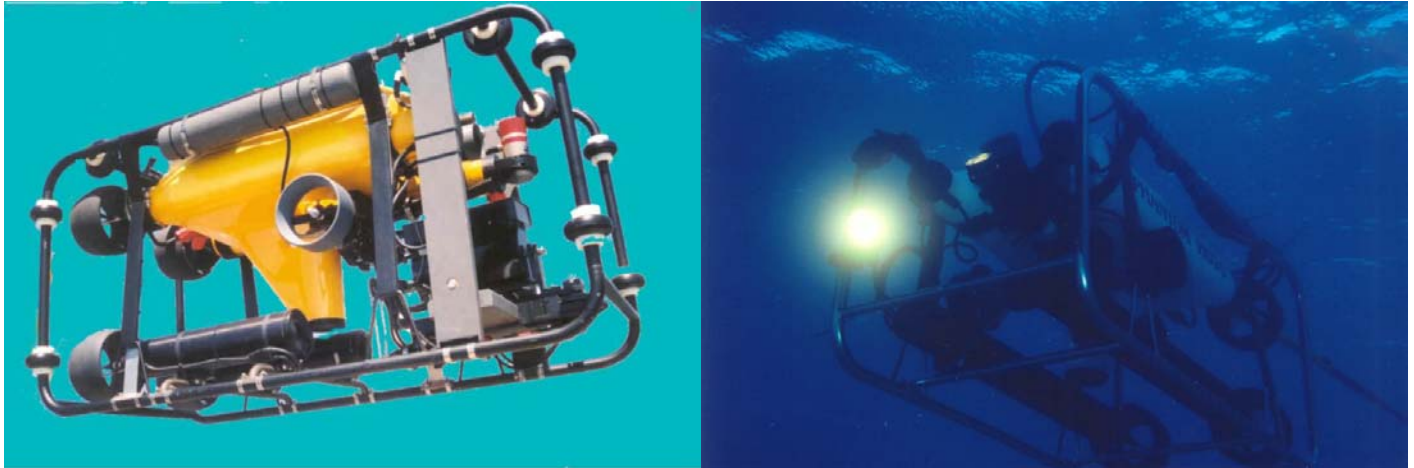


Cariboo Chilcotin Divers Ltd. HD2+2



Phantom[®] HD2+2

- Dependable ROV for offshore inspection and light work tasks
- For use in moderate to strong currents to depths of 300m (1,000 ft.)
- Accommodates cameras, sonar, tracking, manipulators and custom tooling

The Deep Ocean Advantage

- Well established company with 25 years of experience & supply to the ROV industry.
- Over 500 ROV systems delivered.
- Broad international customer base, with clients in over 30 countries.
- Diverse industry applications:
 - Military, customs & police
 - Search & recovery
 - Survey & inspection
 - Nuclear & hydroelectric
 - Offshore oil & gas
 - Scientific research
 - Underwater filming
- World class engineering and R&D
- Solutions oriented customer service support
- Rugged reliable products, easy to use & maintain
- Ability to integrate tooling & sensor packages

Phantom[®] HD2+2 Applications

- Outfall/Intake inspections.
- Jack-up and template inspections.
- NDT inspections.
- Mooring and anchor chain monitoring.
- Telecommunication cable inspection.
- Mine countermeasures.
- Body and evidence recovery.
- Oceanographic survey.
- Fisheries research.
- Environmental surveys.
- Marine archeology.

Phantom[®] HD2+2



Specifications

General:

Weight:	120kg	265lb
Operating depth:	305m	1,000ft
Overall length:	1400mm	55in
Overall width:	686mm	27in
Maximum height:	673mm	26.5in

Performance - forward thrust:

Normal:	68kg	150lb
Full:	91kg	200lb
Lateral thrust:	7kg	15lb
Vertical thrust:	7kg	15lb
Payload (with lateral thruster fitted)	4kg	10lb

Power requirements:

Input Voltage:	100-250vac
Frequency:	50/60Hz
Power Rating:	6kva
User Power Available	
Instrumentation:	24vdc @ 6A
Auxiliary Power:	80vdc @ 0.6A

Lights:

Tungsten-halogen 2 X 250 Watt. 3 settings

Camera:

DOE 18:1 optical zoom high-resolution color camera
PAL/NTSC >470 Lines— 1/3" CCD
Sensitivity 1 Lux @ f1.4
Auto-iris, wide angle lens, viewing angle 7°-58°
Auto/Remote focus select
External motorized camera tilt ±90°
Built-in video switch for 2nd Camera
1,000 m (3,300 ft) rated, recessed and hardened port

Instrumentation:

Fluid-gimbaled fluxgate compass:	Accuracy: ± 3°
Electronic depth gauge:	Accuracy: ± 1% fsd.
Auto heading and auto depth	
Audio feedback of ROV condition	
Leak detector	
Onscreen graphic video display	

Standard Umbilical Tether:

Lengths:	168m (550ft); 335m (1100ft); 670m (2200ft)
Diameter:	20mm (0.8in)
Weight in fresh water:	Neutral

Options:

- Cable reels and slip-ring units available.
- Sonar
- Navigation and tracking systems
- Additional cameras & lights.
- Set additional buoyancy. +3kg/6.6lb Payload.
- Customized versions available.
- DOE single function manipulator.
- Sensor packages.
- Additional components on request

Features:

- Superb video quality, ± 90° camera tilt
- Hardwired Phantom control system — easy to troubleshoot and add accessories
- Shock-mounted full perimeter stainless steel crash frame for rugged protection and durability
- Interchangeable components with DOE Phantom Spectrum vehicles
- Enhanced vehicle stability with low center of gravity and torque-balanced horizontal thrusters.



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