

CHASING

CHASING Underwater ROV
Industry Solutions for
Aquaculture

Fast | Safety | Efficient

Operation Difficulties in the Aquaculture Industry



Labor costs are high and the safety risks are uncontrollable.



A limited diving depth can be reached by commercial diving teams. It is about 50 meters.



Commercial diving hull inspection services are subject to weather conditions. Reservations are required in advance. The waiting and preparation time is long.

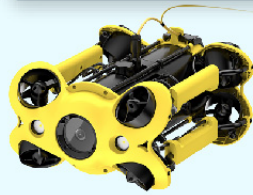


The cage monitoring system is fixed at a viewing angle and cannot detect blind spots of the cages.

CHASING Recommended Solutions

Plan A

CHASING M2



Grabber Arm 2



BATTERY / AC POWER SUPPLY



EREEL

- The grabber claw allows you to collect foreign objects and dead fish and inspect cages.
- The external AC power supply system enables long-term underwater operations.
- The adapter box can be used with the AC power supply system.
- The e-reel can retract the tether at a short time, which reduces the overall operation time.

Plan B

CHASING M2 PRO



DISTANCE LOCK SONAR



Control Console



AC POWER SUPPLY

- The ranging sonar enables automatic cage inspection.
- The high-brightness screen control console adopts the ergonomic design, which enhances the operation and visual experience. The ROV can be operated by multiple people. The anti-glare screen allows you to observe real-time underwater images under direct sunlight.
- The external AC power supply system enables long-term underwater operations.

Accessories

Features

Reasons for recommendation



CHASING AC POWER SUPPLY
(100 M Tether/200 M Tether/B)

Prolonged power supply to ensure long battery life. A high-brightness screen control console or adapter box is required to be used together.

It support 8 hours of operations per day.



CHASING Grabber Arm 2

You can equip the ROV with various grabber claws to meet various underwater operation requirements. For example, equip the ROV with a two-claw grabber, pull ring, rake, fishing net, or water quality sampler.

The rake and fishing net can be used to clear dead fish. The two-claw grabber can be used to collect objects in the cages. The water quality sampler collects seawater to detect the water quality based on five general parameters.



CHASING DISTANCE LOCK SONAR

It can detect obstacles in four directions simultaneously: down, front, left, and right, and automatic netting inspection.


The ROV can maintain a fixed inspection range for cages. It can automatically avoid obstacles and inspect cages. This improves daily operation efficiency. In addition, assisted diving and remote control operations are more convenient.



CHASING Control Console

The ROV can be equipped with an AC power supply system to transform the input voltage. Rollers are provided on the bottom. It is portable.

The integrated console allows you to operate multiple accessories at a time. The ergonomic design enhances the operation and visual experience. You can normally operate the ROV in backlight conditions. The better field demonstration meets the professional requirements for deep-sea operations.

Highlights of the ROV Platform		CHASING M2	CHASING M2 PRO
<ul style="list-style-type: none"> • Eight thrusters resist against currents in all directions and transit at a maximum speed of 1.5 m/s. • Replaceable batteries support 1 to 4 hours of continuous operations. • The camera supports 4K 12MP photos and anti-shake electronic image stabilization (EIS). It is equipped with a 4000 lumen LED to provide fill-in light, allowing you to clearly photograph every detail of cages. • The HDMI adapter allows you to project underwater images to the command center to assist repairers in the repair of underwater cages. Underwater images are transmitted in real time, making it convenient to export work reports. 			
Platform Parameter Differences	Depth	100m	150m
	Current Resistance	3Knots	4Knots
	Battery Life	1-2 hours of battery life 97 Wh standard battery and 200 Wh optional battery	1-2 hours of battery life 300 Wh standard battery and 700 Wh optional battery
	Platform Support for Accessories	Single accessory	Multi accessory
Supported Accessories	CHASING EREEL	✓	✓
	CHASING Tether 300 M/400 M	✓	✓
	CHASING 200WH BATTERY	✓	✗
	CHASING 700WH BATTERY	✗	✓
	CHASING FLOODLIGHT	✓	✓
	CHASING Grabber Arm 2	✓	✓
	CHASING DISTANCE LOCK SONAR	✓	✓
	CHASING Auxiliary Camera	✗	✓
	CHASING Adapter Box	✓	✓
	CHASING Control Console	✗	✓
	CHASING AC POWER SUPPLY (100 M Tether/200 M Tether/B)	✓ A 200 Wh battery pack is required.	✓
	CHASING BLUEPRINT OCULUS KIT	✗	✓
	CHASING USBL KIT	✗	✓
	CHASING Docking Station	✗	✓

01 | A Japanese fishery used the CHASING M2 PRO to conduct field experiments on aquaculture to explore an efficient cage inspection solution.

CHASING's Japanese distributor SpaceOne and the aquaculturist Dynichi who is based in Uwajima, Ehime jointly carried out a field experiment on aquaculture by using underwater drones at tuna and madai farms from June 22 to 23, 2021.

Business Challenges:

1. There are dangers in diving operations such as occasional sharks are spotted to circle the farm.
2. Diving every day to check the nets and collect dead fish can be very tiring. With frogmen, they don't go down deep enough and the frequency of inspection is low in comparison.
3. A red tide spreading underneath fishing nets can cause huge casualties with the fish in the farm, which can be difficult to observe from above the water.



Client Value

1. Replace divers with the underwater ROV. This reduces labor costs and improves safety assurance. The underwater ROV has a larger operation radius, allowing the fisheries to expand their inspection range. They are easy to use, making it convenient to adjust the inspection frequency.
2. Equip the ROV with a grabber claw. When the ROV finds dead fish in the water, the grabber claw can collect the dead fish to prevent pollution and cage corrosion.
3. Use the built-in 4K 12MP anti-shake electronic image stabilization (EIS) camera and 4000 lumen LED to photograph fishing nets and fish. The camera can clearly photograph tunas in cages at a depth of about 10 meters, 15 meters, and 30 meters.

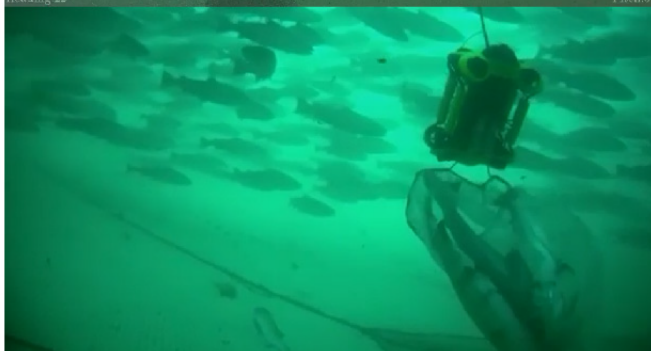
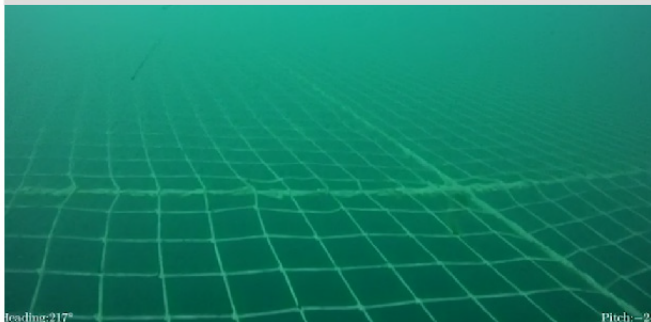


02 | A Chilean fishery used the CHASING M2 to regularly inspect cages and clear dead fish to ensure high salmon production.

Chile provides favorable conditions for salmon aquaculture due to its geographical advantages. However, the outbreaks of the Salmonid Rickettsial Septicaemia (SRS) bacteria and the damage caused by aquatic organisms to cages force the fisheries to clear dead fish and inspect cages in real time every day by using ROVs.

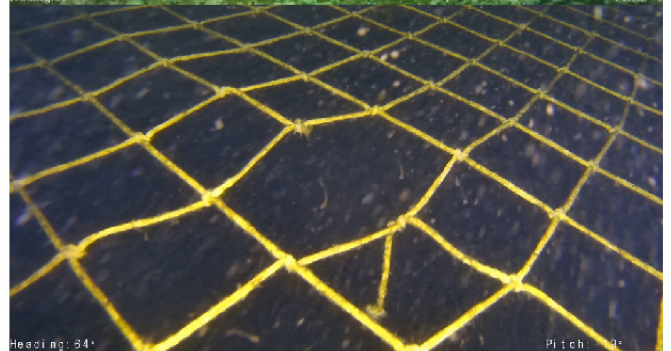
Business Challenges:

1. Fisheries needed to collect a large number of dead fish every day. Commercial diving teams are expensive and cannot meet the demands for routine cleaning.
2. Cages are large in diameter and submerged in a deep operating depth. Commercial diving teams can inspect only a limited range of the cages and cannot observe the blind spots in the cages.



Client Value

1. Use the CHASING M2 to clear and inspect cages. You can equip the ROV with an AC power supply system to support 8 hours of operations per day. In most cases, the power supply is sufficient for you to clear all the dead fish generated in a day.
2. Pinpoint broken parts caused by sea lions during cage detection. The fishery personnel can immediately contact fishing divers to repair the broken parts to reduce economic losses and ensure salmon production.
3. Use the ROV to cooperate with divers during cage repair. You can view the repair progress on the control center in real time. The divers can transfer information to the control center over the camera on the ROV.



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