# Products catalog
2022


MARISCOPE

Since the early 90’s,
Mariscope designs, develops and manufactures different types and models of ROV’s, Towed systems, Cameras & Lights and other oceanographic equipments.

**The permanent search for quality and excellence in our products led to systems with lifetime warranty, something unique on the worldwide market.**

## Lifetime warranty

Mariscope's ROVs and other systems manufactured by the company have limited lifetime warranty without a restriction in the hours of use.


## Top Materials

Stainless steel frames, care for component quality and testing in the most extreme working conditions result in the well known reliability of our products.

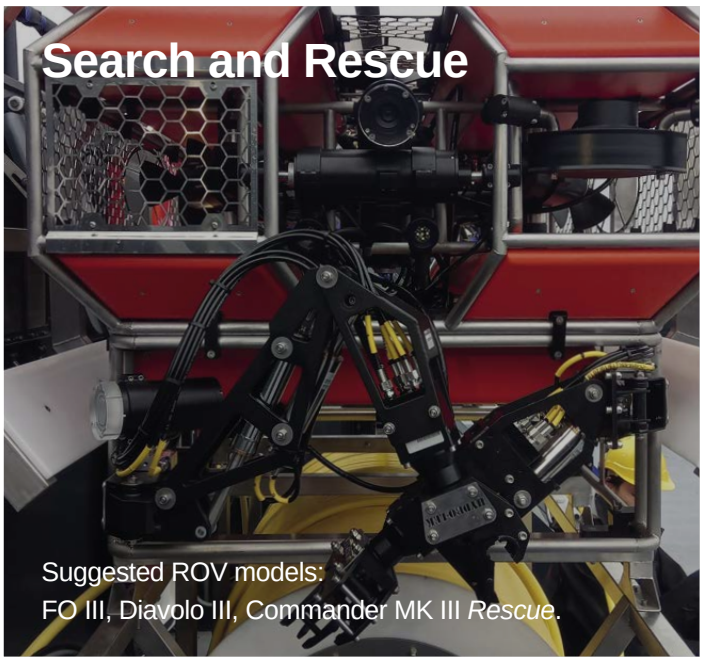
## German quality

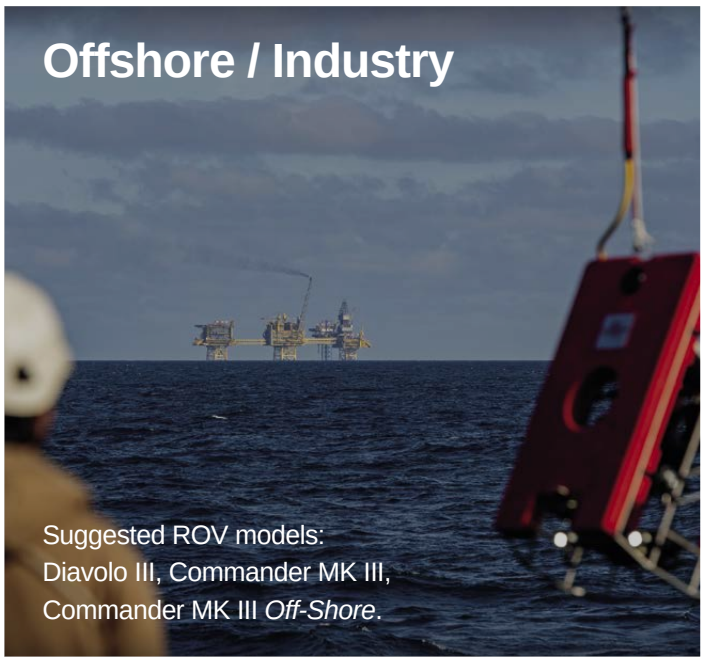
Our products are designed, developed and manufactured in Germany under high quality standards.

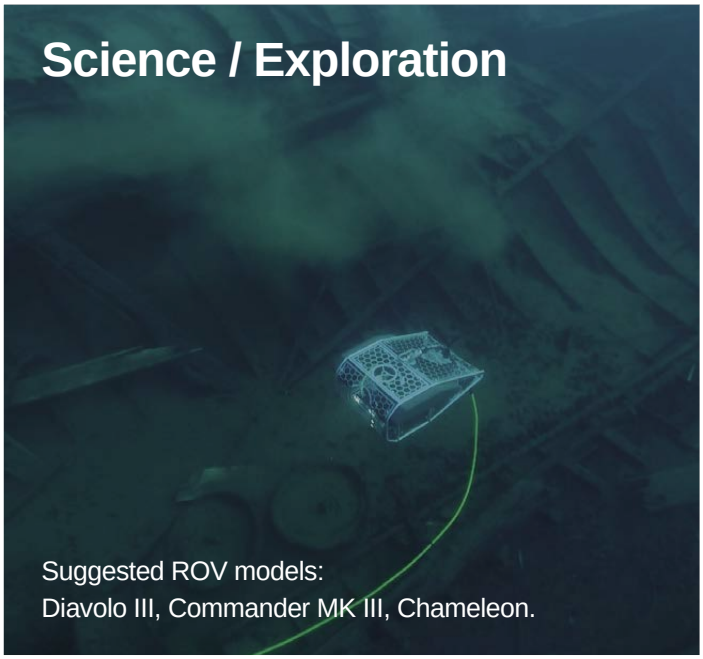
DESIGNED
ENGINEERED &
MADE IN GERMANY

In the search for perfection and customer satisfaction, the company customizes each underwater vehicle to the user´s need. This is also true for the smaller vehicles manufactured by Mariscope. The product range goes from small towed systems over compact ROVs up to multifunction work-class units. Nevertheless, the common basic concept is a design and construction based on modular components that are easily modified and adapted to guarantee maximum flexibility during operations.

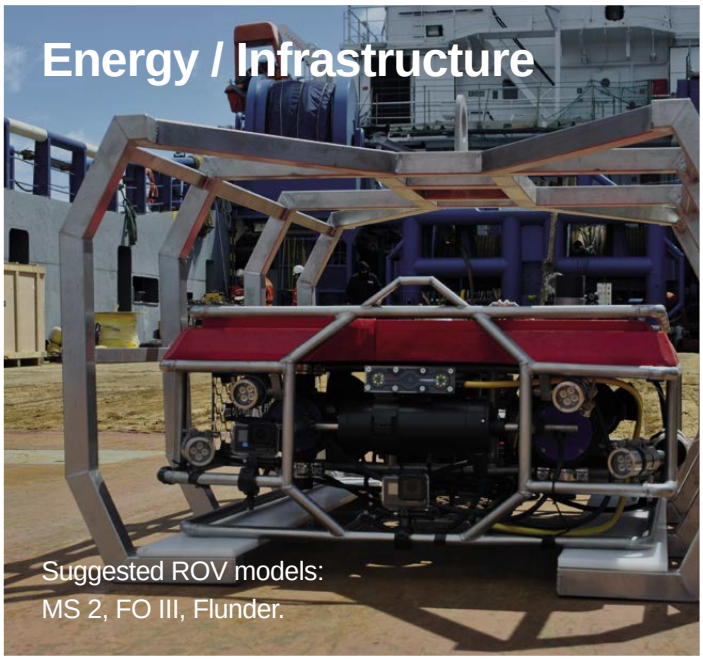
**Taking care of the worldwide market and with extensive experience in the South American Continent, Mariscope Meerestechnik nowadays has also brands in Chile, Argentina and Spain.**


Search and Rescue
Suggested ROV models:
FO III, Diavolo III, Commander MK III *Rescue*.


Offshore / Industry
Suggested ROV models:
Diavolo III, Commander MK III,
Commander MK III *Off-Shore*.


Science / Exploration
Suggested ROV models:
Diavolo III, Commander MK III, Chameleon.


Aquaculture
Suggested ROV models:
Peewee, MS 2, Flunder.

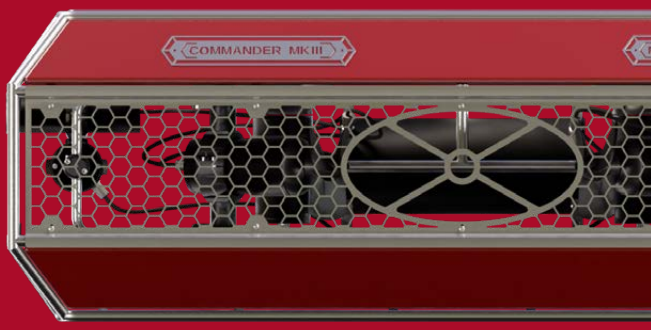

Energy / Infrastructure
Suggested ROV models:
MS 2, FO III, Flunder.


Defence / Military
Suggested ROV models:
Pewee, MS 2, FO III, Diavolo III, Flunder,
Commander MK III, Commander MK III *Off-Shore*,
Commander MK III *Rescue*, Chameleon.

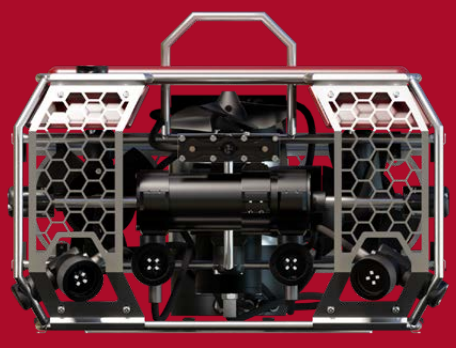
We have wide experience and capacity to carry out **special developments and those with specific requirements.**

This flexibility allows Mariscope to give **turnkey solutions to extraordinary problems.**

Our ROV´s are easily equipped with a **variety of instruments specially designed or available on the market**, in order to cope with the individual demand of each client, redesigning, engineering and manufacturing every unit to the specific requirements.

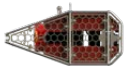



# ROV

# Compare models

The following table shows our full range of standard ROVs and may help you to find the most suitable model for your specific application. Special models and individual systems are based on these standard models.

| | Operation depth (meters) | Speed (knots) | POWER 230V AC minimum (kilowatts) | Weight (kilograms) |
|---|---|---|---|---|
| **Peewee 100**  | 100 m | 2,5 kn | 1,0 kW | 17 kg |
| **MS 2**  | 300 m | 3,0 kn | 2,0 kW | 23 kg |
| **FO III**  | 500 m | 3,0 kn | 3,0 kW | 35 - 70 kg |
| **Diavolo III**  | 500 m | 3,0 kn | 3,0 kW | 45 - 90 kg |
| **Flunder**  | 500 m | > 7,0 kn | 4,0 kW | 60 - 120 kg |
| **Commander MK III**  | 500 / 1.000 m | 3,0 - 5,0 kn | 6,0 kW | 80 - 150 kg |
| **Commander MK III *Off-Shore***  | 500 / 1.000 m | > 5,0 kn | > 8,0 kW | 100 - 250 kg |
| **Commander MK III *Rescue***  | 500 / 1.000 m | > 5,0 kn | > 8,0 kW | 100 - 350 kg |
| **Chameleon**  | 600 m | > 5,0 kn | > 15,0 kW | 100 - 350 kg |

**100 meters** Maximum operation depth

# Peewee 100

**Practical, robust and easy to use.**

The Peewee has a resistant and robust AISI 316L stainless steel structural chassis, hand-welded (TIG) and crystal blasted, which gives it the resistance and robustness that characterize the brand's ROVs.

The protection cage of this ROV is such that it can **be used in areas with nets like marine harvesting sites and fish pens. This ROV is equipped with three BLDC type thrusters of 150 W power each**, that use magnetic couplings instead of drive shafts. These state of the art motors, designed by Mariscope, do not use polluting coolants and are protected by an electronic circuit in case of overload. Initially designed for marine harvesting fish farm operations, **this ROV can be equipped with special tools for this kind of use.**

MADE IN GERMANY · ROV LIFE TIME · WARRANTY ·

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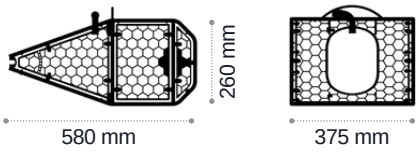
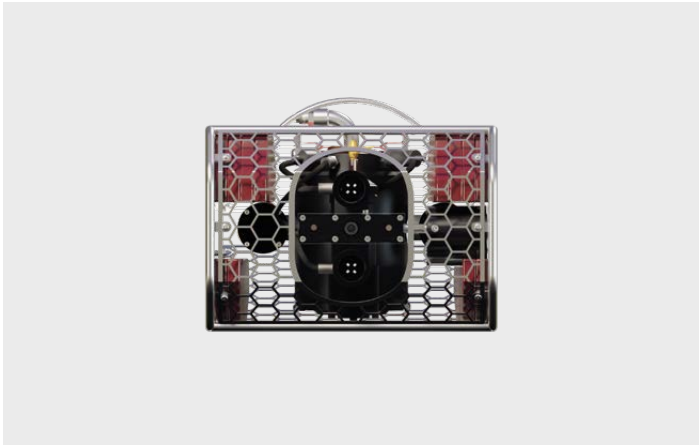
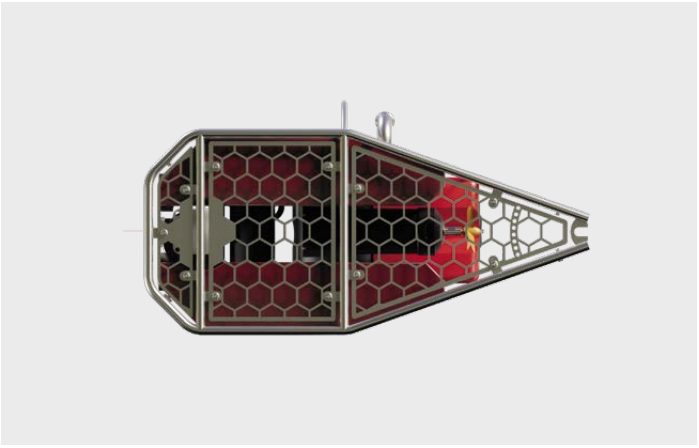
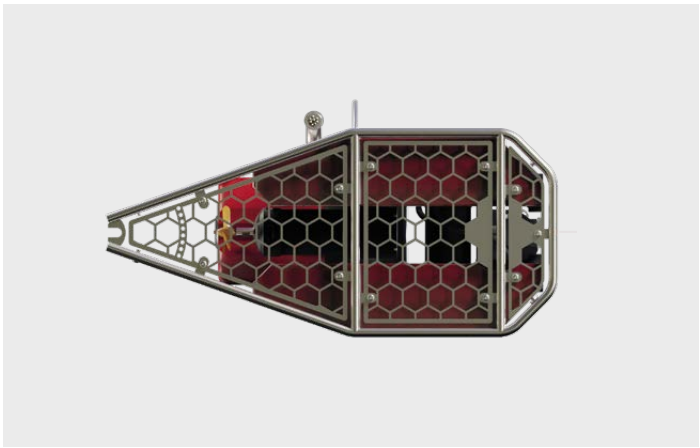


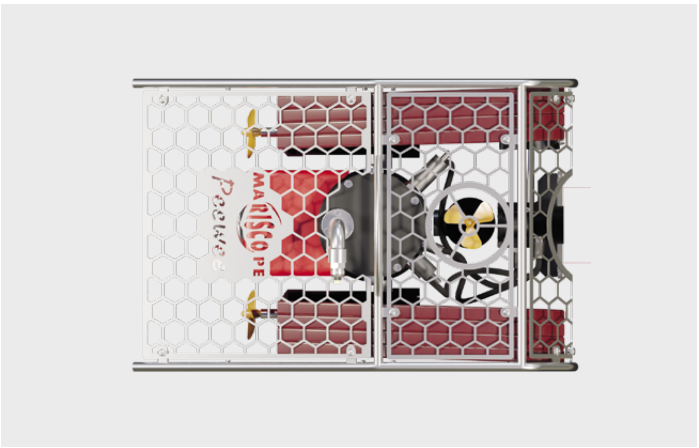

# Peewee 100

| | |
|---|---|
| **Weight** | 17 kg |
| **Propulsion** | 2 horizontals / 1 vertical – 150 W |
| **Electrical power required** | 1,0 kW (230 v AC) |
| **Speed** | 2,5 Knots |
| **Camera** | Full HD (1920 x 1080) camera in external tilt system (160° swivel angle) with built-in laser pointers, installed in salt water resistant aluminum housing with anodized surface. |
| **Lighting** | High power LED spotlights >2900 lumens each. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· Special cameras.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· Customized one function manipulators specially adapted to customer requirements.<br>· Different types of USBL tracking systems are available upon request.<br>· Special tools for moribund fish recovery in fish farms available. |









**300 meters** Maximum operation depth

# MS 2

**Compact, powerful and lightweight.**

With a new hydrodynamic shape, the new MS 2 keeps focus in the modularity of the equipment, ease of maintenance, robustness and reliability. The highly impact resistant stainless steel tubular frame protects its components.
This ROV is propelled by state of the art, efficient and compact BLDC thrusters that use magnetic couplings instead of drive shafts.

The complete stainless steel protection sheets allow this ROV to be used in areas with high entanglement probability. The ROV is built in such way that there are no external components attached outside the cage and entaglement is highly improbable.

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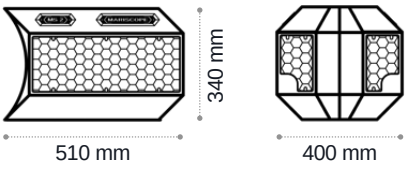
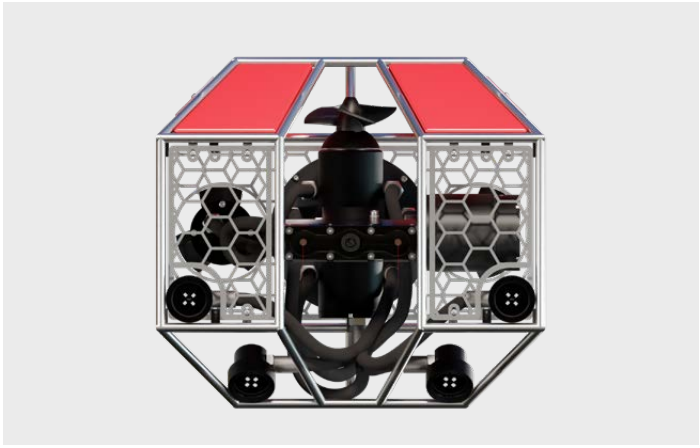



# MS 2

| | |
|---|---|
| **Weight** | 23 kg (depending on the equipment) |
| **Propulsion** | 2 horizontal thrusters / 2 vertical thrusters – 250 W each |
| **Electrical power required** | 2,0 kW (230 v AC) |
| **Speed** | 3 Knots |
| **Camera** | Full HD (1920 x 1080). Camera with integrated laser pointers in salt water resistant aluminum housing with anodized surface. Installed on external tilt system (160° swivel angle). |
| **Lighting** | 4 fixed LED spotlights installed to optimize the front illumination over the full range of view of the camera. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· The ROV can be equipped with several sensors available on the market. Taking into account the compact size of the vehicle, several CTD, UTM, CP and other sensors can be incorporated.<br>· Special cameras.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· EOD lighting on request.<br>· Customized one function manipulators specially adapted to customer requirements.<br>· Different types of USBL tracking systems are available upon request. |

This unit can also be used is fish farming environments and can be equipped with special tools for the recovery of moribung fishes or other activities.





**500 meters** Maximum operation depth

# FO III

**Balanced size and payload capacity in a versatile multi-purpose platform.**

This ROV is designed and manufactured maintaining a balanced ratio between its practical size and its payload capacity. This allows it to carry various accessories on board such as laser pointers and different sensors, sonars, tracking systems, and even manipulators. The complete modular design, oustanding in this ROV category, enables this modularity also in the accessories that can be installed on board. Its resistant and robust structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted, is the basis of the modular design that greatly expand the range of applications, making it a flexible and customizable equipment. This ROV is the perfect base for multipurpose operations. Modifications and the installation of accessories is also possible in a second phase after the initial acquisition.

Its stable, hydrodynamic design and three powerful 400 Watt BLDC thrusters with magnetic couplings instead of drive shafts, give the ROV a great maneuverability underwater and the power to carry the necessary accessories on board.

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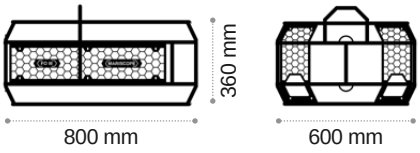
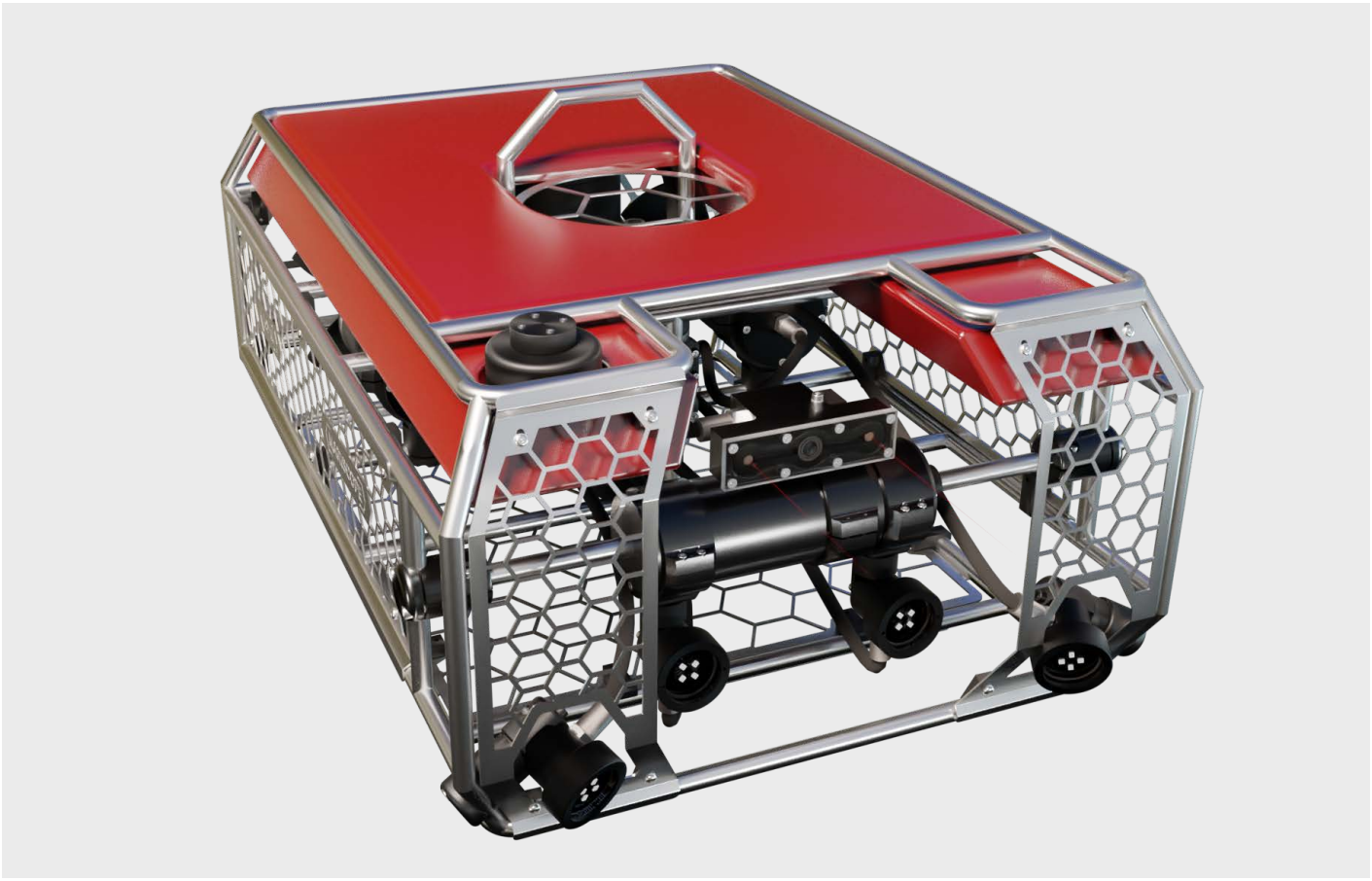
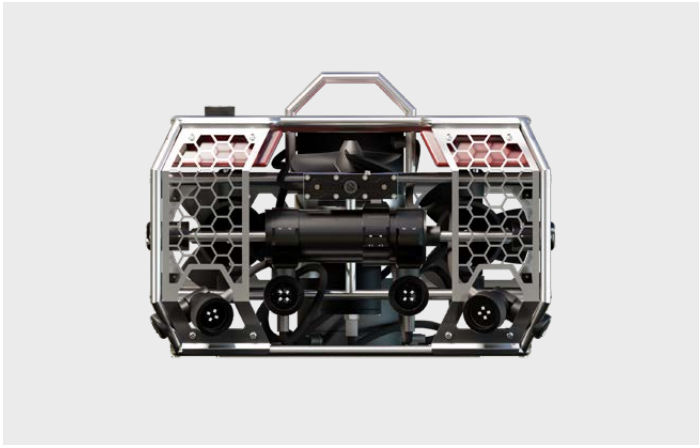
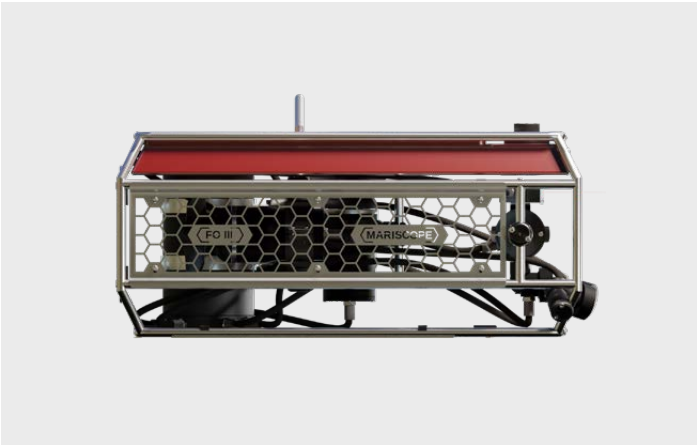


# FO III

| | |
|---|---|
| **Weight** | 35 - 70 kg (depending on the equipment) |
| **Propulsion** | 2 horizontal thrusters / 1 vertical thruster – 400 W each |
| **Electrical power required** | 3,0 kW (230 v AC) |
| **Speed** | 3 Knots |
| **Camera** | Full HD (1920 x 1080) camera with integrated laser pointers in salt water resistant aluminum housing with anodized surface. Installed on external tilt system (160° swivel angle). |
| **Lighting** | 4 total LED spotlights.<br>· 2 LED spotlights attached to the same camera tilt system that rotate simultaneously with it.<br>· 2 fixed LED spotlights installed to optimize front illumination. This configuration can be easily customized by the user, as the LED spotlights are attached to the chassis by specially designed brackets to fit to the ROV frame. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· Special sensors for measuring CO2, H2S, CTDO, oil in water, UTM/CP probes, and others on request.<br>· Special cameras and EOD lighting on request.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· Different types of USBL tracking systems are available upon request.<br>· Customized manipulators specially adapted to customer requirements. |







**500 meters** Maximum operation depth

# Diavolo III

## More than an inspection class ROV.

The Diavolo III is designed to withstand the demands of the toughest environments and extreme conditions, extending the applications of compact equipment to new levels on jobs down to a depth of 500 meters. Its strong and robust hand welded (TIG) and crystal blasted AISI 316L stainless steel structural chassis, is the basis of the modular design that allows to integrate several accessories that greatly expand the range of applications, making it a flexible and customizable equipment. This ROV is the perfect base for multipurpose operations. Its stable, hydrodynamic design and its four powerful 400 Watt BLDC thrusters with magnetic couplings instead of drive shafts, give the ROV a great maneuverability underwater and the power to carry the necessary accessories on board. The 4th thruster allows the ROV a lateral movement which is necessary in many jobs, specially when using manipulators or other tools, where a precise navigation is necessary.

**Powerfull, robust and with a payload of up to 60 kg this unit is the best choice for those users who need to go deep and carry out light work or special measurements and are operating from very small crafts.**

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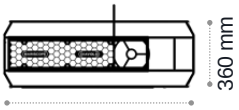
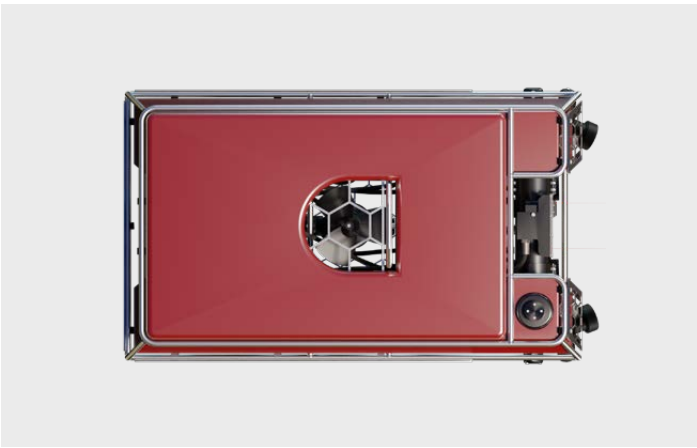



# Diavolo III

| | |
|---|---|
| **Weight** | 45 - 90 kg (depending on the equipment) |
| **Propulsion** | 2 horizontal longitudinal thrusters / 1 horizontal transversal thruster / 1 vertical thruster – 400 W each |
| **Electrical power required** | 3,0 kW (230 v AC) |
| **Speed** | 3 Knots |
| **Camera** | Full HD (1920 x 1080) camera with integrated laser pointers in salt water resistant aluminum housing with anodized surface. Installed on external tilt system (160° swivel angle). |
| **Lighting** | 4 total LED spotlights.<br>· 2 LED spotlights attached to the same camera tilt system that rotate simultaneously with it.<br>· 2 fixed LED spotlights installed to optimize front illumination.<br>This configuration can be easily customized by the user, as the LED spotlights are attached to the chassis by specially designed brackets to fit to the ROV frame. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· Special sensors for measuring CO2, H2S, CTDO, oil in water, UTM/CP probes, and others on request.<br>· Special cameras and EOD lighting on request.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· Different types of USBL tracking systems are available upon request.<br>· Customized manipulators specially adapted to customer requirements.<br>· Cavitation cleaning units. |



**500 meters** Maximum operation depth

# Flunder

**Power, speed and maneuverability for the most adverse situations.**

Based on the well-known and proven Commander MK III, this Observation/Light Work Class ROV has been designed keeping the field operativity in mind. In this model, Mariscope prioritizes function *(Form follows function)* by focusing on a structure that allows the buoyancy to be varied at any time and the payload of the equipment to be adjusted.
ROV speed and maneuverability, along with pilot training and skill, are in many operations the limiting factors in logistics efficiency after improving travel efficiency through the use of fast boats and reduced dead times.
The characteristics of this ROV reduce its hydrodynamic resistance and improve its maneuverability in all kind of situations. Thus, it achieves excellent performance in all conditions reducing travel and inspection underwater times.

**Flat, fast, deep going, compact and light. 6 thrusters and completely modular and interchangeable. Unbeaten in its category.**

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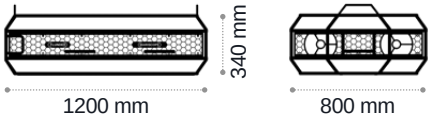
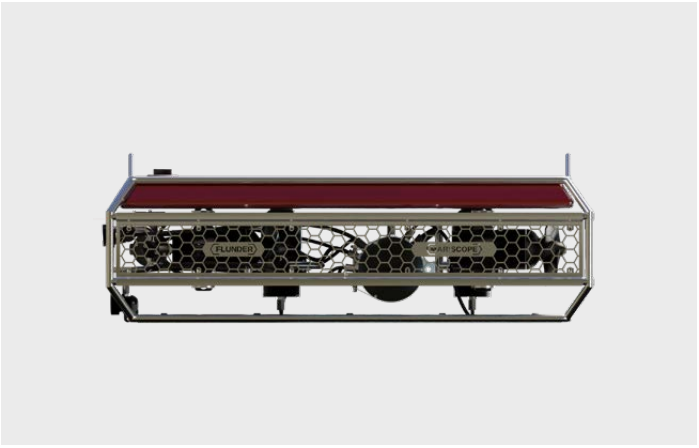
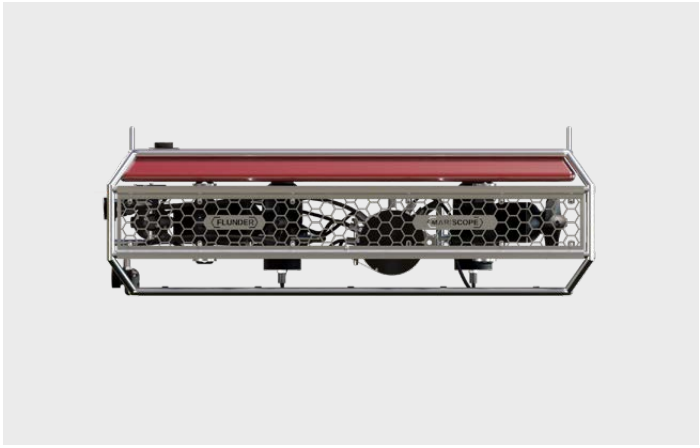



# Flunder

| | |
|---|---|
| **Weight** | 60 - 120 kg (depending on the equipment) |
| **Propulsion** | 4 horizontal vectorized thrusters / 2 vertical thrusters – 400 W each in standard version (power can be increased on request up to 900 W).<br>Brushless electric motors with magnetic coupling. Motors in saltwater resistant aluminum housing with anodized surface and zinc sacrificial anode. |
| **Electrical power required** | 4,0 kW (230 v AC) |
| **Speed** | > 7,0 Knots |
| **Camera** | Full HD (1920 x 1080) camera with integrated laser pointers in salt water resistant aluminum housing with anodized surface. Installed on external tilt system (160° swivel angle). |
| **Lighting** | 4 total LED spotlights.<br>· 2 LED spotlights attached to the same camera tilt system that rotate simultaneously with it.<br>· 2 fixed LED spotlights installed to optimize front illumination.<br>This configuration can be easily customized by the user, as the LED spotlights are attached to the chassis by specially designed brackets to fit to the ROV frame. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· Special sensors for measuring CO2, H2S, CTDO, oil in water, UTM/CP probes, and others on request.<br>· Special cameras and EOD lighting on request.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· Different types of USBL tracking systems are available upon request.<br>· Customized manipulators specially adapted to customer requirements.<br>· Cavitation cleaning units. |





**500 / 1.000 meters** Maximum operation depth

(The ROV is structurally rated for 1.000 mts. Depending on the type of buoyancy used, the working depth will correspond to it´s maximum depth).

# Commander MK III / MK III *SF*

**The top of the range of the Mariscope line. Power and working capacity combined in a robust and compact vehicle.**

After more than 2 years of work and development, the Commander MK III emerged as an ROV equipped with the latest electronics and software, and a symmetrical and hydrodynamic stainless steel structure. This unit has a depth rating of up to 1.000 m. The symetrical design, with Full HD cameras in the bow and the stern of the vehicle as well as full illumination on both sides and a 180° tilting mechanism for cameras and light allow operations in highly dangerous environments, where entanglements are an issue. Like all Mariscope ROVs, the MK III has a strong and robust AISI 316L stainless steel structural chassis, hand welded (TIG) and crystal blasted. This ROV is powered by six powerful 400 Watt BLDC thrusters with magnetic couplings instead of drive shafts, that give the ROV a great maneuverability underwater and the power to carry the necessary accessories on board. The vectorized distribution of its four horizontal thrusters allows excellent maneuverability in all directions, while its two vertical thrusters give it a higher ascent and descent speed. These state-of-the-art motors, designed by Mariscope, do not use polluting coolants and are protected by an electronic circuit in case of overload.

**On request also available as Commander MK III SF (Super Fast).**

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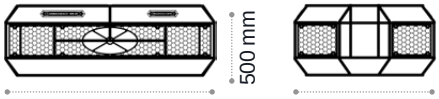
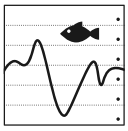



# Commander MK III / MK III *SF*

| | |
|---|---|
| **Weight** | 80 - 150 kg (depending on the equipment) |
| **Propulsion** | 4 horizontal thrusters in vectorized arrangement / 2 vertical thrusters – 600 W each in standard version. **(Power can be increased on request up to 900 W).** |
| **Electrical power required** | 6,0 kW (230 v AC) |
| **Speed** | 3,0 - 5,0 Knots |
| **Camera** | Standard Full HD (1920 x 1080) cameras with integrated laser pointers in salt water resistant aluminum housing with anodized surface installed on external tilt system (160° swivel angle). Additional zoom camera options. |
| **Lighting** | 4 total LED spotlights each side.<br>· 2 LED spotlights attached to the same camera tilt system that rotate simultaneously with it.<br>· 2 fixed LED spotlights installed to optimize illumination.<br>This configuration can be easily customized by the user, as the LED spotlights are attached to the chassis by specially designed brackets to fit to the ROV frame. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· Special sensors for measuring CO2, H2S, CTDO, oil in water, UTM/CP probes, and others on request.<br>· Special cameras and EOD lighting on request, special recording systems.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· Different types of USBL tracking systems are available upon request.<br>· Multifunction electric or hydraulic manipulators on request adapted to customer's requirements.<br>· Cavitation cleaning units, sediment samplers and other work accessories. |



**500 / 1.000 meters** Maximum operation depth

(The ROV is structurally rated for 1.000 mts. Depending on the type of buoyancy used, the working depth will correspond to it´s maximum depth).

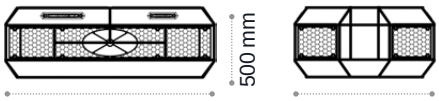
# Commander MK III *Off-Shore*

**A complete multitask platform originally designed for offshore operations, which can be adapted for other activities.**

With six vectorized thrusters, this ROV can reach up to 5 knots speed maintaining high maneuverability.
Completely symmetrical design with same Full HD cameras, high output LED's and tilting frames on both sides.
Equipped with UTM & CP probes on one side, and a MNH (Multi Nozzle Head) cleaning cavitation unit on the other.
All of them controlled from the surface.

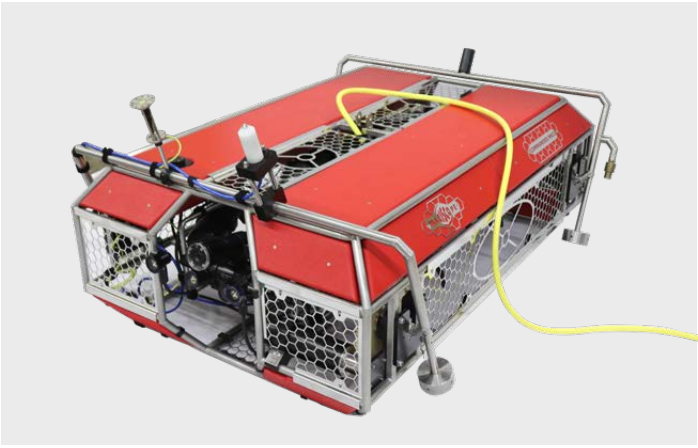
This system was specially designed to clean and measure ship hulls, FPSO, mooring chains and other structures in the offshore industry.

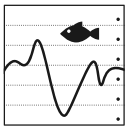

**DESIGNED ENGINEERED & MADE IN GERMANY**




# Commander MK III *Off-Shore*

| | |
|---|---|
| **Weight** | 100 - 250 kg (depending on the equipment) |
| **Propulsion** | 4 horizontal thrusters in vectorized arrangement / 2 vertical thrusters.<br>600 W each in standard version (power can be increased on request up to 900 W). |
| **Electrical power required** | 8,0 kW (230 v AC) |
| **Speed** | > 5 Knots |
| **Camera** | Standard Full HD (1920 x 1080) cameras with integrated laser pointers in salt water resistant aluminum housing with anodized surface installed on external tilt system (160° swivel angle).<br>Additional zoom camera options. |
| **Lighting** | 4 total LED spotlights each side.<br>· 2 LED spotlights attached to the same camera tilt system that rotate simultaneously with it.<br>· 2 fixed LED spotlights installed to optimize illumination.<br>This configuration can be easily customized by the user, as the LED spotlights are attached to the chassis by specially designed brackets to fit to the ROV frame. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· Special sensors for measuring CO2, H2S, CTDO, oil in water, UTM/CP probes, and others on request.<br>· Special cameras and EOD lighting on request, special recording systems.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· Different types of USBL tracking systems are available upon request.<br>· Multifunction electric or hydraulic manipulators on request adapted to customer's requirements.<br>· Cavitation cleaning units, sediment samplers and other work accessories. |





**500 / 1.000 meters** Maximum operation depth

(The ROV is structurally rated for 1.000 mts. Depending on the type of buoyancy used, the working depth will correspond to it´s maximum depth).

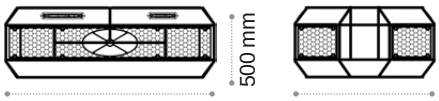
# Commander MK III *Rescue*

**The most reliable and complete rescue suppport ROV for submarines and underwater rescue operations.**

Additional to the basic Commander MK III, this unit is equipped with one or two multifunction manipulators, USBL tracking system and multibeam forwar looking sonar. Additionally a set of special hook and recovery tools are offered for the recovery of manned submarines or other rescue operations. Mariscope offers the possibility to integrate the surface control units to the ship´s bridge in order to be able to increase the efficiency during the rescue operations.

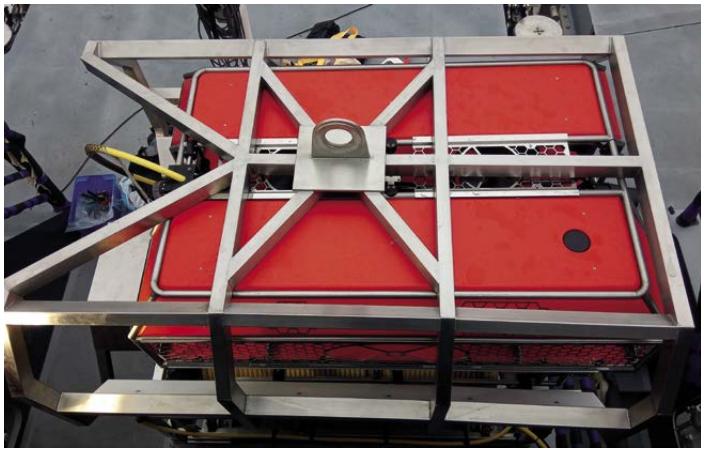
**These systems are mostly used on Mega Yachts, by Navys and special underwater groups.**

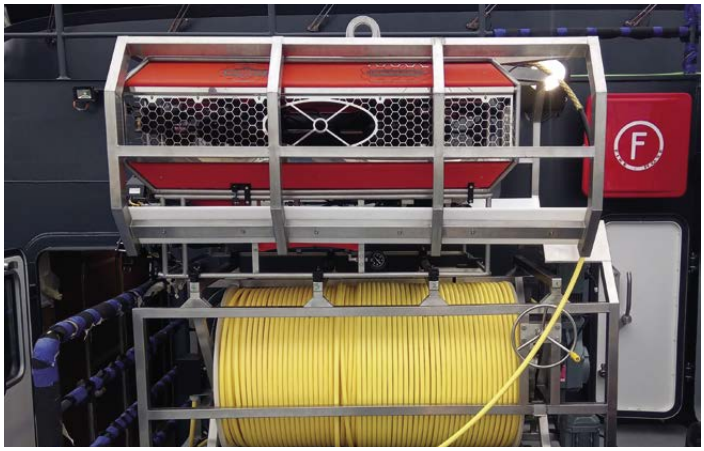

**DESIGNED ENGINEERED & MADE IN GERMANY**




# Commander MK III *Rescue*

| | |
|---|---|
| **Weight** | 100 - 350 kg (depending on the equipment) |
| **Propulsion** | 6 electrical brushless thrusters with magnetic coupling<br>(4 diagonal vectorized and 2 verticals) with 900 W power each for permanent use 24/7. |
| **Electrical power required** | 8,0 kW (230 v AC) |
| **Speed** | > 5 Knots |
| **Camera** | Standard Full HD (1920 x 1080) cameras with integrated laser pointers in salt water resistant aluminum housing with anodized surface installed on external tilt system (160° swivel angle).<br>Additional zoom camera options.<br>Forward-looking sonar to overcame low visibility conditions. |
| **Lighting** | 4 total LED spotlights each side.<br>· 2 LED spotlights attached to the same camera tilt system that rotate simultaneously with it.<br>· 2 fixed LED spotlights installed to optimize illumination.<br>This configuration can be easily customized by the user, as the LED spotlights are attached to the chassis by specially designed fasteners to fit the ROV frame. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted. |
| **Optional accessories** | · Umbilicals, length on request.<br>· Special sensors for measuring CO2, H2S, CTDO, oil in water, UTM/CP probes, and others on request.<br>· Special cameras and EOD lighting on request, special recording systems.<br>· Forward-looking or high definition/multibeam sonars on request.<br>· Different types of USBL tracking systems are available upon request.<br>· Multifunction electric or hydraulic manipulators on request adapted to customer's requirements.<br>· Cavitation cleaning units, sediment samplers and other work accessories.<br>· Special electric winch design. |



**600 meters** Maximum operation depth

# Chameleon

**The Chameleon is a ROV initially designed for scientific purposes. It is not an adaptation of a Work-Class ROV, but a specially developed vehicle taking into account the applications and needs of the scientific community.**

With the Chameleon Mariscope offers to the scientific community the first fully integrated scientific ROV.
Sensors are not attached to but central part of this vehicle. **This ROV is only manufactured under request and according to the scientific scope**. Sensors, grabbers, manipulators and samplers are integrated in the ROV and data managment system. Display on the surface is addapted to the sensors and units on board.

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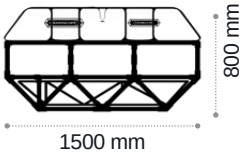
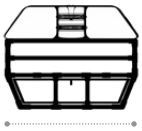
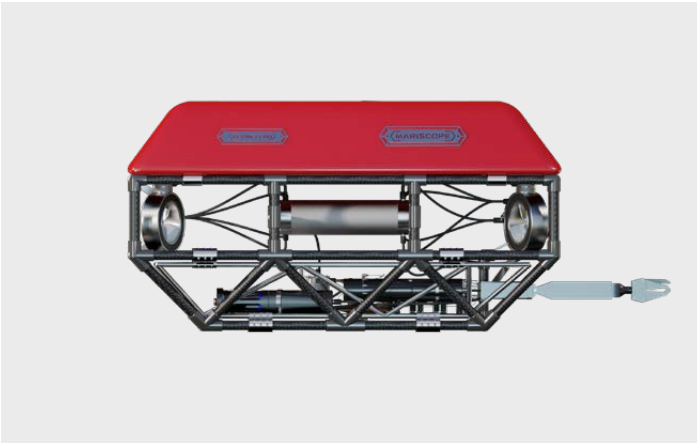
**DESIGNED ENGINEERED & MADE IN GERMANY**




# Chameleon

| | |
|---|---|
| **Weight** | 100 - 350 kg |
| **Propulsion** | 6 thrusters of 900 Watt each power each. 4 horizontal, 1-2 vertical. |
| **Electrical power required** | > 15,0 kW (230 v AC) |
| **Speed** | 5 knots |
| **Camera** | Standard Full HD (1920 x 1080) cameras with integrated laser pointers in salt water resistant aluminum housing with anodized surface installed on external tilt tilt system (160° swivel angle).<br>Additional zoom camera options. |
| **Lighting** | 4 total LED spotlights each side.<br>· 2 LED spotlights attached to the same camera tilt system that rotate simultaneously with it.<br>· 2 fixed LED spotlights installed to optimize illumination.<br>This configuration can be easily customized by the user, as the LED spotlights are attached to the chassis by specially designed brackets to fit to the ROV frame. |
| **Structural chassis** | Structural chassis made of AISI 316L stainless steel, hand welded (TIG) and crystal blasted.<br>Other materials under request. |
| **Optional accessories** | All the accessories are defined during the project.<br>Special sensors delivered or designed by the client can be integrated. |



# Surface Control Units

Each ROV has a surface control system in order to be operational. Through years of continuos improvements, with the use of modern technologies and in collaboration with our clients, we have developed our state of the art control system. Our surface control units are reliable, robust, portable and easy to use, resulting in a high efficiency during the operations.

**Following the concept of our ROVs the surface units are modular and can be customized to any specific need.**

# Main and steering console

The standard main console is the one connected through the umbilical to the ROV.
It contains the power supply unit for the ROV based on a switching power supply*.
The ROV is controled through an industrial computer which also acts as video recording system.
Videos are recorded in Full HD on an internal SSD and can be copied through an USB port.
**The steering console has the controls to operate the ROV in each of its functions. It is wireless and connects through RF (Radio Frequency) signals to the main console.**

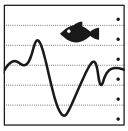
The operator can move freely on the work site, without being attached to the ROV umbilical. Compact and leightweight, the control units can be operated from supply vessels to even small boats and Zodiacs.

*For Flunder and Commander MK III type ROVs the power supplies are delivered in a separate Pelicase.


# Towed systems

Towed systems are a good alternative to ROV's if inspections over extended areas have to be done, with the advantage that they can be deployed from any small vessel. They can be equipped with a vast variety of sensors (oil in water, oceanographic, Methane, H2S, others) and instruments (altimeters, sonars, cameras Full HD/4K), and combined with underwater positioning systems (USBL).

**Over the past 28 years Mariscope has built an infinite number of different systems. Most of them have been customized wether for the use from small boats, in trawl nets, for extreme conditions or equipped with special measuring devices.**



**300 meters** Maximum operation depth

# Mini Observer

**The Mini Observer is a fast deployable and easy to use system, built for any type of environment.**
The special design of the frame, protection and hook guidance prevents the unit to get entangled.
Mini Observer is often used in search and rescue operations in lakes, rivers and also shallow coastal areas.

| | |
|---|---|
| **Weight** | 15 - 25 kg |
| **Dimensions** | Each system is custom built and dimensions are defined according to the client´s needs. |
| **Camera** | Fixed focus or zoom cameras. The cameras are chosen according to the client´s needs. The same is valid for the type of lenses. Camera housings are manufactured of POM, PVC, Aluminum or Stainless steel. |
| **Lighting** | High output LEDs in stainless steel or aluminium housings. Lights start at 2.900 lm each and can be upgraded according to special needs. |
| **Structural chassis** | Stainless Steel AISI 316L. |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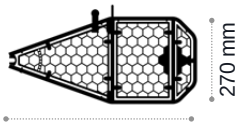



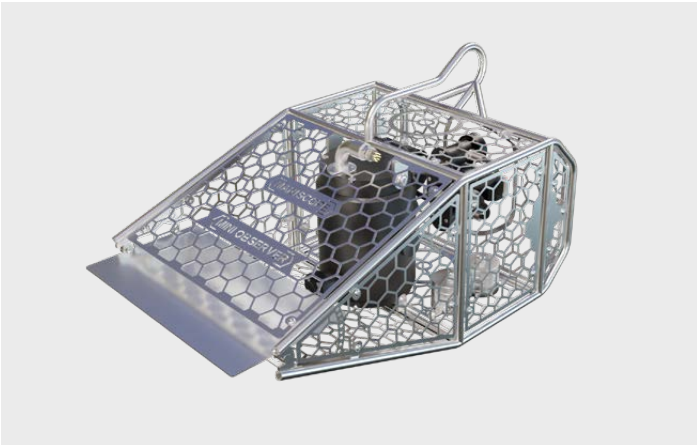

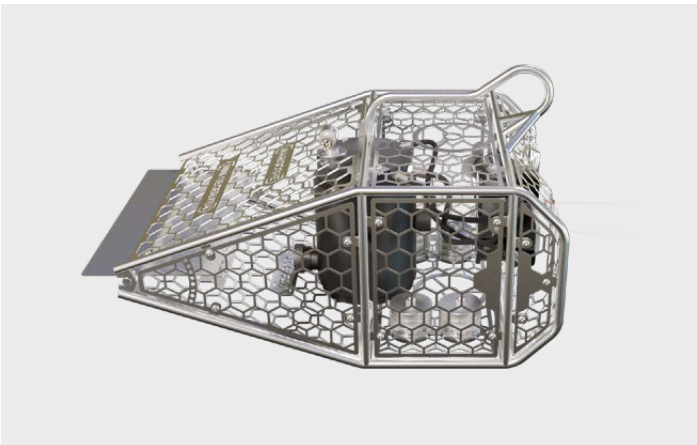

**500 meters** Maximum operation depth

# Observer V

**The Observer V is the last evolution of the Observer series. Over the years the unit has been improved to the actual version. Although bigger and heavier than the Mini Observer, these systems are also fast deployable and easy to use.**
The Observer is able to carry different types of oceanographic sensors, sonars or USBL systems. It is equiped with a depressor that can also be delivered with an electric tilting system. As the Mini Observer the special design of the frame, protection and hook guidance prevents the unit to get entangled. Many units have been customized with special cameras and lighting systems as well as on board power supply.
**These vehicles are mostly used in oceanographic research, search and rescue or site survey**

| | |
|---|---|
| **Weight** | 30 - 100 kg |
| **Dimensions** | Each system is custom built and dimensions are defined according to the client´s needs. |
| **Camera** | Fixed focus or zoom cameras. The cameras are chosen according to the client´s needs. The same is valid for the type of lenses. |
| **Lighting** | High output LED Clusters in stainless steel or aluminium housings. |
| **Structural chassis** | Stainless Steel AISI 316L. |

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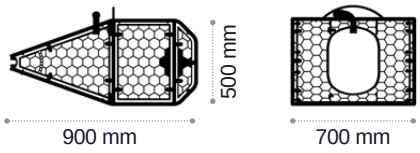
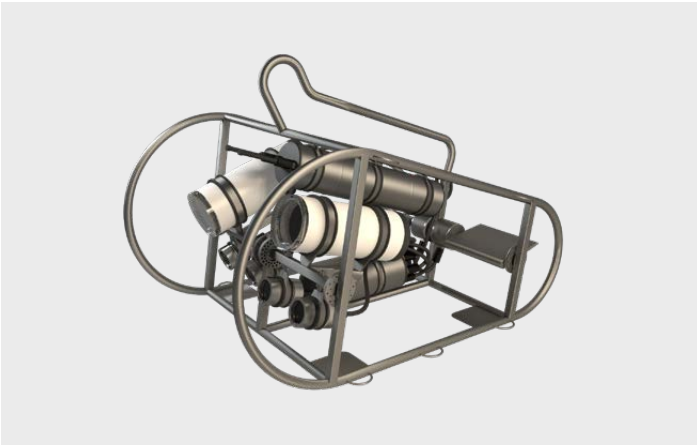
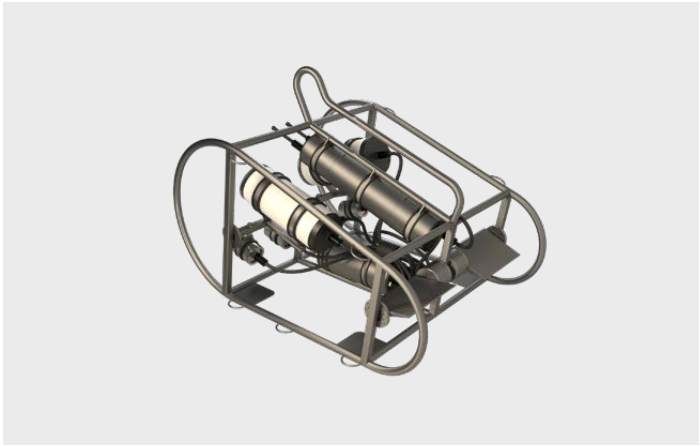
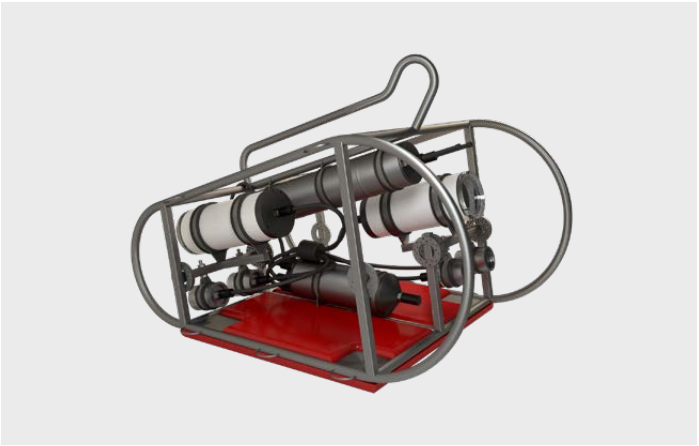






# Accessories

**In order to accomplish with any customer´s need, Mariscope offers a series of accessories and tools for the different systems.**

Most of the accessories and tools are unique in the market and manufactured by Mariscope.
This gives our customers the chance to ask for specially designed tools or modifications.

## Sonars

Mariscope works with the best sonar suppliers in the world.
The past years of development has made it possible to get this technology integrated even in the smallest ROVs.
Multibeam, front looking sonars, are nowadays a standard, for search and rescue operations.

## USBL Tracking System

For the correct operation of the ROV a USBL positioning system is nowadays part of the standard equipment. The integration of a USBL unit, even on the smallest of our ROVs is a matter of fact.

## Altimeter

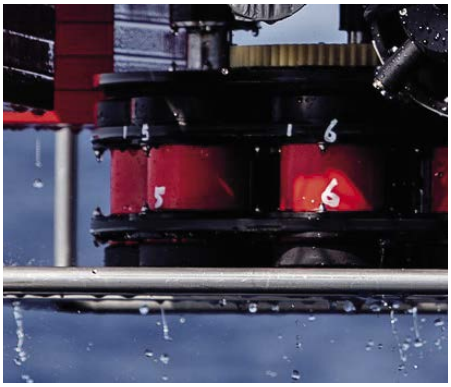
Altimeters with automatic height control of the ROV are part of the autopilot functions and help the user during navigation.
Different models and frequencies are available.

## Manipulator 1 Function / Multifunction

Manipulators are the most often used tool during underwater operations.
Either electric or hydraulic, single or multi-function, the customer chooses what fits best to its ROV and task.

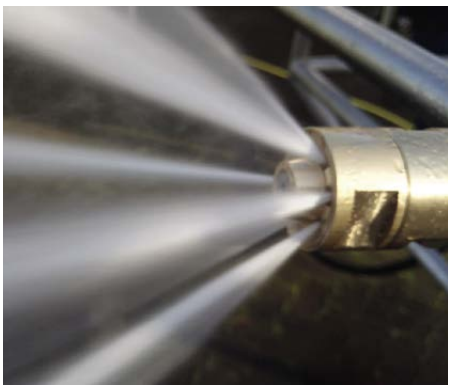
## Recovery Tools

During search and rescue operations recovery tools are a key part of the success. Therefore Mariscope offers a variety of special tools and customizations also to be fitted to single or multifunction manipulators.



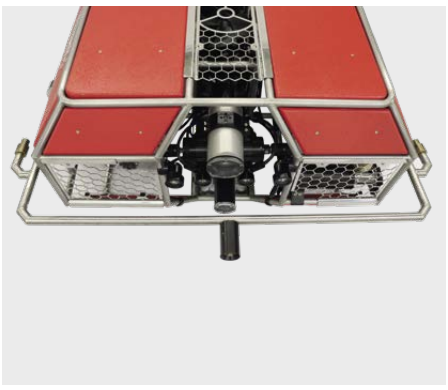
## Suction Sampler

This is achieved by the innovative design of the sampler, revolver mechanism and cup holder.
The sampler is delivered on a separate frame and can be fitted to existing Mariscope ROVs.



## Fixed Cavitation Jet

Single and multi nozzle system designed and manufactured in house are offered as additional tools for the ROVs. Cleaning efficiency is at a maximum using cavitation.



## Cavitation jet with tilting frame

For some tasks like overhead cleaning, the tilting of cavitation nozzles is necessary. We designed special tilting units that also allow to hold the ROV on position balancing the backpush generated by the cleaning jet.

## Pan and Tilt system

Pan & Tilt units are normally a standard component in modern ROVs. Often a pure tilt mechanism is sufficient, but numerous operations make a pan and tilt unit mandatory Depending on the type of application Mariscope uses its own pan & tilt mechanism or relies on other professional partners.

## Zoom Camera

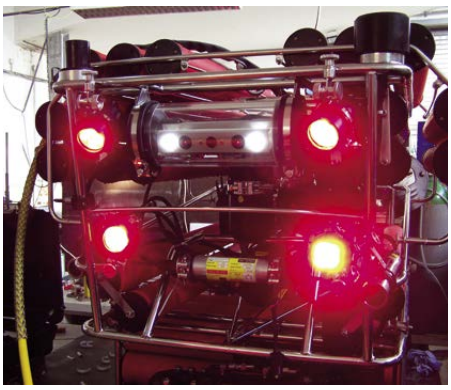
Professional UHD Zoom cameras can be integrated in the ROVs and operated from the surface. Adding a pan and tilt system to these cameras, increases also the underwater visual area.

## Tilting Tool Frame for Small Sensors

Sometimes, a front-fixed sensor installation is not enough.
This mechanical tilting system allows any sensor installed in the ROV to change its position underwater.
Can be measuring at any angle needed.

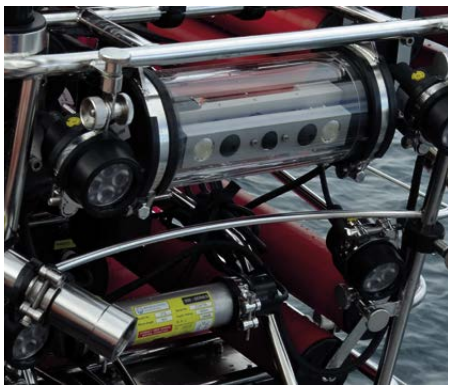
## Flight Cases

Low-weight flight cases are the best option to transport the ROV's and its accessories securely. The cases are customized for each ROV.
They help to keep the equipment organized and allow a quick deployment of the complete system.



## RGBW Light

Multicolor lights based on LED technology find their application in research, military activities and police operations. For EOD these lights can be installed on any of our platforms or hand carried by a diver.



## Additional Camera

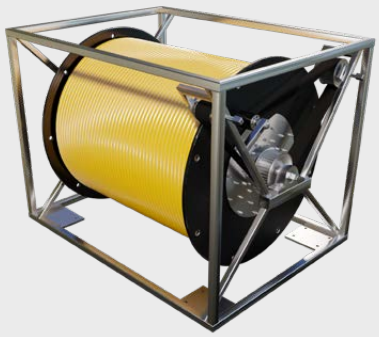
Several additional cameras can be integrated in the ROV. Normally a back looking camera is useful to control the umbilical proximity to object and to avoid entanglements. Also, cameras can set pointing manipulators, or other instruments of the ROV.

## Extra-Light Set

High-performance LED-type Lights are essential when using Full HD Cameras. Additional lights, manufactured by Mariscope, can be attached to the ROV, by using special clamps, that allow the illumination to point in any desired direction.

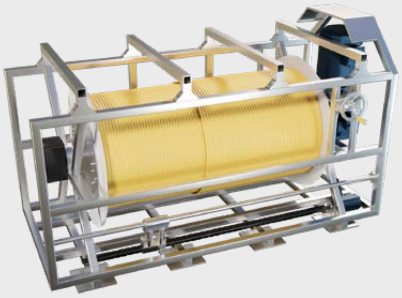
## Data Logger

This robust and compact system records information like depth and time of the dive and can be installed on the ROV, but also to Drop/Drift Cameras or Landers. When the Instrument reaches the surface, it transmits its GPS location to the surface control unit.



## Cable Reel / Electrical Cable Reel / without Spooling Mechanism

The cable reels are crucial for operations with long umbilicals. Mariscope manufactures its own design stainless steel cable reels, with gold plated slip rings, and waterproof connections. There are different options available according to the diameter and length of the umbilical. Reels can be hand operated, but also electric or hydraulic powered.

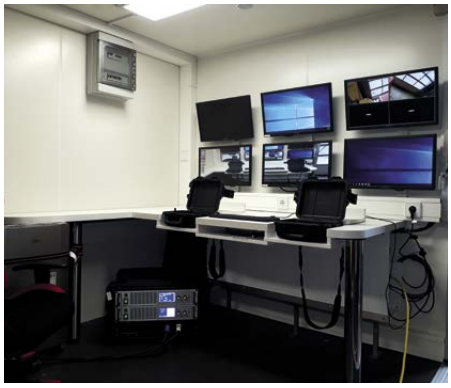


## Cable Reel / Electrical Cable Reel / with Spooling Mechanism

Special designed Stainless Steel electric winches are offered for the different types of ROVs and applications.

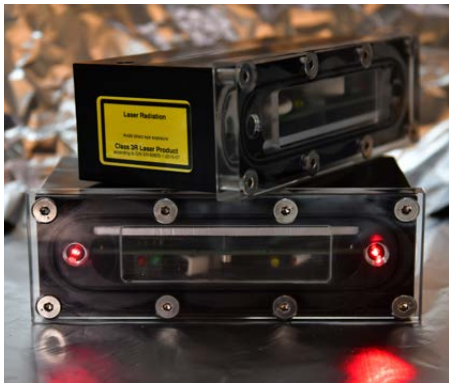
## Dual Console

When a ROV is equipped with multiple accessories such as USBL, sonar and other sensors, it can be provided with a dual console with two 21,5” Monitors (one for ROV image and navigation, one for sonar, USBL and sensors data). This portable and practical configuration facilitates the ROV operation and allows the pilot to have all the information available.



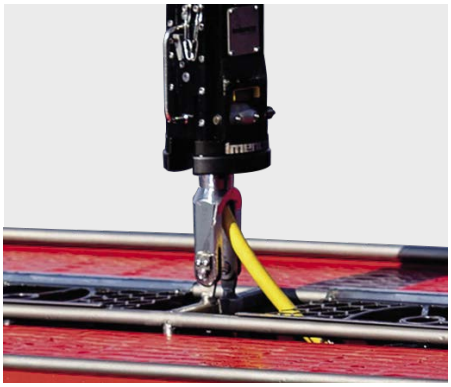
## Second Monitor

A second monitor can be delivered with Mariscope ROVs, which is connected to the main monitor of the pilot.
This second monitor is often installed in the bridge of large vessels, so that decision-making persons on board can watch live, the status of the ROV.



## Laserpointer (Battery)

The easiest way to measure object sizes underwater is by using laser pointers. They are normally installed near the camera and can tilt together with the unit. Internal or external laser pointers are available in different types of housings.



## Lock Latch

They are designed to lift an ROV out of the water, taking the load off from the main umbilical, by attaching a special bullet to the main ROV Structure. This system will increase overall safety and ease deployment and recovery of ROV’s.

## Deployment Frame

When launching and recovery ROVs from high-freeboard ships, a special deployment frame is needed. These stainless-steel frames are made specifically for our ROVs, with a strong, but also lightweight structure. They are also useful to keep the ROV stored and secured on board.

## Control Van

Mariscope fabricates different customized control systems, including control vans. These are made according to the client needs and can include storage for the ROV, cable reels, and accessories.

## Thickness Gauge

Robust ultrasonic thickness gauges for underwater measurements can be installed in Mariscope ROVs. The gauge uses multiple echo which means measurements can easily be carried our without the need of removing coatings.

## CP Corrosion Protection sensor

CP probes are used to get information of the status of steel material underwater and their grade of corrosion. Installed on Mariscopes tilting frames, these CP probes can also measure over the head i.e. on a FPSO or ship hull.

## Fiber Optic Upgrade

Mariscope offers the possibility to upgrade the standard-copper umbilical, to a fiber optic version, in case of demand.

# Sensors

All type and models of oceanographic sensors and measuring devices can be integrated on our ROVs. Mariscope provides the system integration, power supply through the ROV and data transmision through the umbilical to the surface.
Mostly asked sensors are:

## Oil in Water

## PCO2

## Methane sniffers

## CTDO


## Chla

## H2S

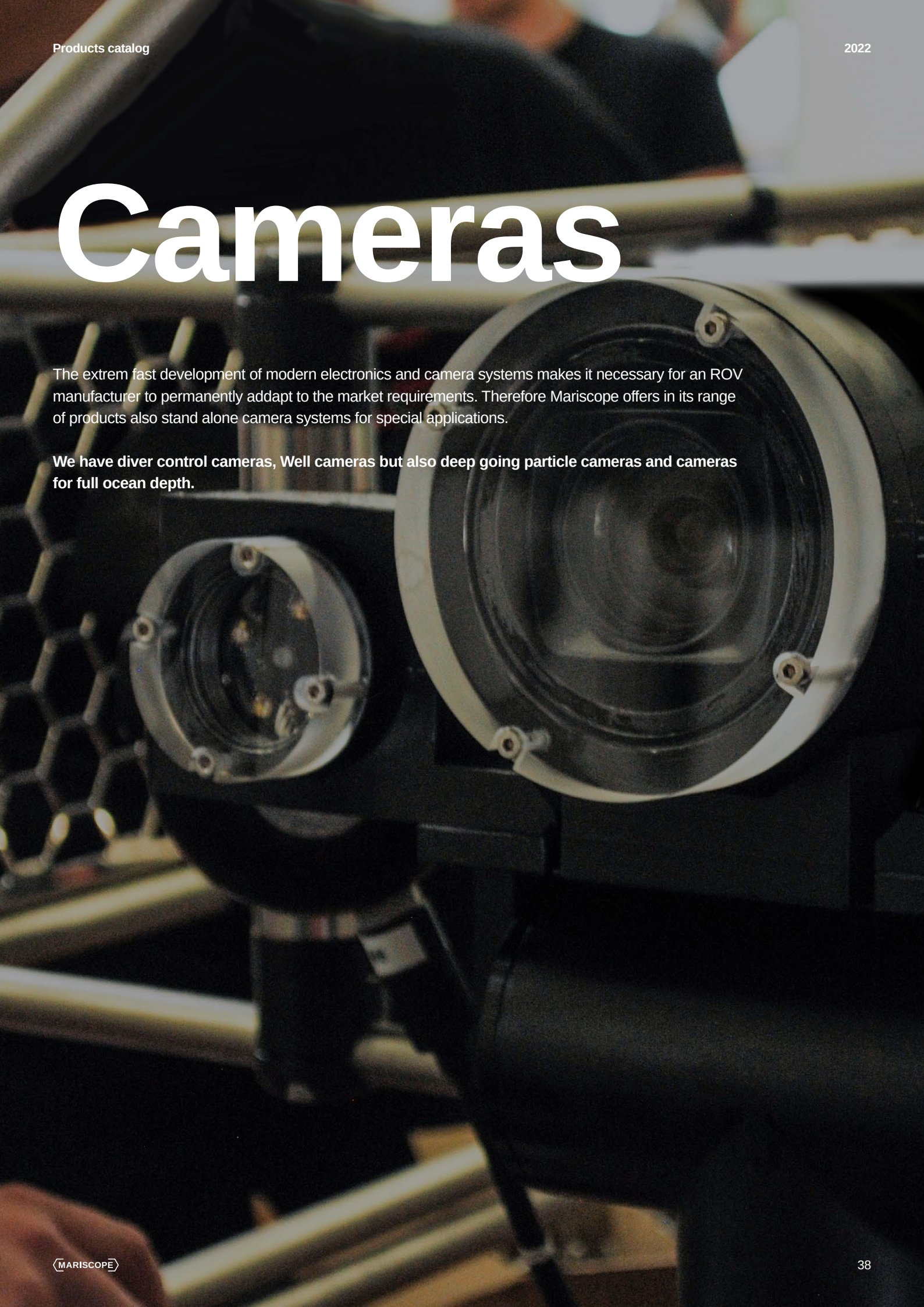
# Just a selection of possibilities.

# ROV accessories

The following table shows the possibilities of each ROV to carry different types of accessories and tools.
It may help you to choose the right system according to your operation. Smaller units have a natural limitation of payload, wereas the bigger units can carry their own weight as payload.

| | Peewee | MS 2 | FO III | Diavolo III | Flunder | Commander MK III | Chameleon |
|---|---|---|---|---|---|---|---|
| Cable Reel / Electrical Cable Reel / with Spooling Mechanism | • | • | • | • | • | • | • |
| Control Van | • | • | • | • | • | • | • |
| Second Monitor + Big Case | • | • | • | • | • | • | • |
| SplashProof Consoles | • | • | • | • | • | • | • |
| Flight Cases | • | • | • | • | • | • | • |
| Laserpointer (Battery) | • | • | • | • | • | • | • |
| Lock Latch | | | | | • | • | • |
| Deployment Frame | | | • | • | • | • | • |
| Sonars | | • | • | • | • | • | • |
| USBL Tracking System | • | • | • | • | • | • | • |
| Altimeter | | | • | • | • | • | • |
| Manipulator 1 Function | | | • | • | • | • | • |
| Manipulator Multifunction (Hydraulic) | | | | | • | • | • |
| Recovery Tools | | | • | • | • | • | |
| Suction Sampler | | | | | • | • | • |
| Fixed Cavitation Jet | | | • | • | • | • | |
| Cavitation jet with tilting frame | | | | | | • | |
| Pan and Tilt system | | | | | | • | • |
| Fiber Optic Upgrade | | | • | • | • | • | • |
| Tilting Tool Frame For Small Sensors | | | | | | • | • |
| Thickness Gauge | | | • | • | • | • | • |
| RGBW Light | | | • | • | • | • | • |
| Additional Camera | | | • | • | • | • | • |
| Extra Light Set (2) | | | • | • | • | • | • |
| Zoom Camera | | | • | • | • | • | • |
| Data Logger | | • | • | • | • | • | • |

# Cameras



The extrem fast development of modern electronics and camera systems makes it necessary for an ROV manufacturer to permanently addapt to the market requirements. Therefore Mariscope offers in its range of products also stand alone camera systems for special applications.

**We have diver control cameras, Well cameras but also deep going particle cameras and cameras for full ocean depth.**

## EOD cameras

In certain types of applications, it is necessary to illuminate objects with light sources that do not emit white light only. This system, developed by Mariscope and unique worlwide, allow the variation of colors in underwater operations using advanced high power LED technology integrated to most modern camera systems.

## Hand held camera

Focusing in underwater operations with real time surface control and communication with the diver, Mariscope has designed compact cameras with stainless steel or Titanium housings, easy in handling and use, with cable bounded online transmission. They also allow recording, various types of lenses and zoom, as well as lights / camera control.

## Drop-Cam

**This system is the easiest option to get images between 1.000 and 6.000 meters depth, on budget.** It is umbilical free, and once it has been a certain time at the seafloor, it returns to the surface by releasing a weight. Users can modify the position of the cameras and lights, and program the cameras to record different time intervals, and also modify the bottom time.

## Helmet camera

Mariscope offers several cameras that can be installed on helmets and facial masks for the online transmission of videos, manufactured in stainless steel AISI 316 L or in titanium alloys, according to the requirement of the clients. The cameras can incorporate LED rings or external lighting in hard anodized aluminum housings. Cameras with different types of lenses are offered.

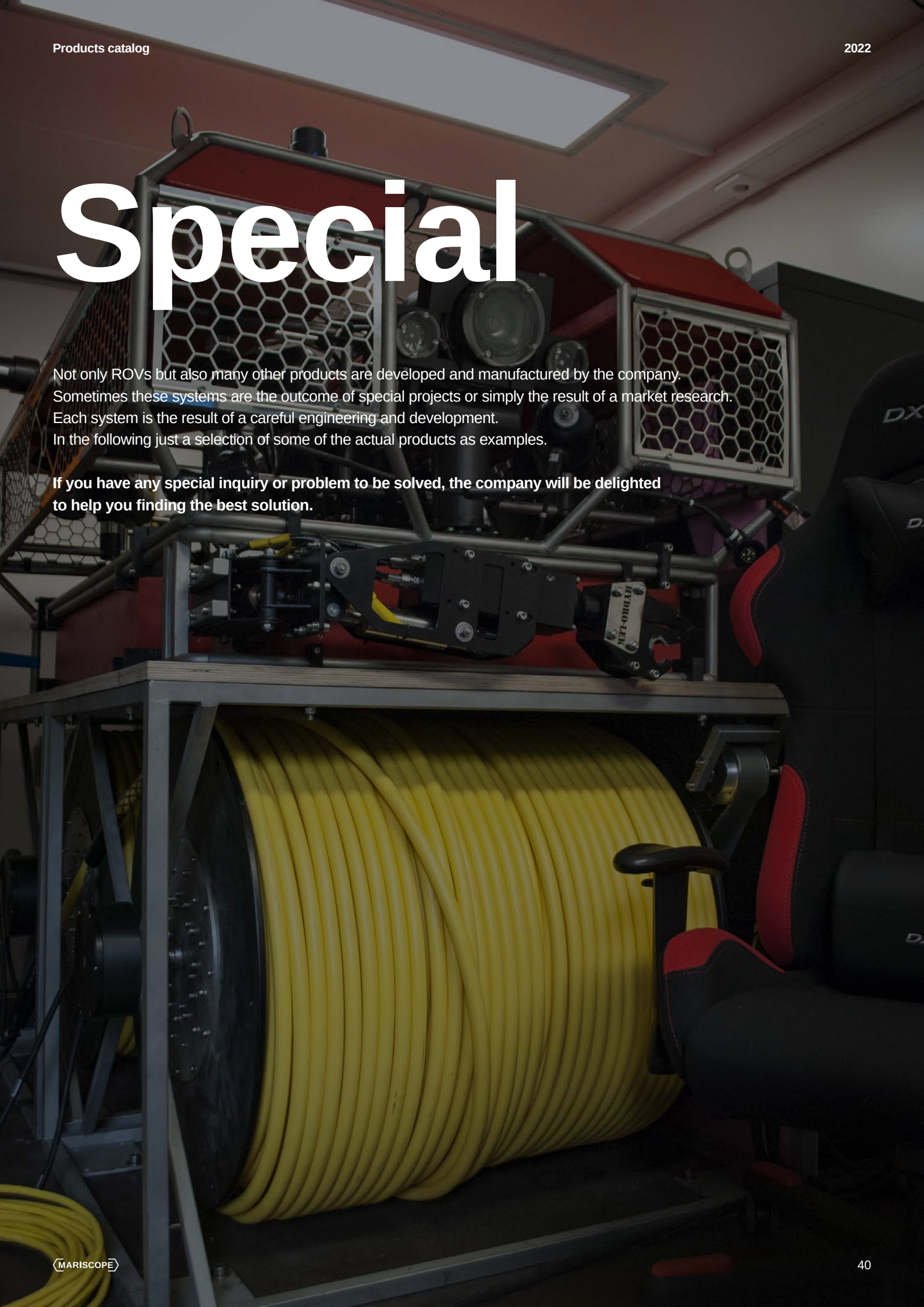
## Water well camera

To visualize the state of water wells and ducts. Small dimensions, adjustable lighting, special viewing angles and macroscopic approaches. Manufactured with stainless steel AISI 316 L or in titanium alloys as per the clients' requirement. The cameras can incorporate LED rings or external lighting in hard anodized aluminum housings. Cameras with different types of lenses are offered.

# Special

Not only ROVs but also many other products are developed and manufactured by the company.
Sometimes these systems are the outcome of special projects or simply the result of a market research.
Each system is the result of a careful engineering and development.
In the following just a selection of some of the actual products as examples.

**If you have any special inquiry or problem to be solved, the company will be delighted to help you finding the best solution.**



## UV Antifouling lights

Developed as prototype in the Ocenographic Institute of Rostock, Germany (IOW), these UV antifouling lights were brought to an industrial level by Mariscope. These UV lights are the most efficient on the market and help prevent sensors and other platforms that are permanently moored or installed in the water from biofouling. Low energy consumption and internal or external power supply with simple and easy to use clamps or brackets.

The UV lamps are delivered with a programing unit that allows individual programing of the light cycles and duration.

## Diving lights

No sight without light.
As diver you are often in situations where you need artificial light.
Following often requests from our customers we designed reliable, high quality underwater lights with strong LEDs and low consumption.
Our experience in ROV technology helped us to get the best combination of energy consumption vs. light output.
Different sizes and light strength are available.

## Videocom

The increasing demand of high quality video and comunication systems for professional inwater surveys (IWS) led us to the development of diver carried systems. Full HD with fast Ethernet video transmision to the surface coupled to bidirectional diver communication units with ROV type surface control consoles are the result of our newest Videocom Systems.

## Dredges

Hand deployed or ROV installed dredge systems are designed and manufactured according to customer´s specifications.
Electric controled and Video supervized units can be requested as ROV tool or in a stand alone version.

MARISCOPE

DT-GEN-CAT-22-V5

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