ISE International Submarine Engineering Ltd

HYSUB

Remotely Operated Vehicle

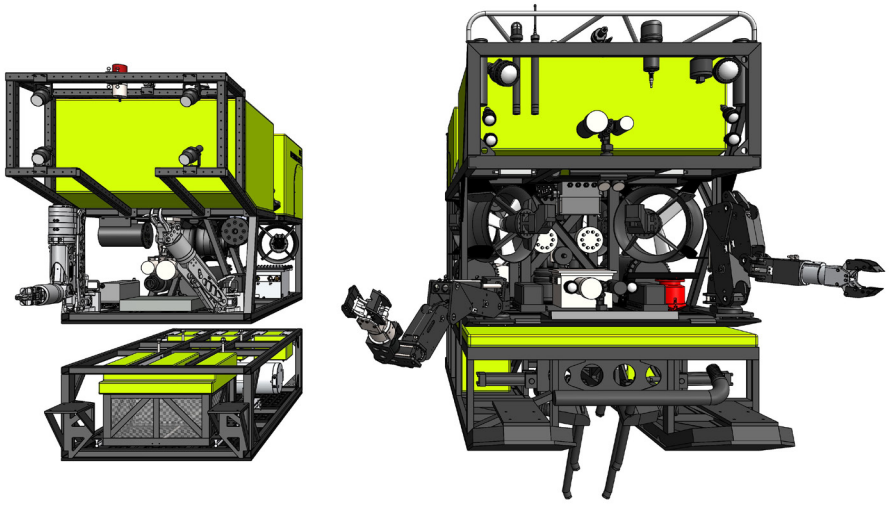
The ISE HYSUB Remotely Operated Vehicle (ROV) is a **fully customizable work class ROV** which is optimized for your operational profile. Select your payloads, depth, power, and frame size to receive your customized HYSUB in as little as 6 months! Every HYSUB is **designed to last for decades** in harsh conditions and is easy to **modify and upgrade** when new technology becomes available.

APPLICATIONS

- Inspection and Intervention
- Construction and Drill Support
- Recovery and Salvage
- Cable and Pipe Burial and Inspection
- Ocean Science and Sampling
- Hydrographic and Site Survey

INDUSTRIES

- Environmental Monitoring
- Commercial Offshore
- Oil & Gas
- Mining
- Scientific Research



PAYLOADS AND TOOLING

The HYSUB can be equipped with any equipment, payloads, and tools designed for use on an ROV. These include:

- **Jetting Skid for trenching and cable burial**
- **Suction Samplers, Sample Baskets, and Collection Systems**
- **Core Sampler, Clathrate Sampler**
- **Ultra HD Camera and Light Systems**
- **Hydrographic Survey Skid**
- **Cable and Pipe Tracking, CP, and Survey Skid**
- **7 Function Manipulators and 5 Function Grabbers**
- **Cable, rope, and chain cutters**

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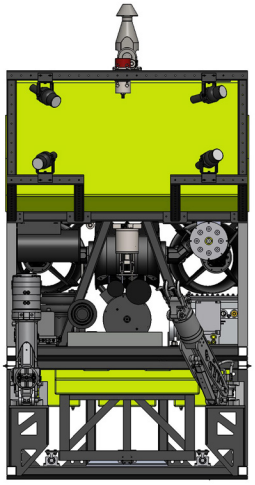
FEATURES & CAPABILITIES

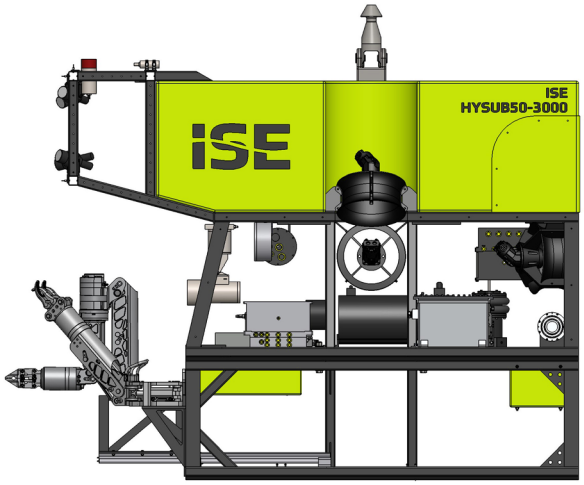
These are the features that are built into the HYSUB to ensure our customers achieve great results:

CUSTOMIZATION: set up your ROV to optimize your operations

RUGGED AND RELIABLE: HYSUB has a proven track record of being able to take a beating in real world conditions

- **Modular, Versatile and Configurable:** Change your tools, cameras, lights, skids and components to suit your operation
- **Upgradability:** Spare I/O channels, mounting locations, and payload capacity for adding and removing equipment
- **Auto-functions:** Station Keeping, Depth, Altitude, Heading, Speed, and Cruise Control
- **Line Follow and Mission Planning:** Use ISE AUV mission planning software to allow your HYSUB to perform tasks autonomously
- **USBL/LBL positioning**
- **LARS, TMS and Winch Options:** Top-hat or Garage TMS. A-Frame, Cursor, or Gantry LARS. Up to 7000m Winch





SPECIFICATION

ROV PERFORMANCE

- Depth Ratings: 100—6000 m
- Power: 25—250 hp (19 kW—186 kW)
- Bollard Pull: 370 kg (50 hp), 500 kg (100 hp), 1100 kg (150 hp)
- Surface speed: up to 1.9 m/s (3.7 kts)
- Hydraulic Thrusters: 4 x 12”—19.5” Horizontal (vector or XYZ)
  2 or 3 x 12”—16” Vertical
- Through Frame Lift: 500 kg—1000 kg*
- Payload: 100—200 kg*

WEIGHT AND DIMENSIONS

- Length: 2.5—3.45 m
- Width: 1.0—2.0 m
- Height: 1.0—2.3 m**
- Weight: 700—5700 kg***

MANIPULATORS AND GRABBERS*

- Standard: ISE Magnum 7F and 5F*
- Optional: TITAN 4, ORION, Rigmaster, Predator*
- Multiple mounting locations

STANDARD EQUIPMENT

- Scanning Sonar: Imagenex 881a*
- TOGS NAV*: Depths, heading, speed, altitude
- Cameras: 1 x 1080p HD Colour Zoom
  1 x Low Light
  4 x POV SD Colour
- Lights: 6 x 6000 Lumen
  2 x 18000 Lumen (Optional)*
- Pan and Tilt: Electric or Hydraulic
- Beacons: MetOcean Novatech RF & Strobe*
- Wireless Bellypack

SOFTWARE AND COMPUTERS

- ISE Automated Control Engine (ACE) modular, upgradable, field proven, multiplatform software

SPARE CHANNELS, UPGRADES AND ADD-ONS

- Power: 24 VDC @150 Wm, 120 VAC @ 2.3 kVa, 240 VAC @ 1.2 kVa
- Lights: 2 x 250 W Ports @ Light Junction Can
- 5 x RS232, 3 x RS485/422, 2 x Ethernet, 2 x Spare Fibres
- Video: 2 x SD Channels
- Navigation: INS, DVL, USBL & LBL Beacons
- Payloads and Sensors: Can accept CTD, Sonars (MBES, SSS, SBP, SAS), Environmental Sensors, and Scientific Payloads

*Others available upon request
** Not including skid
*** Based on selected options and skid

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