

DAEYANG R&D CENTER

# Underwater Vehicles

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# MDV

## Mine Disposal Vehicle

### 1. Objective

MDV is an equipment for searching, identification and disposal of the mines.



### 2. Contents

Development of Design and Integration Technology for MDV

Development of Technology for Automatic Control

Design and Application of Hybrid Navigation Algorithm

Development of Technology for precise control of Communication System

### 3. Specification

MDV	
Dimension(L×M)	3.650(m)×0.55(m)
Weight	About 437kg
Material	AL6061, FRP
Sea State	Wave height : below 2.5m
Max. operating depth	400m
Max. speed	7knots
Max. operating time	7 knots : over 1.5 hours 3.5 knots : over 4 hours
Thrusters	For./Rev.(2), Ver.(2), Lat.(2)
Telemetry	Fiber Optic / Coaxial / RF
Telemetry Cable	Fiber Optic : over 2,000m Coaxial : over 500m
Power	Lithium Polymer Battery
Sensors	USBL, GPS, DVL, Multi-beam Sonar, Forward-looking Sonar, Altitude Sonar, Camera, Light, Pressure sensor, Compass,...
Payload	N/A
Tether length	N/A



# Sea Rover A 100

## Autonomous Underwater Vehicle

### 1. Objective

AUV is an equipment for surveillance and monitoring of environmental ecology in a coastal areas.

### 2. Contents



Development of Technology for Automatic Control

Design and Application of Hybrid Navigation Algorithm

Development of Technology for precise control of Communication System

# Sea Rover R 100

## Autonomous Underwater Vehicle

### 1. Objective

Sea Rover R 100 is an equipment for surveillance and monitoring of environmental ecology in costal areas.

### 2. Contents

Underwater camera, Sonar, Environmental Sensor

Automatic dynamic control

Underwater hybrid navigation algorithm

Communication system via tether cable



### 3. Specification

	Sea Rover A 100	Sea Rover R 100
Dimension(L×W×H)	2.70(m)×0.75(m)×0.60(m)	0.74(m) x 0.54(m) x 0.36(m)
Weight	120Kg	40Kg
Material	AL6061, ABS	AL6061, ABS
Sea State	Wave height : below 0.5m	Wave height : below 0.5m
Max. operating depth	100m	100m
Max. speed	4knots	2 knots
Max. operating time	10 hours (Dependent on speed and extra configuration)	Dependent on power resource of surface platform
Thrusters	Horizontal 1EA	Horizontal 2EA , Vertical 1EA
Telemetry	Wireless LAN : IEEE 802.11n/b/g Acoustic modem : For tracking and status updates	Fiber Optic
Telemetry Cable	N/A	Tether cable 300m
Power	768W (2EA), Lithium Polymer Battery	DC 48V, 1 KW
Sensors	USBL, GPS, DVL, Multi-beamSonar, Altitude Sonar, Pressure sensor, IMU, AHRS, Enviromental sensors	Low-light Camera, Color Camera, USBL, GPS, Sonar, Altimeter, Depth sensor, AHRS, Environmental sensors
Payload	2kg	1kg
Tether length	N/A	300m(optional)

# H-ROV

Hybrid – Remotely Operated Vehicle

## 1. Objective

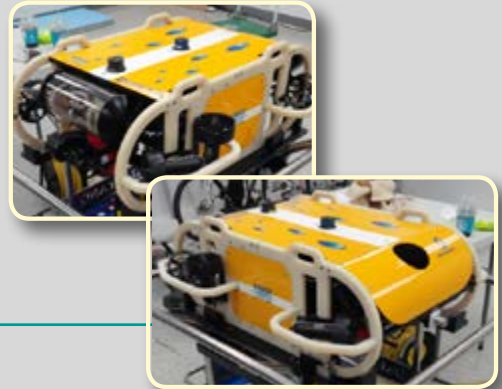
H-ROV is a two-man-portable hovering ROV designed for ship hull inspection. H-ROV uses thrusters to hover, rotate in place and translate in any direction, enabling operations in confined areas.

## 2. Contents

Development of Technology for Automatic Control, KAIST

Improve navigation performance using sensor fusion for H-ROV, KAIST

Development of Technology for precise control of Communication System



## 3. Specification

**●●● Main functions**

- 6-DOF Motion Control
- Heading Keeping Control (Heading, Depth, Altitude)
- Precise Control through Fiber Optic Telemetry
- Localization with USBL System

**●●● Applications**

- Ship Hull & Infrastructure Inspection
- Port & Harbor Security
- Mine Countermeasures (MCM)
- Scientific Research

	Sea Rover H 100
Dimension(L×W×H)	0.97 X 0.83 X 0.37(m)
Weight	About 70kg
Material	AL(Pressure Vessels), ABS(Fairings), MC nylon(Main frames)
Sea State	Wave height : below 0.5m
Max. operating depth	100m
Max. speed	2knots
Max. operating time	4 hours (Dependent on speed and extra configuration)
Thrusters	Forward, Lateral (4) Vertical (3)
Telemetry	Optical communication
Telemetry Cable	Fiber Optic Cable (Single Mode) ; Neutral buoyancy in seawater
Power	29.4V(7-Cell, 15Ah), 388W Lithium Polymer Battery (3EA)
Sensors	USBL, DVL, Scanning Sonar, Altimeter, IMU, Camera, Light, Pressure sensor, Leakage sensor
Payload	About 1kg
Tether length	50m, 100m(Optional)



### 1. Objective

UUV is used for exploration of deep sea to help the ecological environment research and the discovery of new natural materials

### 2. Contents



### 3. Specification

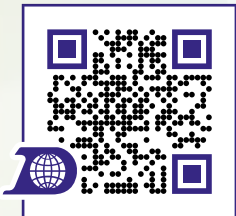
**ROV**

- Underwater Station to support ROV & AUV
- Heading Keeping Control
- Deep Towed Camera Function
- Localization with USBL System

**Launcher**

- 4-DOF Motion Control
- Precise Underwater Manipulation & Sampling
- Remote Control through Fiber Optic Telemetry
- Inertia & Acoustic Hybrid Navigation System

	ROV	Launcher
Dimension(L×W×H)	3.3(m)×1.8(m)×2.2(m)	2.70(m)×0.75(m)×0.60(m)
Weight	3,660kg about	1,100Kg about
Material	Al6061 etc..	Galvanized steel
Sea State	N/A	N/A
Max. operating depth	6,000m	6,000m
Max. speed	For./Lat./Vert. 1.5/1.0/1.5 knots	N/A
Max. operating time	N/A	N/A
Thrusters	5HP X 6	1HP X 2
Telemetry	Fiber Optic	Fiber Optic
Telemetry Cable	Fiber Optic : over 8,500m	Fiber Optic : over 8,500m
Power	Main input : AC 2800V	Main input : AC 2800V
Sensors	2-7f Manipulators, USBL transponder, 8 cameras, CTD, DVL, FLS, Multibeam Sonar	2 cameras / 2 lights Altimeter, USBL transponder, Side scan sonar, Forward Looking sonar
Payload	200kg	N/A
Tether length	30/50/70m	N/A



#### DAEYANG QR Code

You can see more detailed information about our products take a QR.

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