

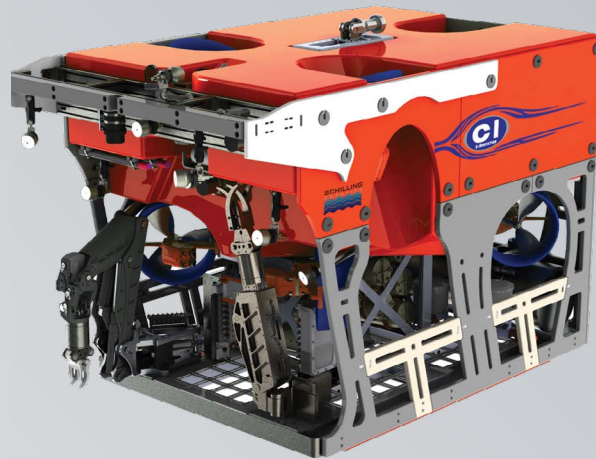
C-INNOVATION

# SUPERIOR ROV SOLUTIONS FOR ALL MARKETS FROM C-INNOVATION

## Heavy Duty ROV (HD® ROV) by Schilling Robotics

C-Innovation continues to provide its customers with innovative ROV solutions, utilizing the latest technologies while increasing operational efficiency. We are proud to introduce the new Heavy Duty ROV (HD® ROV) from Schilling Robotics.

The HD is a compact ROV system that provides flexibility for achieving high performance across all key markets. The HD features Schilling's unique power management system which delivers superior operational stability and control. Based on integrated sub-systems from the Remote Systems Engine™, the HD reduces complexity, increases efficiency and lowers the cost of owning and operating an ROV.



### HD ROV BENEFITS:

- Delivers industry leading work-class ROV performance and provides automatic power efficiency management.
- Easily configured to perform a wide range of operations and associated pricing structures, including drill support, IRM (inspection, repair and maintenance) and construction support.
- Increases ROV pilot efficiency through intuitive ROV control interface, automated navigation and positioning systems.
- High reliability system design based on proven core sub-systems from Schilling's Remote Systems Engine.
- System design enables rapid maintenance with modular sub-system redundancy.
- User configurable Digital Telemetry System™ (DTS™) featuring a Gigabit Ethernet backbone that accommodates any configuration of sensors and video cameras (including HDTV).
- Automatic control modes, including heading, depth, altitude, attitude, AutoTrack, Auto Stability and StationKeep™.
- Can be used with a highly-efficient, all-electric Tether Management System (TMS) or in free-fly configuration.
- Optimized system footprint to support rapid mobilizations and road transportability.



**SAFE, EFFICIENT SUBSEA REMOTELY OPERATED VEHICLE OPERATIONS**

# HD ROV SPECIFICATIONS

## System Overall

Depth Rating	
Standard	3,000 msw (9,843 fsw)
Optional	4,000 msw (13,123 fsw)
System Classification	Heavy Duty Work Class ROV
Operating Condition Limits	
Sea State	Sea State 6 (vessel dependent)
Low Temperature	0°C (32°F)
Certifications	
All Containers (Vans)	A60 Safe Area (DNV 2.7-1 Offshore Container Certification)
Winch/A-Frame	DNV's Rules for Certification of Lifting Appliances
Zoning	Safe Area standard / Zone II optional
U/W Electrical Design Standard	AODC 035 - code of practice for safe use of electricity underwater

## ROV

Weight in Air	3,500 kg (7,716 lb) (with lead trim and standard equipment installed)
Dimensions	
Length	2.5 m (8.2 ft)
Width	1.7 m (5.6 ft)
Height	1.9 m (6.2 ft)
Through-Frame Lift	3,000 kg (6,614 lb) (in addition to vehicle weight)
Payload Capacity in Seawater (min)	250 kg (551 lb) (with standard accessories and manipulators installed)

## ROV Performance

Power	
Standard	150 HP (112 kW)
Bollard Pull (Minimum)	
Forward/Aft	900 kgf (1,984 lbf)
Lateral	900 kgf (1,984 lbf)
Vertical	850 kgf (1,874 lbf)
Thrusters	
Horizontal	4 x Sub-Atlantic SA380
Vertical	3 x Sub-Atlantic SA380
Automatic Control Modes:	Heading (semi/full)
Depth	
Altitude	
Attitude (pitch and roll)	
StationKeep™	
AutoTrack™	
Flight Control Modes	Cruise
Trim	
Pitch	
Controlled Displacement	
Operator Interface	9 x 610-mm (24-inch) LCD displays

## ROV Tooling

Isolated HPU	Optional 45cc pump
Manipulator	ORION 7R and RigMaster five-function grabber
Optional	TITAN 4, ORION 7P or ATLAS 7R
Valve Packs	2 x 8 station Sub-Atlantic
Spare Hydraulic Functions	4, standard
Auxiliary Hydraulic Circuit	72 LPM (19 GPM) at 207 bar (3,000 psi)
3 Function Proportional Flow High Valve Pack	Optional

## ROV Sensor / Telemetry – Gigabit Ethernet-Based

Digiquartz	Standard
FOG (Fiber Optic Gyro)	Standard
RLG (Ring Laser Gyro)	Optional
DVL (for dynamic positioning and altitude)	Standard
Inertial Navigation System	Available
Instrument Power	5 kVA total
HDTV Support	Optional

## Tether Management System

Type	Top hat
Depth Rating	
Standard	3,000 msw (9,843 fsw)
Optional	4,000 msw (13,123 fsw)
Height	2,191 mm (86 in)
Weight in Air (max)	3,000 kg (6,614 lb) including standard 425 m (1,394 ft) tether
Tether Line Pull	TBC
Tether Line Speed	Minimum of 0 - 50 MPM variable speed
Latch Capability	6,700 kg (14,771 lb)
Tether Capability	425 m (1,394 ft) of 28 mm (1.1 in) OD tether

## Launch and Recovery System

Umbilical	Armored, 3,300 m (10,827 ft) Outside Diameter (OD) 28.5 mm (1.12 in)
Winch	Right angle level wind (conventional level wind optional)
A-Frame	Standard, luffing-type or telescoping (can be manufactured to client specifications, if required)
Heave Compensation	Passive or active
Control and Work Container	
Standard	2.4 x 6.1 m (8 x 20 ft)
Optional	2.4 x 4.9 m (8 x 16 ft)

\* C-Innovation, LLC reserves the right to alter or amend the published specifications without notice.



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