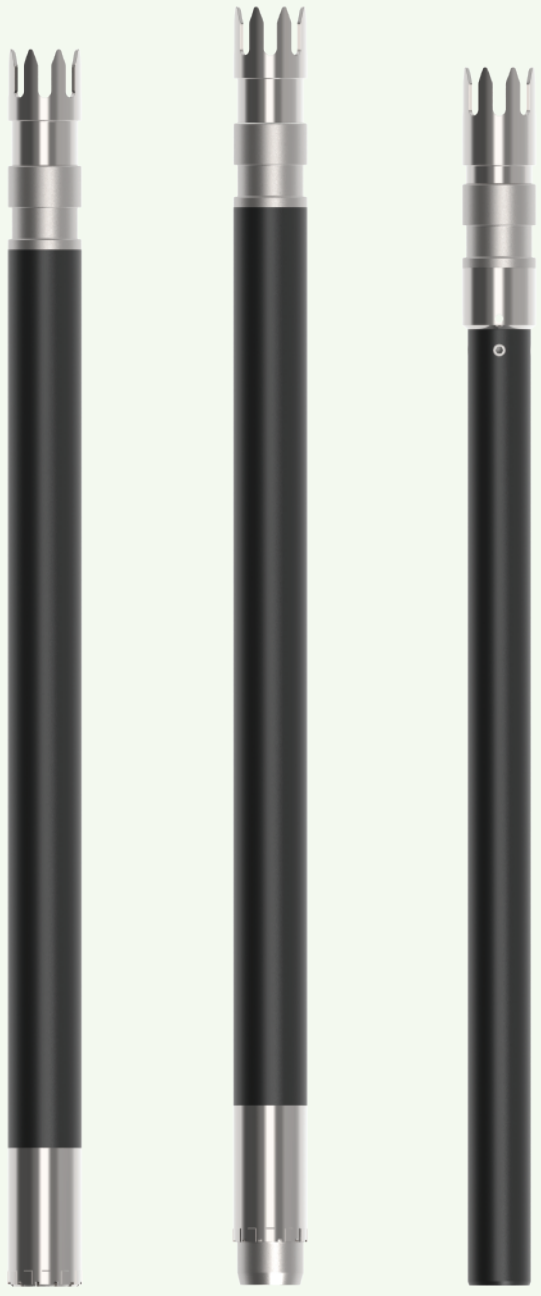
1050mm Double Tube Thin Kerf Core barrel for hard rock sampling. The 350C can be fitted with a basket style core catcher to improve core recovery in friable substrates.

350 EXN

1050mm Double Tube EXN Core barrel for loose / sediment coring. The EXN allows the bit to rotate behind the extended nose inner tube and greatly reduces friction. The EXN can be fitted with basket style core lifter or core liner.

350 S

1000mm Shelby Push Core assembly for standard push coring. *Requires most bit weight.



350 C | 350 EXN | 350 S

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