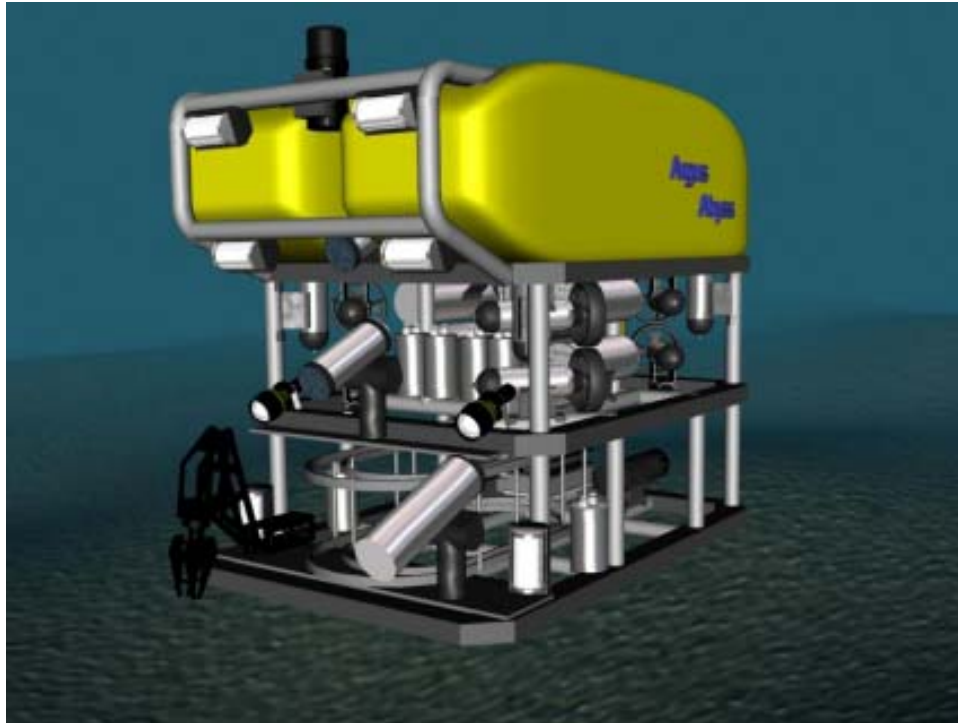


## Argus Abyss Features

The **Argus Abyss** delivers almost equivalent performance to current work class systems, but is smaller and lighter and can easily be configured for a wide range of functions.



Argus Abyss

The Argus Abyss's high efficiency also allows a reduced umbilical cross section and weight, resulting in a smaller deck footprint and reduced overall system weight. All sub sea components are rated for operation depth to at least 5000msw.

The vehicle has a large multi-purpose undercarriage to accommodate benthic samplers.

The lower frame is designed to be easily changed out if other applications are required like multibeam echosounder, water samplers etc.

A 4kW power pack is available for high flow hydraulics.

A variable speed control for an electric motor is also available.

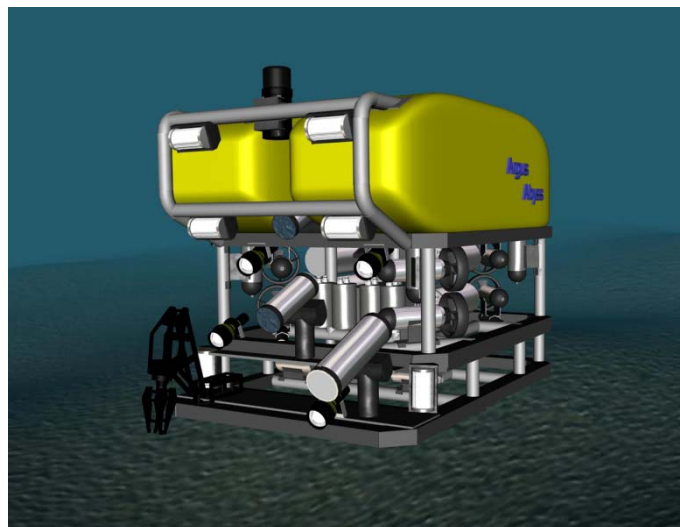
The Argus "building blocks" commonality further reduces parts storage requirements if an Argus ROV (Aglantha) is being used together with the Argus Abyss ROV. Although the same electronic parts are being used for both the Aglantha and the Argus Abyss vehicle. Argus Remote Systems a/s will also be able to deliver personnel to operate both Aglantha and the Argus Abyss.

Equipment modularity, combined with standard configuration techniques, allows the Argus to be easily modified for mission-specific tasks.

The control system ensures compatibility of common sensors and control devices.

**The standard Argus Abyss system includes:**

- A ROV with 12 each 850W electric thrusters. 8 horizontal in 35 deg vector and 4 vertical thrusters. Gives 200kg in push fwd/aft, 150kg lateral and 140kg vertical. ROV dimensions are 1.1m H by 1m W by 1.5m L. Approximate weight is 850kg, including a full suite of accessories and 110kg of led ballast. The ballast weight can be increased by adding more buoyancy onto the vehicle.
- All required surface and sub sea equipment for electrical power distribution, conversion and management.
- A standard suite of accessories (sensors and other systems) including, 4 x 400W HID lights, (alternative 2 x 400W HMI and 2 x 400W HID), 4 x Variable Halogen lights, 4 x 8W IR lights (alternative 2 x 65W), a colour 12 x zoom CCD camera, a SIT camera, a Digital Video Camera (Panasonic AW-E600 incl. SDI module), Stills camera facilities, Sonar MS1000, a paired Laser for scaling, a 5 function manipulator and sensor package for providing, heading, depth, altitude and position. All thrusters can be turned off individually. By turning off the 4 thrusters in front, you can manoeuvre the ROV without disturbance from the thrusters into the field of view.
- A single mode fibre optic communication system with serial RS-232, RS-485 and RS-422 channels and composite video channels. The standard amount of channels provided is 4 x RS-232, 2 x RS-485 or RS-422 and 3 video channels. More channels will be added after customer requirements.
- An Operator Control Station in a 10 inch control cabin.
- A complete winch and standard Kevlar Armoured Umbilical.
- An additional sensor package is available including CTD, Oxygen, Fluorescence, turbidity, current sensor (dopler) and transmissometer. All the data from the ROV sensors are available on the video screen and can be logged into a computer.
- A Simrad EM3000 or EM2000 Multibeam Echosounder can be mounted onto the vehicle, to make 3D maps of the seabed.



## ROV Operator Control Station

The Argus operation is simplified by status information that is readily available and easy to understand. The control system uses one main 15 inch screen (data), 2 x 14 inch high resolution screen and 3 smaller screens to let the operator focus on the information source with the highest priority while remaining aware of other information streams.

The system facilitates efficient task performance so that operators of all skill levels can perform tasks more rapidly. Clear, uncomplicated diagnostic information allows quick and efficient troubleshooting.

Information from ship, such as position of ROV etc., can easily be configured to be displayed onto the video screen, by the video overlay.



## Modular equipment

By emphasizing modularity (for example using thruster motor and controller for running hydraulics and other tooling), the Argus system simplifies ROV configuration and maintenance and allows smaller inventories.

Because the vehicle does not need to carry unnecessary equipment, it can support a wide range of tasks while remaining smaller and lighter than typical work-class ROV's.

## Product Evolution

Argus Remote Systems a/s was founded in 1992, by people who has designed and operated ROV, ROT and EOD systems since 1986.

In the past several years the company has increased focus on equipment for deep water applications. For example the ROV “Aglantha”, introduced in 1998 for the University in Bergen, specifically designed to fill the need for a lightweight and compact light to medium work-class ROV system, for depth down to 2000 meters.

The Argus Family of vehicles covers a wide range from “**Argus Sprint Replacement**”, (small obs ROV), “**Argus Rover mkII**”, (light work-class ROV), “**Argus Mariner**”, (medium work-class ROV), to “**Argus Mariner XL**”, (work-class ROV).

Company expertise in Control systems, Power control systems, Field operation, combined with inventive solutions, makes the Argus Systems a cost-effective, next generation ROV that uses a minimum of basic devices and is easily configured for a wide variety of functions.

