**ROV**

**Performance**
Movements : in three axes, plus rotation on vertical axis
Forward speed : 4.5 knots (in zero knot current)
Operating depth 300 m in sea water
Stability : inherent, due to low center of gravity
Payload : 11 kg with removal of ballast
 30 kg more with incorporation of additional buoyancy

**Propulsion**
6 x DC thrusters : 4 x horizontal (vectored) / 2 x vertical
Forward thrust : 59 kg, Lateral thrust : 27 kg

 Vertical thrust : 34 kg

**Manipulator**
5-function electric manipulator arm
Slow: 120 LH or RH mounting
Elevation: 90
Elbow bend: 130
Reach: 640mm
Lift: 10 kg
Jaw rotate: continuous
Jaw opening: 125mm

**High Definition Cameras** **Inspection TV camera**
1Cam Alpha +HD Video and Digital Stills
- Color zoom camera mounted on external
- Pan and tilt unit with two LED lights.
-Lens: 10 x zoom (2.5-25 mm) / F1.8
 - Resolution:
- Video Resolution: 1920 x 1080p
- Still Resolution: 6544 x 3680
- Two integrated laser diodes
 (1 mW) for 2D measurement
- Two LED lights (4000 lumen),
- variable intensity.

**Navigation TV camera**
Very low light B/W
- Lens : 3.6 mm / F1.6 ;
 angle of view: 68°
- Resolution : 570 TV lines
- Sensitivity : 3 x 10-4 lux at F1.4

**Video Recording and Event Logging System**
- Dive events log synched with the recorded videos and still images.
- Each log event will include the following information:
- Date and time
- ROV data (depth, altitude, heading, position, speed etc.)
- Vessel (mother ship)\_data (position, heading, speed)
- Optional, additional sensor data
- Comments section (free text)
- Easy production of dive report/summary

**General characteristics**
Dimensions (cm) : 99 L x 72 W x 55 H
Weight in air : 99 kg excluding optional equipment
Material : polypropylene frame, stainless steel fittings

**Navigation**
**scanning sonar**Operating frequency: 500kHz to 900kHz
Beam Width: 38° vertical, 2.3° horizontal
Range: up to 100m Maximum

**USBL Positioning System**Working Range: up to 500m
Operating Frequency: 31.0 to 43.2 kHz
Operating Beamwidth: 120 to 150 degrees
Targets Tracked: up to16
Positioning Accuracy: 1.0 degree

**Sample collection procedures**

Samples collected with the arm are transferred to a separate “basket”, lowered to the bottom on a line from the ship and raised back to it when collection is completed. The basket dimensions are approximately (width, length, height) 50 X 20 X 40 cm with a lid with hinges that can be opened and closed with the ROV’s arm. Different baskets can be fabricated upon request.