



WHAT'S AN ROV?

An ROV is a Remotely Operated Vehicle, a tool used to explore our oceans. It is controlled by an ROV pilot on-board the ship and sends live video of what it is seeing back to the control room. ROVs can also be used to take samples of creatures, gases, seabed sediments and are regularly used to collect scientific information (data) about the area in which it operates.



PARTS OF AN ROV:

- 1 FRAME & HYDRAULIC SYSTEM:**
The frame of the ROV is its skeleton to which everything else is attached. The hydraulic system is the heart and blood system of the ROV – electrical wiring doesn't agree with sea water, so the hydraulic system is usually filled with oil to protect it at great depth and pressure.
- 2 SYNTACTIC FOAM:**
Syntactic foam is made from hundreds of thousands of tiny hollow glass balls in a glue-like cement. It helps control the buoyancy of the ROV.
- 3 UMBILICAL/TETHER:**
The umbilical or tether connects the ROV to the ship. It is through this fibre-optic cable that the ROV gets its power and sends video and data back to the ship.
- 4 THRUSTERS:**
The thrusters are how the ROV moves under water. They are controlled by the ROV operator on the ship and allow the ROV to move forward, backward, right, left, up and down.
- 5 LIGHTS:**
Super-bright lights are used to light up the underwater world so the ROV can see the sea floor and the unusual creatures in the deep dark depths of the ocean.
- 6 ROBOTIC ARMS:**
The robotic arms are used to collect samples from the sea bed. They are controlled by the operator on-board the ship.
- 7 VIDEO CAMERA:**
The video camera allows the operators to see what life is like in the ocean depths and to decide which samples they should take back to the surface. The video camera on an ROV is the eye into the deep.

