



Deep·C[®]



Equipment and Service catalogue

Rev December 2018

We will find a way, or make a way

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Kristiansund, Norway	p 33
Aberdeen, UK	
Newfoundland, Canada	
Global Distribution Network	

How may we assist you?

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Deep C[®] Overview

Deep C is a leading provider of specialist services to the offshore energy sector. We are dedicated to deliver a complete service which contributes to valuable and sustainable relationships with our clients.

Being a specialist means that Deep C combines the best of technologies, operational know-how and in-depth engineering, in order to provide our clients innovative, reliable and cost-efficient solutions.

Deep C track record is extensive and demonstrate high project performance, as well as successful implementation of new technologies and game changing operational methods.

Seabed Intervention

- › Dredging & Excavation
- › Seabed levelling & profiling
- › Umbilical trenching
- › Sediment transport & disposal
- › Pile dredging / soil plug removal
- › Pipeline support
- › Drillcut relocation & recovery

Cutting & Jetting

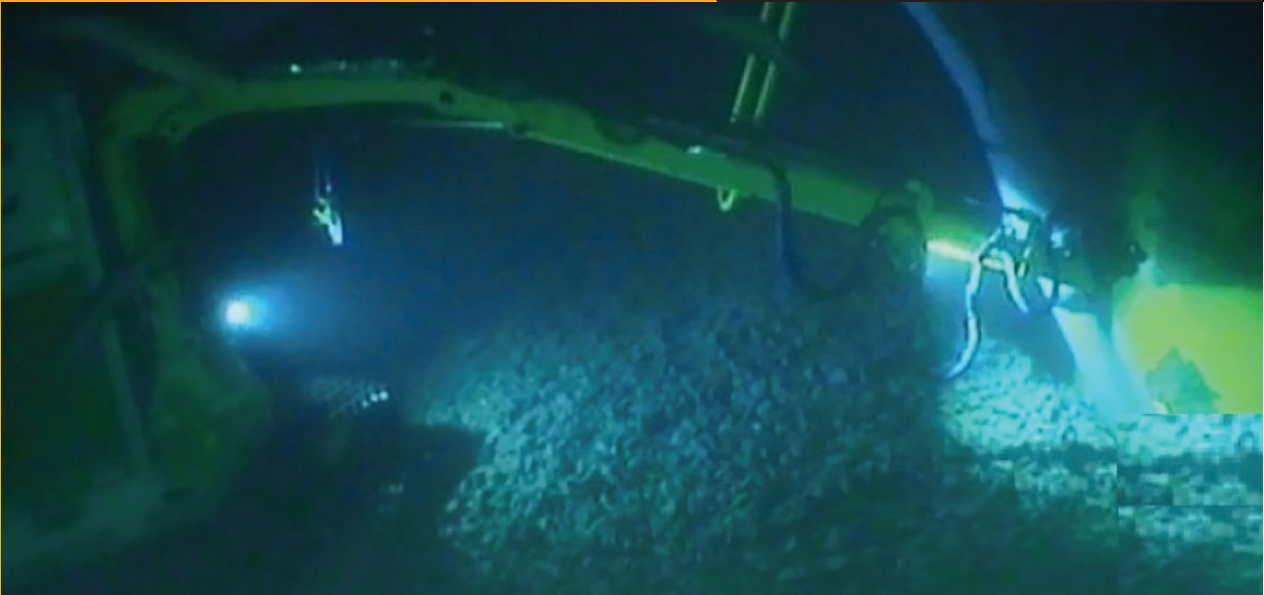
- › Concrete breaking & cutting
- › Marine growth removal
- › Mechanical cutting
- › Commissioning
- › Flushing
- › Coating removal
- › Cleaning

Engineering

- › Sediment engineering
- › Fluid dynamics
- › Remote intervention
- › Product design and fabrication
- › Operational engineering
- › Simulation and Visualization
- › Customized solutions

Rental services

- › Seabed interventions systems
- › Jetting & flushing systems
- › Cutting equipment
- › Subsea Power Stations
- › Topside support equipment
- › Subsea appliances
- › SUV, ROV and diver tooling



Seabed Intervention

Deep C is seabed intervention specialist who tailor superior turn key solutions for your needs. Our capabilities are successfully demonstrated through an extensive and impressive track record.

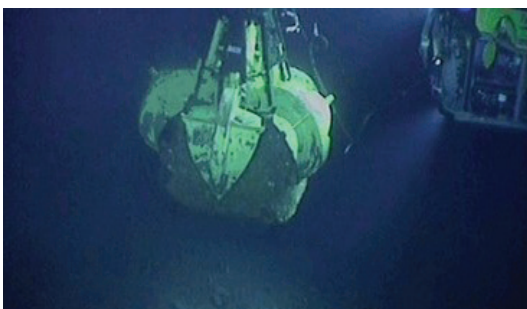
We combine operational know how with in depth engineering, which provide each project with a unique and comprehensive solution. It is our capability to understand the task and engineer a solution that excel the performance of our equipment in a real operational environment.

Services

- › Rock dump removal
- › Seabed preparations
- › Trenching and free span correction
- › Deburial and backfilling
- › Boulder removal
- › Relocation of drill cuttings
- › Spud can preparation
- › Removal of grouting
- › Clearance og debris
- › Soil Plug Removal / Pile dredging

Assets

- › Deep C SUV
- › Deep C Blower (MFE)
- › Deep C ROV Trenching Skid
- › Deep C Subsea Dredge
- › Deep C Subsea HP Jetting
- › Deep C ROV Dredge
- › Deep C Subsea Grabs
- › Deep C Pile Dredge
- › Deep C Diver Dredge
- › Customized solutions





Cutting & Jetting

Deep C cutting and jetting capabilities completes a full range of services for a wide variety of subsea applications.

Our engineering team has in-depth expertise within fluid dynamics (PhD) and subsea remote Intervention and is able to make the most complex task to appear easy.

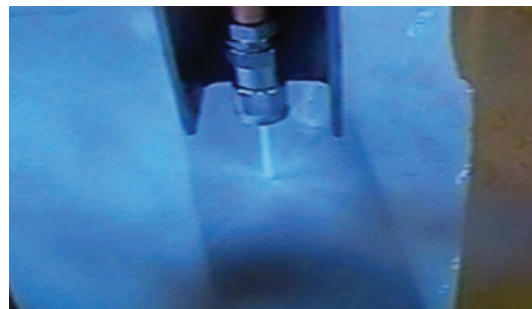
Deep C track record is extensive and demonstrates our ability to work smarter and more efficient through successful development of new technologies, equipment and operational methods.

Services

- › Pipeline coating removal
- › Diamond wire cutting
- › Marine growth removal
- › Pressure testing
- › Fluid injection
- › Complex cleaning
- › Pipe flushing
- › Cutting of structures
- › Demolishing
- › Cutting of ultra strong concrete

Assets

- › Deep C SUV
- › Deep C Subsea HP Jetting System
- › Deep C Diamond Wire Cutters
- › Shear cutters
- › Rotary saws
- › Grinders / brushing tools
- › Demolishing tools
- › ROV cutting tools
- › SUV cutting tools
- › Customized solutions





Engineering - Fabrication - Maintenance

Deep C® provides design- and operational engineering services. Our in-house facilities makes Deep C® a perfect partner to deliver fabrication, maintenance and modification of subsea and offshore equipment.

Deep C® develops methods for offshore execution. Using our operational know-how, comprehensive understanding of customer and third party interfaces, we develop methods saving operational time requirements. Our state of the art simulator is a valuable aid to assess the scope of work and verify our procedure in a very realistic environment.

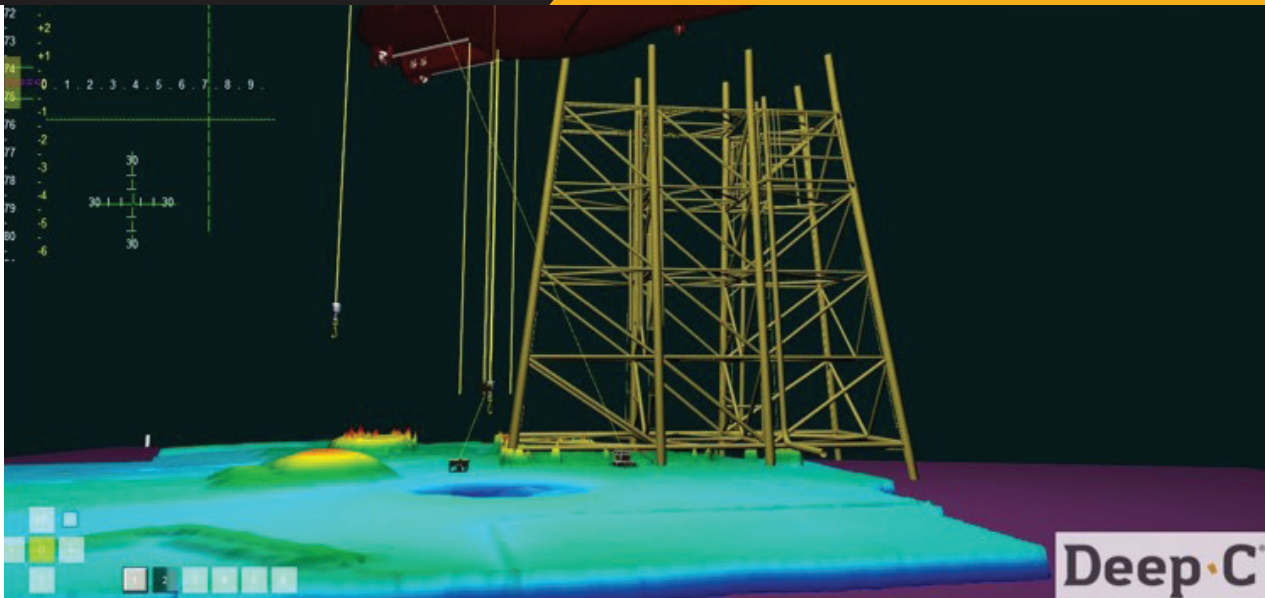
Services

- › Operational procedures
- › Simulation and visualization
- › Studies
- › Development of specialized equipment
- › Fabrication
- › Machining
- › Maintenance
- › Modification
- › FAT / SIT

Assets

- › Simulation center
- › Rapid prototyping
- › Cooperation with science institutions
- › Mechanic workshop
- › Hydraulic workshop
- › Electro/Electronic workshop
- › Fabrication yard
- › Machining
- › Test facilities
- › Indoor/ outdoor storage yards



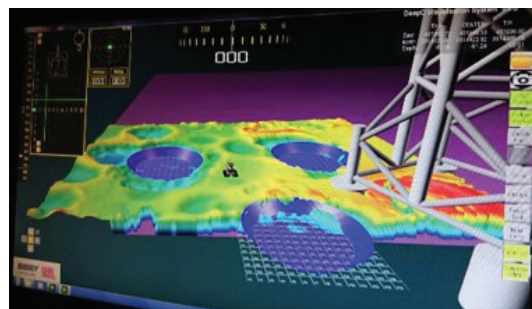
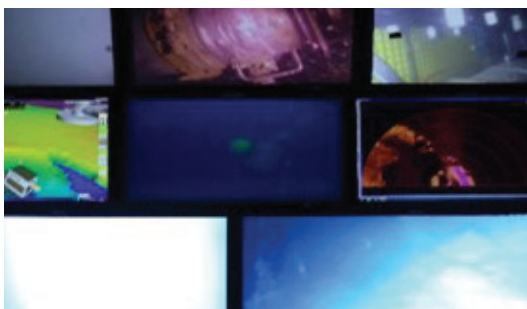


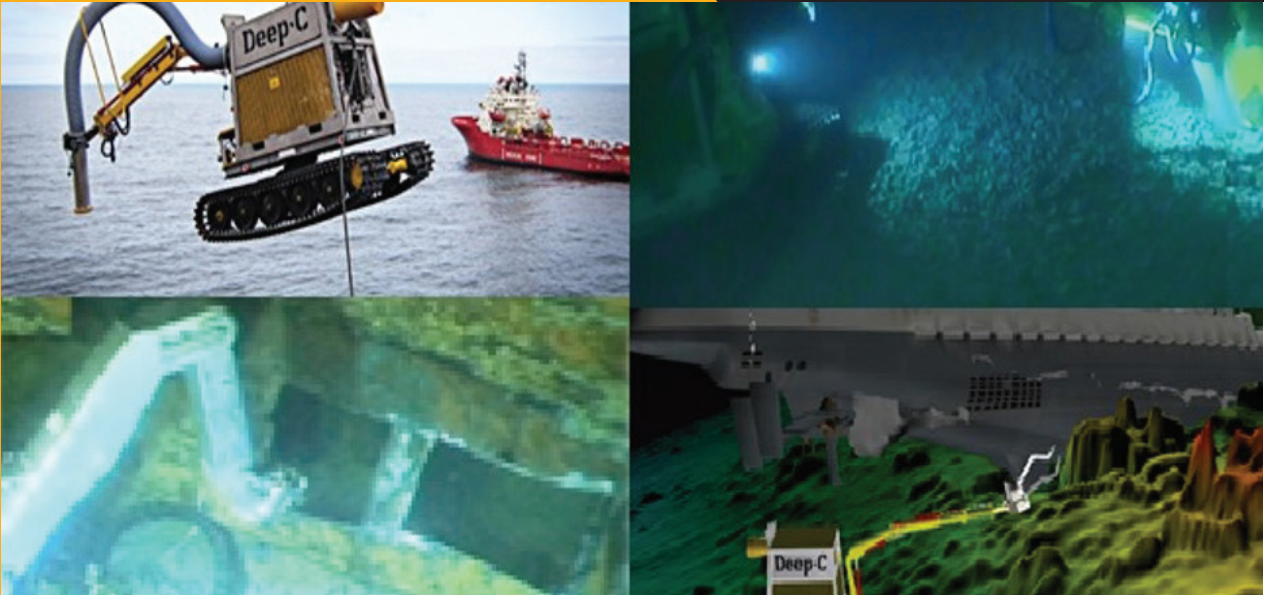
Deep C® Simulation & Visualization System

The Deep C® Simulation & Visualization system provides a platform for highly realistic simulation of subsea operations. The simulator is used for operator training, and development and verification of procedure.

The Deep C® Simulator imports relevant data to create a realistic environment, such as DTM, structures, and equipment and tools intended to be used in the operation.

During operations, the system offers a ground breaking feature which provides live visualization of the actual operations. Hence, the Deep C® Visualization provides an overview of the operations beyond traditional monitoring sensors, and is totally independent of visibility





Deep C® Subsea Utility Vehicle

The Deep C® Subsea Utility Vehicle (SUV®) is a powerful and remotely operated subsea tracked vehicle. The Deep C® SUV® has great capacity to execute numerous tasks, and shift between working modes while being submerged. Its low ground pressure and stability makes it very mobile on seafloor and stable in operation.

- › Rock dump removal
- › Dredging & Excavation Trenching
- › Tooling operations
- › Decommissioning
- › Cutting
- › Demolishing

Technical Specifications

Physical dimensions:

Length:	4 500 mm
Width:	3 200 mm
Height:	3 000 mm
Weight (air):	9 000 kgs*
Weight (water):	7 500 kgs*
*) typical configuration	

Power Sources:

Various configurations up to 490 kW electrical power can freely be utilized for dredging, hydraulics and jetting

Manipulator configuration:

Interchangeable manipulators for various purposes (i.e long reach, heavy duty ops, interchangeable tooling etc)

Traction & turret:

360 degree rotation on turret
Low ground pressure for soft seabed
Step less speed 0 – 6 km/h

Navigation / Sensors:

Lights and cameras
Gyro
Pitch/ Roll sensors
Sonars
Compass
Live 3D Visualization System

Dredging System:

Up to 16" unrestricted dredging system
Remotely operated backflush
Quick connect for suction and exhaust hose
Available mechanical aids and jetting systems for disintegration of clay

Other available features:

Range of SUV® tooling
Extensive electronic interface (i.e survey kits, additional instrumentation etc)
Very flexible for project specific configuration



Deep C® Blower

The Deep C® Blower is superior to any other mass flow excavation tools in the market. It can be operated at any water depth, and its unique nozzle design provides high removal capacity, avoids excessive fluidization of seabed, and provides visibility throughout the operation. Utilizing Deep C® Blower in combination with engineered methods for operation provides highly efficient and controlled mass flow excavation.

- › Seabed profiling
- › Rock dump removal
- › Trenching
- › Asset deburial
- › Free span correction
- › Clay cutting

Technical Specifications

Physical dimensions:

Length:	2 500 mm
Width:	2 500 mm
Height:	3 000 mm
Weight (air):	6 000 kgs*
Weight (water):	4 500 kgs*

*) typical configuration

Power Sources:

190 kW electrical motors for thrusters
 95 kW electrical motor available for water jetting

Performance:

Thrust	16 kN
Flow	up to 5.0 m ³ / sec
Nozzle velocity	up to 8 m/ sec
Excavation rate	up to 800 m ³ / hr
Water depth:	2000 meters

Clay cutting:

Seabed specific configurations
 95 kW electrical power available with no need for additional topside equipment or downlines

Navigation:

Lights forward and aft Cameras forward and aft Sonars forward and aft Gyro

Deployment:

Dedicated pedestal for deployment, landing and storage.
 Hangs freely in crane wire, no guide wires required
 Heading is controlled by joystick or by auto



Deep C® Subsea Dredge

The Deep C® Subsea Dredge is a powerful stand alone dredging unit, powered through an electrical umbilical from surface. The system requires minimum deck space and offshore manning, and is designed for seamless operation by ROV or diver. The Deep C Subsea Dredge offers unrestricted dredge size up to 16", extensive outreach and long transport distances.

- › Seabed profiling
- › Rock dump removal
- › Trenching
- › Asset deburial
- › Free span correction
- › Clay cutting

Technical Specifications

Physical dimensions:

Length:	2 700mm
Width:	2 100mm
Height:	2 600mm
Weight (air):	3 200 kgs*
Weight (water):	2 500 kgs*

*) typical configuration

Power Sources:

Up to 285 kW available in system
Power can be freely utilized for dredging, jetting and hydraulics

Dredging system:

Up to 16" unrestricted flow
Standard power on dredge 95 kW, with possibility to run twin pumps (2x 95 kW) Remotely operated backflush

Clay Cutting:

Seabed specific configurations
190 kW electrical power available with no need for additional topsie equipment or downlines

HPU:

The Deep C® Subsea Dredge can carry up to 190 kW integrated subsea HPU with no need for additional topside equipment or downlines

Hose Handling:

Designated basket for storage of hoses
Reinforced hoses for safe launch and recovery
Subsea quick connectors for suction hoses and exhaust hoses

Navigation:

Output available for extensive use of lights, cameras, sonars, and other instrumentation

Deployment:

Deployment to seabed by vessel crane
Guide funnels available for deployment through moon pool

Selection of relevant equipment:

Deep C ROV Manipulator, various suction heads, exhaust hose, mud mats, etc



Deep C® ROV Trenching Skid

The Deep C® ROV Trenching Skid is a highly cost efficient solution for trenching of umbilicals. The trenching system is skidded to any WROV, and requires only hydraulic from ROV to operate. Two swords with jetting nozzles are lowered on each side of the umbilical, flushing the cable down to desired soil depth. The Deep C ROV Trenching Skid requires no deck space or manning, and is very easy to mobilise.

- › Umbilicals
- › Fiber optic cables
- › Sesimic cables
- › Easy mobilisation
- › Standard WROV interface
- › Field proven

Technical Specifications

Description:

Trenching depth
Trenched cable diameter
Seabed conditions

Standard set up

Down to 1 meter
 Up to 120 mm
 Gravel, sand, silt, soft clay

ROV mechanical interface
ROV hydraulic interface

Various connection types available
 Jetting pumps 60 lpm/ 180 bar
 Jetting lance position 5 lpm/ 10 bar
 Guiding reels
 Trench depth indicator

Cable positioning/ monitoring

Customized

Adjusted by length of swords
 Adjusted by distance between swords
 For cohesive sediments various configurations are available
 Various connection types available
 Depending on ROV capacity
 Jetting lance position 5 lpm/ 10 bar
 Guiding reels
 Trench depth indicator
 Project specific requirements





Deep C® Subsea HP Jetting System

The Deep C® Subsea HP Jetting System is deployed to the seafloor and powered from the surface via an electrical umbilical. Utilization is maximized as the pump is placed at the sea bottom, avoiding significant energy loss compared to jetting supply from topside. The set up requires minimum equipment on deck, hence saving significant amount of time for mobilization, and minimizing deck space requirements. Furthermore, higher safety for personnel on deck is achieved, as no equipment (or hoses) are pressurized on deck.

- › Commissioning
- › Cutting of concrete
- › Cleaning
- › Deep water applications
- › Works as stand alone, or integrated with Deep C SUV or Deep C Subsea Dredge

Technical Specifications

Physical dimensions:

Length:	2 700 mm
Width:	2 100 mm
Height:	2 600 mm
Weight (air):	3 200 kgs
Weight (water):	2 500 kgs

Operational modes:

Stand alone unit deployed to seafloor
 Integrated in Deep C Subsea Utility Vehicle*
 Integrated in Deep C Subsea Dredge*
 *) No additional downlines req'd when integrated in Deep C SUV or Deep C Subsea Dredge

Pump specifications:

Operating pressure	970 bar
Pressure max	2 500 bar
Operating flow (970 bar)	168 l/min
Rod force	200 000 N
Power rating	300 kW

Power interface (vessel):

1 off 3x520 A, 60Hz, 440 V (PDU)
 1 off 3x125 A, 60 Hz, 440 V (winch)
 1 Off 16 A, 220 V (light)

Deployment:

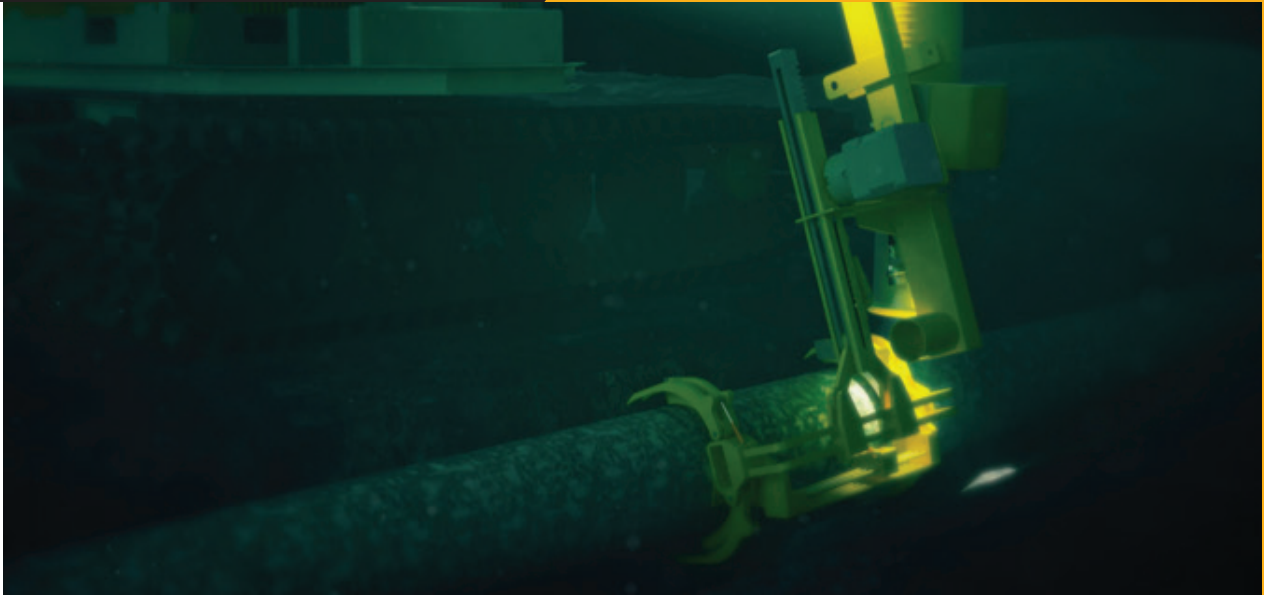
DNV 2.7-3 certified, 4,5m Hs
 Guide funnels available for deployment through moon pool

Associated equipment/ services:

Range of jetting nozzles/lances available
 Subsea HP jetting hose reel
 Stabbing systems for subsea quick connection
 Coating removal tools
 Bespoke manipulating tools/ equipment
 Customized solutions

Other:

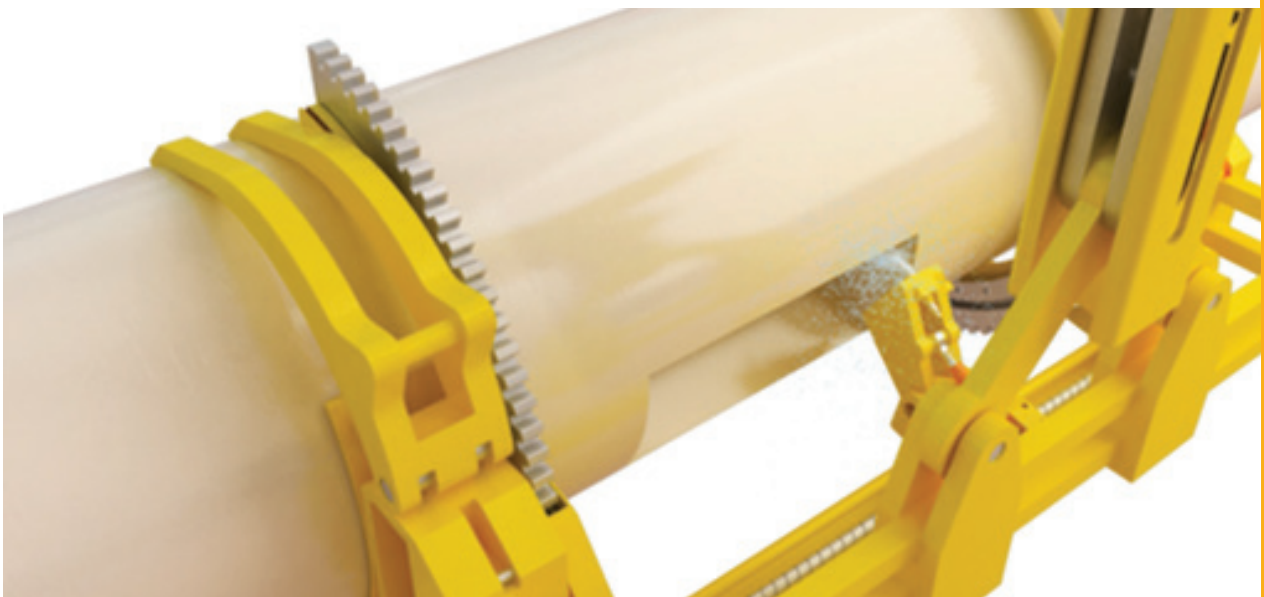
The subsea unit is prepared for interfacing various instrumentation (such as cameras, sonar etc) and carries additional power which provides the possibility to combine. HP jetting with other working modes



Deep C® Coating Removal Tool

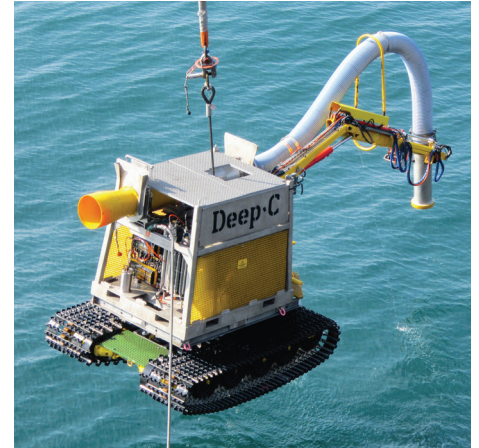
The Deep C® Coating Removal Tool (Deep C CRT) is capable of removing any type of coating 360 degrees around pipelines up to 26". The Deep C® CRT can be operated at any water depth, supplied by the Deep C® Subsea HP Jetting System. Hence, the Deep C® CRT is unparalleled to any other coating removal tools as it provides the capability to work at the deepest water depths.

- › Removes any type of coating
- › Deep water capability
- › 360 degrees sections <26"
- › Adjustable length of sections
- › Manipulated by Deep C® SUV or ROV



Deep C® SUV®

- › Highly versatile remotely operated tracked vehicle
- › Onboard powerful and efficient dredging system
- › Capability to carry out numerous working modes with subsea interchangeability



Dimensions (LxWxH): 4500mm x 3200mm x 3000mm
Available power: 500 kW electrical
Outreach: <14 meters/ 360o rotation

Deployment: 4,5 m Hs
Weight (water): 7 500 kgs
Ground pressure: 10-15 kPa

Deep C® Subsea Dredge

- › Powerful and efficient stand alone dredger Seamless operation by ROV or diver
- › Up to 16'' unrestricted flow
- › Long transport capacity and controlled disposal
- › Can be configured with jetting system and auxilliary HPU



Dimensions (LxWxH): 2700mm x 2100mm x 2600mm
Available power: 285 kW electrical
Dredge size: <16''

Deployment: 4,5 m Hs
Weight (water): 3 000 kgs
Weight (air): 2 500 kgs

Deep C® Pile Dredge

- › Simultaneous disintegration of cohesive soil, cleaning of pile walls and removal of soil plug
- › Unique design which avoids blocking even when submerged in sediments
- › Easy customization to meet a wide variety of project specific requirements



Pile size: Customized
Effect on dredger: 95 kw – 190 kw
Effect on jetting: 95 kw – 190 kw

Suction diameter: 14'' unrestricted
Weight and dimension: Project dependent

Deep C® Diver Dredge

- › Stand alone dredge hydraulically operated from topside
- › High efficient removal of materials up to 10"
- › Jetting facility for fluidization of cohesive materials
- › Diver in focus with regards to safety and operability



Dredge size:	4, 6, 8 and 10"	Pressure rating:	180 – 250 bar
Suction hose:	10m and upwards	Minimum flow:	60 lpm
Water jet on nozzle:	Yes		

Deep C® ROV Dredge

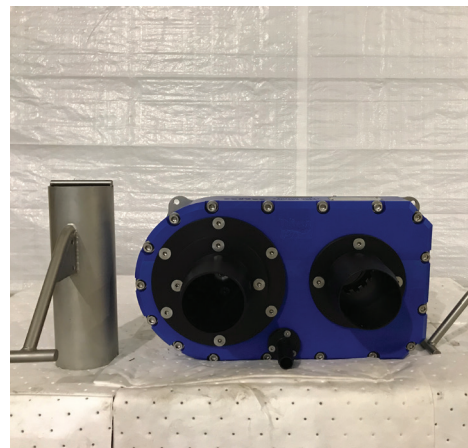
- › Unrestricted flow up to 10"
- › High removal capacity
- › Compact and light weight design
- › Easy to install and operate



Dredge size:	3, 4, 6 ,8 and 10"	Pressure rating:	180 bar
Water jet on nozzle:	Yes	Required flow:	60 lpm
Weight in water:	25 - 55 kg		

Merlin ZIP Pump

- › Robust and proven design
- › Rapid switching from suction to jetting Compact and easy to install
- › Reverse flush for suction nozzle



Dimensions (HxW):	550mm x 500mm	Output (jetting/suction):	8 bar/ 4000 lpm
Weight (air):	40 kg	Pressure rating:	170-250 bar
Weight (water):	17 kg	Flow:	65- 110 lpm

Deep C® Blower

- › Mass flow excavator with deep water capability
- › Horizontal heading control
- › Freely hanging from crane – no guide wires
- › Unique patented nozzle for high removal capacity and high precision excavation

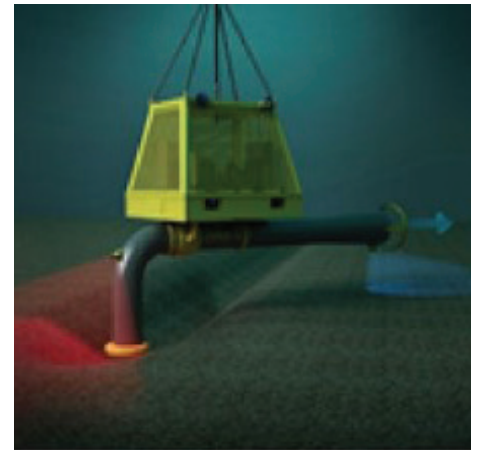


Dimensions (LxWxH): 2500mm x 2500mm x 3000mm
Weight: 6000 kgs
Thrust: 16 kN

Flow: 5,0m³/sec
Nozzle velocity: 8 m/sec
Deployment: <4,5 m Hs

Deep C® Jumbo Dredge

- › High flow suction unrestricted diameter up to 32"
- › High removal capacity and controlled disposal Horizontal heading control
- › Onboard jetting system for disintegration of clay No need for ROV/diver intervention

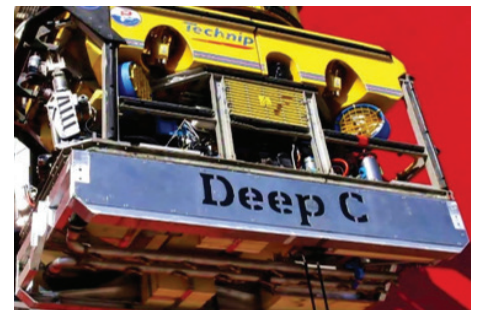


Dimensions (LxWxH): 2700mm x 2100mm x 3000mm
Available power: 285 kW electrical
Dredge size: <32"

Deployment: <4,5 m Hs
Weight (water): 3 500 kgs
Weight (air): 2 700 kgs

Deep C® ROV Trenching Skid

- › Cost efficient solution for trenching of cable
- › Easy mobilisation, requires only power from the ROV
- › No additional downlines and topside equipment needed
- › Trenching depth adjusted to project requirements



Volume: 220 l
Dimension: Open 1310 mm
SWL: 900 kg

No of cylinders: 1
Pressure rating: 200 bar
Maximum flow: 50 lpm

Deep C® 4.0 m³ Subsea Grab

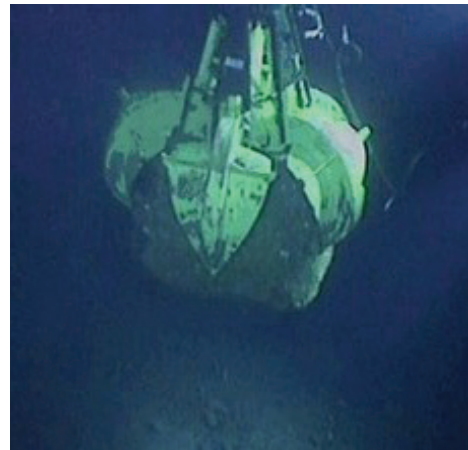
- › Hydraulically operated via hot stab or topside Deep water capability
- › Fully closed in closed position
- › Wide variety of applications



Volume:	4,0 m ³	No of cylinders:	5
Dimension:	Closed 2740mm	Pressure rating:	160-350 bar
SWL:	20 000 kgs	Maximum flow:	190 lpm

Deep C® 2.3 m³ Subsea Grab

- › Hydraulically operated via hot stab or topside Deep water capability
- › Fully closed in closed position
- › Wide variety of applications



Volume:	2.3 m ³	No of cylinders:	6
Dimension:	Closed 2278 mm / Open 3212 mm	Pressure rating:	160-350 bar
SWL:	15 000 kgs	Maximum flow:	190 lpm

Deep C® Tiger Claw

- › Hydraulically operated via hot stab or topside
- › Crane deployed or Deep C® SUV® operated
- › Deep water capability
- › Wide variety of applications



Volume:	230 l	No of cylinders:	1
Dimension:	Open 1210 mm	Pressure rating:	200 bar
SWL:	900 kg	Maximum flow:	50 lpm

Deep C®Mini Grab

- › Hydraulically operated via hot stab or topside
- › Crane deployed or Deep C® SUV® operated
- › Deep water capability
- › Wide variety of applications



Volume: 180 l
 Dimension: Open 1200 mm
 SWL: 600 kg

No of cylinders: 2
 Pressure rating: 180-200 bar
 Maximum flow: 175 lpm

Deep C® ROV Manipulator

- › Versatile heavy duty ROV manipulator
- › Handling of dredging suction hoses
- › Grabbing of pipes and debris
- › Handling of heavy duty ROV tooling



Overall length: 1,7 m
 Functions: 4
 Lifting capacity: 500 kgs

Claw size: 440 mm open
 Pressure rating: 160-250 bar
 Flow: 10-45 lpm

Deep C® Pipe Grapple

- › Hydraulically operated via hot stab or topside
- › Crane deployed
- › Deep water capability
- › Wide variety of applications

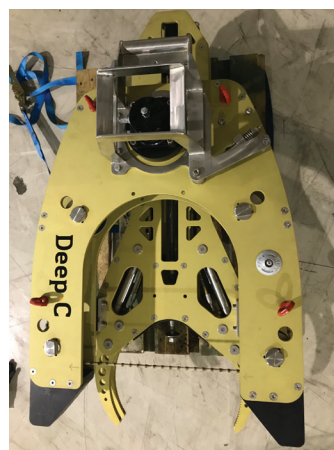


Grapple size: <19"
 Dimension (LxH): 1735 mm x 1100 mm
 Weight: 2 500 kg

No of cylinders: 2
 Pressure rating: 110 bar
 Flow: 30-60 lpm

Deep C® Diamond Wire Cutter

- › Easy grip from different positions
- › High efficiency
- › Deep C SUV and ROV friendly
- › Various applications



Dimensions (LxWxH): 1124 x 768 x 308 mm
 Weight: 35 kg
 Weight in water: 18 kg

Max cutting size: 450mm/ 18"
 Pressure rating: 175 bar
 Optimum flow: 50 l/min

Deep C® Chop Saw

- › Compact and robust
- › Fully automated hydraulics
- › ROV and Diver friendly
- › Various applications

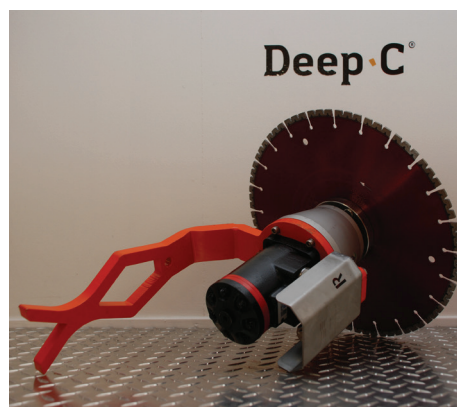


Dimension (LxW): 1453x746mm
 Weight: 120 kg
 Weight in water: 90 kg

Max cutting size: 230mm/ 9"
 Pressure rating: 110 bar
 Optimum flow: 60 l/min

Deep C® Rotary Saw

- › Versatile and easy to operate
- › ROV friendly
- › Cutting disc up to 14"
- › Various applications



Dimension (LxW): 260x400 mm
 Weight: 13 kg
 Weight in water: 9 kg

Max cutting disc: 350mm/ 14"
 Pressure rating: 210 bar
 Optimum flow: 50 l/min

Deep C® Grinder

- › Operated by diver or ROV
- › Can be fitted w/ large variety of tools
- › Easy to install and operate
- › Wide variety of applications



Dimension (LxW): 230x230 mm
 Weight: 6,8 kg
 Weight in water: 4,7 kg

Max cutting disc: 9"
 Pressure rating: 70-175 bar
 Optimum flow: 34 l/min

55 mm Soft Line Cutter

- › Heavy duty soft and fiber line cutter
- › Quick and efficient operation
- › Can be used at any water depth
- › Diver or ROV operable design



Dimension (LxWxH): 155x135x487 mm
 Weight: 9,7 kg
 Weight in water: ca 7 kg

Max cutting size: 55 mm ø
 Pressure rating: 210 bar

80 mm Soft Line Cutter

- › Heavy duty soft and fiber line cutter
- › Quick and efficient operation
- › Can be used at any water depth
- › Diver or ROV operable design



Dimension (LxWxH): 187x138x646 mm
 Weight: 15 kg
 Weight in water: 10,5 kg

Max cutting size: 80 mm ø
 Pressure rating: 690 bar

RCO 40 Wire Rope Cutter

- › Heavy duty for use in severe conditions
- › Open sided for easy positioning
- › Can be used at any water depth
- › ROV and diver operable



Dimensions (LxWxH): 136x100x313 mm
 Weight: 17,5 kg
 Weight in water: ca 12 kg

Max cutting size: 38 mm \varnothing
 Pressure rating: 700 bar

RCO 54 Wire Rope Cutter

- › Heavy duty for use in severe conditions
- › Open sided for easy positioning
- › Can be used at any water depth
- › ROV and diver operable



Dimension (LxWxH): 177x125x461 mm
 Weight: 37 kg
 Weight in water: ca 25 kg

Max cutting size: 54 mm \varnothing
 Pressure rating: 700 bar

RCV 115 Wire Rope Cutter

- › Heavy duty soft and fiber line cutter
- › Quick and efficient operation
- › Can be used at any water depth
- › Diver or ROV operable design



Dimension (LxWxH): 514x252x703 mm
 Weight: 125 kg
 Weight in water: ca 87 kg

Max cutting size: 115 mm \varnothing
 Pressure rating: 690 bar (main)
 210 bar (anvil)

Deep C® Subsea HP Jetting System

- › Can be operated as stand alone or integrated in Deep C® SUV® or Deep C® Dredge
- › Ultra deep water capability
- › Wide range of applications such as concrete cutting, complex cleaning operations and pressure testing



Max pressure: 2500 bar
 Flow: 168 lpm @ 970 bar
 Power rating: 300 kW

Rod force: 200 kN
 Weight (air): 3200 kgs
 Weight (water): 2500 kgs

Deep C® Topside HP Jetting Unit

- › High pressure jetting for topside and subsea applications
- › ROV or diver intervention compatible
- › Easy to install and low maintenance
- › Cleaning, marine growth removal, grout removal etc



Dimension (LxWxH): 2990mm x 2440mm x 2500mm
 Weight: 6500 kgs
 Max pressure: 12000 psi

Max water flow: 65 lpm
 Diesel requirement: 27 liters/ hr
 Certification: BS7072

Hose reel - High Pressure Jetting

- › Containerized reel system for HP jetting hose
- › Drum capacity 500 m 1"
- › Integrated HPU
- › Easy to install on vessel



Dimension (LxWxH): 3000mm x 2400mm x 2700mm
 Weight: 6000 kg
 Drum capacity: 500 m 1" hose

Load capacity: 6000 kg
 Effect on HPU: 22 kW
 Power interface: Electric

Deep C® 520 bar ROV HP Jetting

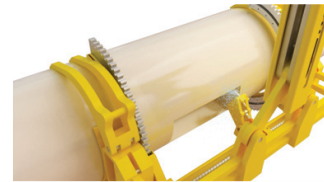
- › Versatile jetting unit for cleaning, injection and pressure testing
- › Mounted to an powered from the ROV
- › Minimal size and weight
- › Easy operation



Dimensions (LxWxH):	285mm x 175mm x 210mm	Max flow:	30 lpm
Weight:	22 kgs	Pressure rating:	160-210 bar
Max pressure:	520 bar	Required flow:	85 lpm

Deep C® Coating Removal Tool

- › Can be operated as stand alone or as an interchangeable tool with Deep C® SUV®
- › Suitable for pipes 10" – 26"
- › Removes any type of coating
- › Interfaces with Deep C® Live Visualization System



Pipeline size:	10-26"	Cutting width pr pass:	<120 mm
Circumferential range:	360 degrees	Water jet:	200 lpm/ 1000 bar
Sections:	1 m (can be extended)	Weight (unit):	500 kgs

300 bar High Pressure Heater

- › Containerized HP heater with dual pumps
- › Great selection of lances and nozzles
- › DNV 2.7-1 Lifting frame



Dimension (LxWxH):	1800mm x 100mm x 1500mm	Water flow:	2x 21 lpm
Weight:	1700 kg	Heating element:	3x 23 kW
Water pressure:	300 bar	Water tank:	380 liters

Deep C® Subsea HP Jetting System

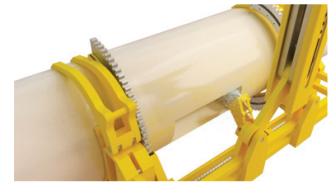
- › Can be operated as stand alone or integrated in Deep C® SUV® or Deep C® Dredge
- › Ultra deep water capability
- › Wide range of applications such as concrete cutting, complex cleaning operations and pressure testing



Max pressure:	2500 bar	Rod force:	200 kN
Flow:	168 lpm @ 970 bar	Weight (air):	3200kgs
Power rating:	300 kW	Weight (water):	2500 kgs

Deep C® Coating Removal Tool

- › Can be operated as stand alone or as an interchangeable tool with Deep C® SUV®
- › Suitable for pipes 10" – 26"
- › Removes any type of coating
- › Interfaces with Deep C® Live Visualization System



Pipeline size:	10-26"	Cutting width pr pass:	<120 mm
Circumferential range:	360 degrees	Water jet:	200 lpm/ 1000 bar
Sections:	1 m (can be extended)	Weight (unit):	500 kgs

Deep C® SUV® Drum Cutter

- › Heavy duty drum cutter for demolishing
- › High production rate
- › Low energy impact cutting action
- › Wide range of applications such as rock cutting, trenching in hard soil etc.



Volume:	220 l	No of cylinders:	1
Dimension:	Open 1310 mm	Pressure rating:	210-350 bar
SWL:	900 kg	Maximum flow:	60-90

Deep C® SUV® Heavy Duty Manipulator

- › Robust arm for heavy duty Deep C® SUV® operations
- › Good outreach on working envelope
- › Quick release for tooling interchangeability subsea
- › Sensors for live visualization



Outreach tooling:	7 m	Lift capacity:	1 320 kgs
Outreach dredging:	9-12 meters	Weight (unit):	850 kgs
Swing on arm:	60 degrees		

Deep C® SUV® Telescopic Manipulator

- › Robust arm with optimized working envelope for dredging
- › Operation of several tools with subsea interchangeability
- › Can easily be extended for project specific requirements



Outreach tooling:	9 meters	Lift capacity:	900 kgs
Outreach dredging:	11-13 meters	Pulling/ pushing force (tip):	42/23 kN
Swing on arm:	60 degrees	Weight (unit):	885 kgs

Deep C® SUV® Telescopic Manipulator Extended

- › Robust arm with optimized working envelope for dredging
- › Operation of several tools with subsea interchangeability
- › Can easily be extended for project specific requirement



Outreach tooling:	11,5 m	Lift capacity:	900 kgs
Outreach dredging:	13-15 m	Pulling/ pushing force (tip):	42/23 kN
Swing on arm:	60 degrees	Weight (unit):	900 kgs

Deep C® Mini Grab

- › Hydraulically operated via hot stab or topside
- › Crane deployed or Deep C® SUV® operated
- › Deep water capability
- › Wide variety of applications



Volume: 180 l
 Dimension: Open 1200 mm
 SWL: 600 kg

No of cylinders: 2
 Pressure rating: 180-200 bar
 Maximum flow: 175 lpm

Deep C® Grinder

- › Operated by diver or ROV
- › Can be fitted w/ large variety of tools
- › Easy to install and operate
- › Wide variety of applications



Dimension (LxW): 230x230 mm
 Weight: 6,8 kg
 Weight in water: 4,7 kg

Max cutting disc: 9'6"
 Pressure rating: 70-175 bar
 Optimum flow: 34 l/min

Deep C® Tiger Claw

- › Hydraulically operated via hot stab or topside
- › Crane deployed or Deep C® SUV® operated
- › Deep water capability
- › Wide variety of applications



Volume: 230 l
 Dimension: Open 1210 mm
 SWL: 900 kg

No of cylinders: 1
 Pressure rating: 200 bar
 Maximum flow: 50 lpm

Deep C® SUV® 3in1 Excavation Bucket

- › Excavation bucket with in built jetting nozzles and suction for emptying
- › Efficient tool for excavation in cohesive materials



Volume: 180 l
Weight: 100 kg

Deep C® SUV® Plough

- › Plough to be mounted on the Deep C® SUV® for shovelling rock/seabed and/or stabilizing in rough terrain



Width: 2,5 m
Weight: 250 kg
Movement: Horizontal and vertical

Deep C® XL Excavation Bucket

- › Controlled excavation of clay and contaminated sediments
- › Hydraulic push for controlled disposal of sediments
- › Can interface with jetting arrangement



Volume: 380 l
Weight: 150 kg

Deep C® SUV® Excavation Bucket

- › Controlled excavation of clay and contaminated sediments
- › Hydraulic push for controlled disposal of sediments
- › Can interface with jetting arrangement



Volume: 150 l
Weight: 100 kg

Deep C® SUV® Working Platform

- › Working platform to be installed on tip of Deep C® SUV® Telescopic Manipulator
- › Interfacing for two ROV manipulators
- › Basket for tooling
- › Perfect for manipulation work in restricted areas



Manipulator type: Titan 4 2 off
Basket size: 200 liters
Weight: 80 kgs

Deep C® SUV® Tooling Basket

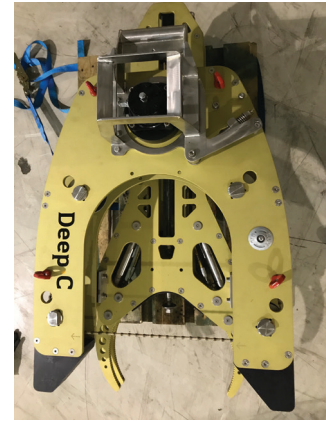
- › Tooling basket to be mounted to the Deep C® SUV®
- › For wet storage of equipment to be operated by the Deep C® SUV®
- › Picture shows Deep C® HD Breaker in parking mode



Dimensions (LxWxH): 1500mm x 500mm x 400mm
Weight: 120 kg
Max load: 500 kgs

Deep C® Diamond Wire Cutter

- › Easy grip from different positions
- › High efficiency
- › Deep C® SUV® and ROV friendly
- › Various applications



Dimension (LxWxH): 1124x768x308 mm
 Weight: 35 kg
 Weight in water: 18 kg

Max cutting size: 450mm/ 18"
 Pressure rating: 175 bar
 Optimum flow: 50 l/min'

Deep C® HD Hydraulic Breaker

- › Powerful heavy duty chissel hammer
- › High frequency
- › Protection agains dust and overload
- › Perfect tool for demolishing, concrete breaking and rock crushing



Carrier weight: 6,5 - 13 tons
 Impact rate: 500 - 1250 blows/min
 Dimensions (LxØ): 470 mm x 95 mm

Weight in air: 440 kgs
 Pressure rating: 100-150 bar
 Flow: 55-100 lpm

Deep C® Rotary Saw

- › Versatile and easy to operate
- › ROV friendly
- › Cutting disc up to 14"
- › Various applications



Dimensions (LxW): 260x400 mm
 Weight: 13 kg
 Weight in water: 9 kg

Max cutting disc: 350mm/ 14"
 Pressure rating: 210 bar
 Optimum flow: 50 l/min

Deep C® Levelling Rake

- › Levelling rake to be mounted to Deep C® SUV® manipulators
- › Tool for levelling and profiling of seabed and gravel

Dimension (W): 1000 mm
 Weight: 25 kg

Deep C® Shear Cutter

- › Efficient tool for demolishing and removal
- › Deployed by crane or ROV
- › 350 mm opening



Weight: 1250 kgs
 Opening jaw: 350 mm
 Depth jaw: 410 mm

Closing force: 1445 kN
 Pressure rating: 350 bar
 Flow: 100-160 lpm

Deep C® ROV Manipulator

- › Versatile heavy duty ROV manipulator
- › Handling of dredging suction hoses
- › Grabbing of pipes and debris
- › Handling of heavy duty ROV tooling



Overall length: 1,7 m
 Functions: 4
 Lifting capacity: 500 kgs

Claw size: 440 mm open
 Pressure rating: 160-250 bar
 Flow: 10-45 lpm

IW12 ROV Impact Wrench

- › Adjustable impact intensity
- › Flexible fish tail handle
- › Compact design
- › Wide variety of applications



Dimension (LxW): 241x102 mm
 Weight: 6,4 kg
 Chuck type: 3/4 in

Torque: 342-1632 Nm
 Pressure rating: 70-140 bar
 Optimum flow: 15-45 lpm

Deep C® Grinder

- › Operated by diver or ROV
- › Can be fitted w/ large variety of tools
- › Easy to install and operate
- › Wide variety of applications

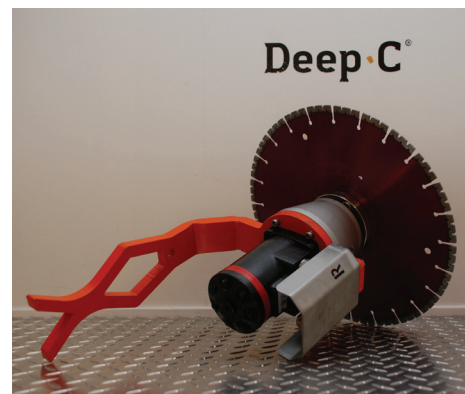


Dimension (LxW): 230x230 mm
 Weight: 6,8 kg
 Weight in water: 4,7 kg

Max cutting disc: 9"
 Pressure rating: 70-175 bar
 Optimum flow: 34 l/min

Deep C® Rotary Saw

- › Versatile and easy to operate
- › ROV friendly
- › Cutting disc up to 14"
- › Various applications

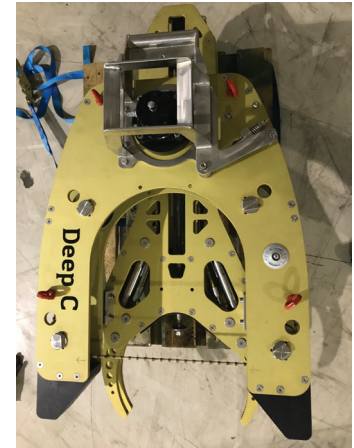


Dimensions (LxW): 260x400 mm
 Weight: 13 kg
 Weight in water: 9 kg

Max cutting disc: 350mm/ 14"
 Pressure rating: 210 bar
 Optimum flow: 50 l/min

Deep C® Diamond Wire Cutter

- › Easy grip from different positions
- › High efficiency
- › Deep C SUV and ROV friendly
- › Various applications



Dimension (LxWxH): 1124x768x308 mm
 Weight: 35 kg
 Weight in water: 18 kg

Max cutting size: 450mm/ 18"
 Pressure rating: 175 bar
 Optimum flow: 50 l/min

Deep C® ROV Dredge

- › Unrestricted flow up to 10"
- › High removal capacity
- › Compact and light weight design
- › Easy to install and operate



Dredge size: 3, 4, 6, 8 and 10"
 Water jet on nozzle: Yes
 Weight in water: 25 - 55 kg

Pressure rating: 180 bar
 Optimum flow: 60 lpm

Deep C® ROV Manipulator

- › Versatile heavy duty ROV manipulator
- › Handling of dredging suction hoses
- › Grabbing of pipes and debris
- › Handling of heavy duty ROV tooling



Overall length: 1,7 m
 Functions: 4
 Lifting capacity: 500 kgs

Claw size: 440 mm open
 Pressure rating: 160-250 bar
 Flow: 10-45 lpm

Deep C® Mini Booster HC2

- › Compact skid for easy installation on ROV
- › Pressure gauge
- › Blow off valve
- › Water, oil or glycol injection

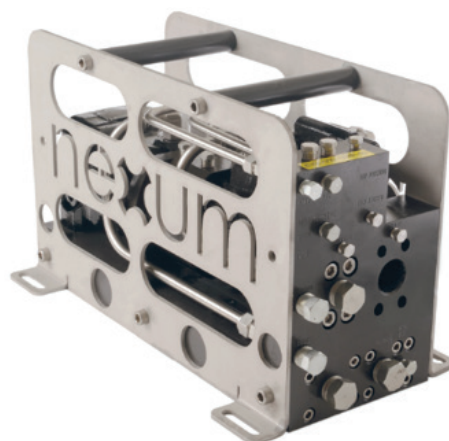


Dimension (LxWxH): 400mm x 150mm x 150mm
 Weight (air): 10 kgs
 Min pressure inlet: 20 bar

Max pressure inlet: 200 bar
 Max flow: 2,5 lpm
 Intensification ratio: 4

Dirty Work Pack

- › ROV friendly compact skid
- › Valve for remote start/stop
- › Flow regulation valve for speed control
- › Pressure relief valve



Dimension (LxWxH): 590mm x 250mm x 350mm
 Weight (air): 65 kg
 Efficiency: 66 %

Max supply pressure: 210 bar
 Max supply flow: 90 lpm
 Max output @210bar: 60 lpm

Deep C® Intensifier Panel HC6

- › Compact skid for easy installation on ROV
- › Pressure gauge
- › Blow off valve
- › Water, oil or glycol injection



Dimensions (LxWxH): 450mm x 400mm x 150mm
 Weight (air): 35 kgs
 Min pressure inlet: 20 bar

Max pressure inlet: 200 bar
 Max flow: 11 lpm
 Intensification ratio: 3,3

3 Valve Hi Flow Hot Stab

- › Integrated 3 port valve
- › High flow, no restrictions through poppets
- › Leakage free
- › D handle



Dimension (LxWxH): 448 mm x 70mm x 120mm
 Weight: 7 kg
 Efficiency: 66 %

Pressure rating: 250 bar
 Max supply flow: 90 lpm
 Max output flow @210bar: 60 lpm

ISO A SP Stab 10 k

- › ISO 13628 Type B
- › Single port
- › Improved flow \varnothing 43 mm



Dimensions (LxWxH): 328mm x 70mm x 120mm
 Weight (air): 3,8 kg
 Diameter: 43 mm

Pressure rating: 690 bar
 Efficiency: 66 %

ROV Tooling Manifold Block

- › Added safety prevention for external ROV tools
- › Allows on/off control
- › Assists with tool run down

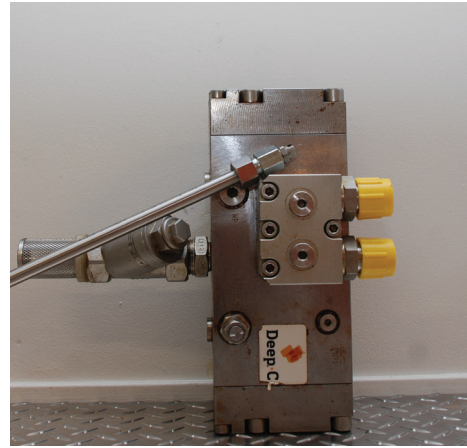


Dimensions (LxW): 150mm x 125mm
 Weight (air): 2 kg
 Max pressure: 210 bar

Standard flow: 35 lpm
 Optimum flow: 40 lpm

Deep C® 520 bar ROV HP Jetting

- › Versatile jetting unit for cleaning, injection and pressure testing
- › Mounted to an ROV powered from the ROV
- › Minimal size and weight
- › Easy operation



Dimension (LxWxH): 285mm x 175mm x 210mm
 Weight: 22 kgs
 Max pressure: 520 bar

Max flow: 30 lpm
 Pressure rating: 160 - 210 bar
 Required flow: 85 lpm

Deep C® Chop Saw

- › Compact and robust
- › Fully automated hydraulics
- › ROV and Diver friendly
- › Various applications



Dimension (LxW): 1453 x 746mm
 Weight: 120 kg
 Weight in water: 90 kg

Max cutting size: 230mm/ 9"
 Pressure rating: 110 bar
 Optimum flow: 60 l/min

Deep C® Jack Hammer

- › Portable ROV operated tool for concrete breaking
- › Feathering on/off valve
- › Trouble free diaphragm accumulator



Dimensions (LxW): 680mm x 40mm
 Weight (air): 30 kg
 Output: 1800 blows/ min

Capacity: 6" x 1 1/4" Hex
 Pressure range: 105 - 140 bar
 Flow range: 26-34 lpm

Deep C® ROV Trenching Skid

- › Cost efficient solution for trenching of cable
- › Easy mobilisation, requires only power from the ROV
- › No additional downlines and topside equipment needed
- › Trenching depth adjusted to project requirements



Volume: 220 l
 Dimension: Open 1310 mm
 SWL: 900 kg

No of cylinders: 1
 Pressure rating: 200 bar
 Maximum flow: 50 lpm

55 mm Soft Line Cutter

- › Heavy duty soft and fiber line cutter
- › Quick and efficient operation
- › Can be used at any water depth
- › Diver or ROV operable design



Dimensions (LxWxH): 155 x 135 x 487mm
 Weight: 9,7 kg
 Weight in water: ca 7 kg

Max cutting size: 55 mm ø
 Pressure rating: 210 bar

80 mm Soft Line Cutter

- › Heavy duty soft and fiber line cutter
- › Quick and efficient operation
- › Can be used at any water depth
- › Diver or ROV operable design



Dimensions (LxWxH): 187 x 138 x 646 mm
 Weight: 15 kg
 Weight in water: 10,5 kg

Max cutting size: 80 mm ø
 Pressure rating: 690 bar

RCO 40 Wire Rope Cutter

- › Heavy duty for use in severe conditions
- › Open sided for easy positioning
- › Can be used at any water depth
- › ROV and diver operable



Dimension (LxWxH): 136 x 100 x 313 mm
 Weight: 17,5 kg
 Weight in water: ca 12 kg

Max cutting size: 38 mm ø
 Pressure rating: 700 bar

RCO 54 Wire Rope Cutter

- › Heavy duty for use in severe conditions
- › Open sided for easy positioning
- › Can be used at any water depth
- › ROV and diver operable



Dimension (LxWxH): 177 x 125 x 461 mm
 Weight: 37 kg
 Weight in water: ca 25 kg

Max cutting size: 55 mm ø
 Pressure rating: 700 bar

RCV 115 Wire Rope Cutter

- › Heavy duty soft and fiber line cutter
- › Quick and efficient operation
- › Can be used at any water depth
- › Diver or ROV operable design



Dimensions (LxWxH): 514 x 252 x 703 mm
 Weight: 125 kg
 Weight in water: ca 87

Max cutting size: 115 mm ø
 Pressure rating: 690 bar (main)
 210 bar (anvil)

3Te ROV Chain Hoist

- › Compact and light weight
- › 4 point manipulator connection points
- › Flexible heavy duty chain bag
- › Manual fishtail direct drive



Dimension (LxWxH): 700mm x 590mm x 400mm
 Weight: 65 kg
 Weight in water: 60 kg

Max torque: 50 Nm
 Max lifting capacity: 3 tons

10Te ROV Chain Hoist

- › Compact and light weight
- › 4 point manipulator connection points
- › Flexible heavy duty chain bag
- › Manual fishtail direct drive

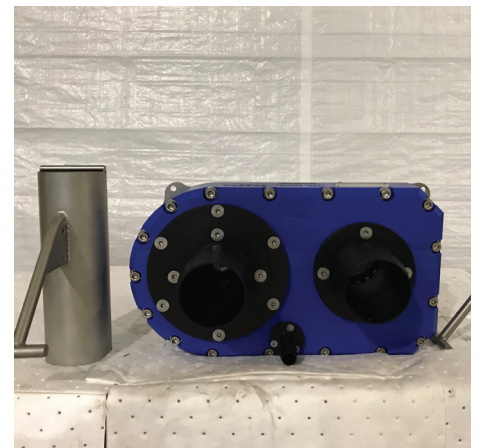


Dimensions (LxWxH): 700mm x 590mm x 400mm
 Weight: 65 kg
 Weight in water: 60 kg

Max cutting size: 50 Nm
 Pressure rating: 10 tons

Merlin ZIP Pump

- › Robust and proven design
- › Rapid switching from suction to jetting
- › Compact and easy to install
- › Reverse flush for suction nozzle

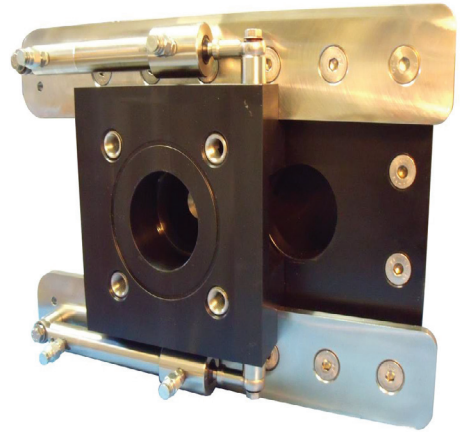


Dimensions (HxW): 550mm x 500mm
 Weight (air): 40 kg
 Weight (water): 17 kg

Output (jetting/suction): 8 bar/ 4000 lpm
 Pressure rating: 170-250 bar
 Flow: 65- 110 lpm

AnchorZip 10

- › Deploy/ recover large suction anchors
- › High efficiency, high performance
- › Flow reversal for anchor recovery
- › Variable suction release valve preset



Dimension (LxWxH): 450mm x 315mm x 290mm
 Weight: 30 kg
 Weight in water: 14 kg

Differential pressure: <9,5 bar
 Suction flow: <8 cm @ 7,5 bar
 Hydraulic input: 70 lpm @ 276 bar

High Flow ROV Jetting Pump

- › Compact and light weight
- › Easy installation
- › High efficiency, high performance
- › Field proven design



Dimension (LxWxH): 500mm x 200mm x 200mm
 Weight: 30 kg
 Maximum pressure: 4,5 bar

Maximum flow: 2000 lpm
 Hydraulic input: 60 lpm @ 180 bar

ROV Rake

- › Versatile rake for ROV
- › Fish tail handle
- › Adjustable stick



Outreach: 500mm - 1000 mm
 Weight: 7 kg
 Rake width: 50 cm

Deep C® Subsea Power Station

- › 490 kW subsea powerpack
- › High capacity subsea hydraulic powerpack
- › Subsea high pressure jetting
- › Comprehensive monitoring and remote control system



Dimension (LxWxH): 2700mm x 2100mm x 2600mm
Weight: 3 200 kgs
Weight in water: 2 500 kgs

Available power: 490 kW electrical
Control system: Project sepcific
Deployment: 4,5 m Hs

Deep C® 55 kW HPU/ Reel

- › All fitted in 10' container for low deck space requirement and easy installation
- › Spool control and lock off valve
- › Remote operation control
- › Adjustable drum speed



Dimensions (LxWxH): 2998mm x 2438mm x 2671mm
Weight: 7 800 kgs
HPU effect: 55 kW

Hydraulic output: 220bar @ 100 lpm
Spooler hose length: 250m 1", 3/4", 3/8"
Certification: DNV 2.7-1

Deep C® 22 kW HPU

- › Equipment testing, SITs, operation of tools
- › 3 in-built directional valves
- › Pressure and flow adjustable to suit application

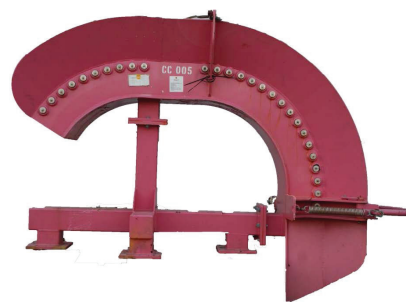


Dimensions (LxWxH): 700mm x 494mm x 1285mm
Weight: 315 kgs
HPU effect: 22 kW

Max pressure: 280 bar
Max flow: 45 lpm
Oil tank capacity: 180 liters

Deep C® Roller Chute

- › Plastic rollers for friendly guiding of umbilical
- › Replacable fundament for flexible installation
- › Bolted welding plates for quick installation



Dimension (LxWxH): 2362mm x 867mm x 1770mm
Weight: 750 kg
Bearing load: 6 tons

Bending radius: 848 mm
Certification: DNV 2.7-1

Deep C® Umbilical Chute

- › Synthetic surface for friendly guiding of umbilical
- › Replacable fundament for flexible installation Bolted welding plates for quick installtion

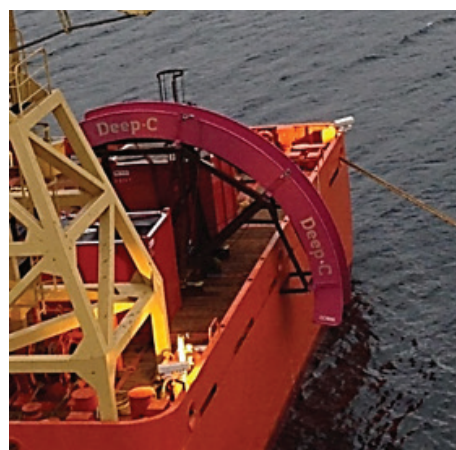


Dimension (LxWxH): 1931mm x 400mm x 1151mm
Weight: 350 kg
Bearing load: 3 tons

Bending radius: 1000 mm
Certification: DNV 2.7-1

Deep C® 4,5 m radius Chute

- › Deployment and recovery of large products
- › Replacable fundament for flexible installation
- › Smooth surface for friendly handling

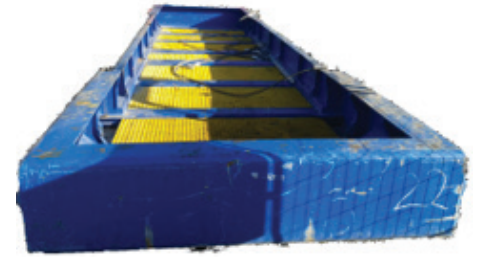


Dimensions (LxWxH): 6300mm x 5350mm x 1600mm
Weight: 350 kg
Bending radius: 4 500 mm

Clearance inside: 900 mm
Angle coverage: 120 degrees

Deep C® Hose Basket

- › Custom made for storage and transport of hoses and pipes
- › Can be used as an open basket for loose items
- › Easy to sea fasten on deck

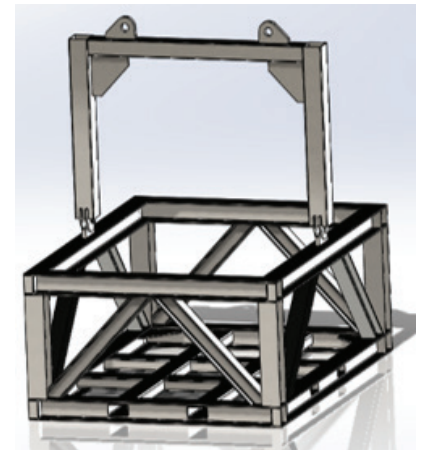


Dimension (LxWxH): 9910mm x 2400mm x 565mm
Weight: 3 000 kgs
SWL: 6 500 kgs

Certification: DNV 2.7-1

Deep C® Subsea Basket

- › Hinged lifting arrangement for open unrestricted access on top
- › Low weight and high load
- › Versatile functionality



Dimensions (LxWxH): 3530mm x 2691mm x 1400mm
Weight: 1 300 kgs
SWL: 8 000 kgs

Certification: DNV 2.7-1

Temporary Mud Mats

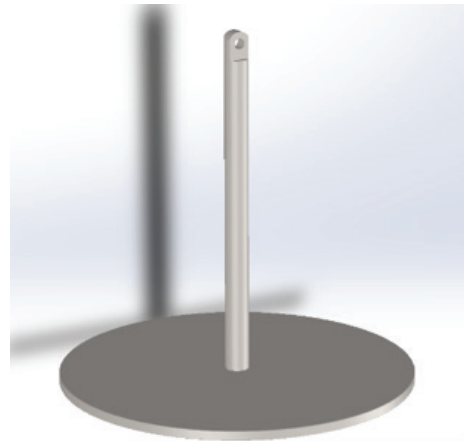
- › Stabilization of equipment and tools on soft seabed
- › Several applications and an alternative to concrete mattresses
- › Several sections can be hinged to create larger footprint



Dimensions (LxW): 2000mm x 3600mm (pr section)
Weight: 70 kgs (pr section)
Weight in water: 50 kgs (pr section)

Deep C® Clump Weight Hanger

- › For load testing and/or seabed anchoring
- › Modular based to allow flexible length



Dimension (LxWxH): 900mm x 900mm x 870mm
 Working load limit: 5 tons
 Lifting certification: DNV 2.7-1

Blagdon Pump

- › Air driven and Atex approved
- › Mobile and compact unit
- › Various fluid applications



Dimension (LxWxH): 590mm x 328mm x 579mm
 Weight: 78 kgs
 Max load: 6 mm

Max working pressure: 8,6 bar
 Flow capacity: 0-550 lpm
 Max discharge head: 88 mm

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- › JAJAJA
- › JAJAJ

Dimensions (LxWxH): XX
 Weight: XX
 Bending radius: XX

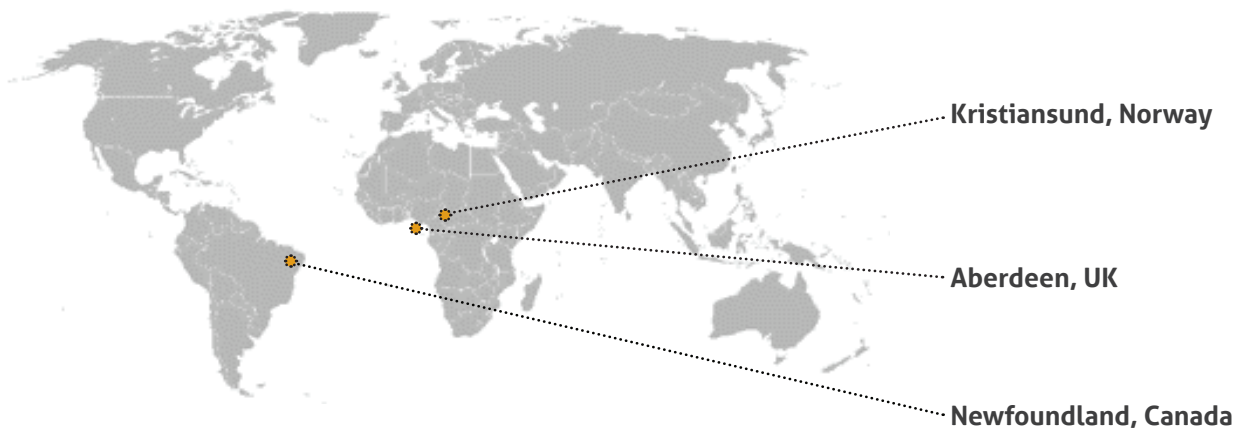
Clearance inside: XX
 Angle coverage: XX

Deep C[®]

Global operations

Deep C[®] operates globally. Through our own facilities in Norway, UK and Canada, and a broad distribution network beyond, we can mobilize world wide. We have experience with operations on all 5 continents

Contact one of our offices and we will remain at your assistance



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