**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.