WE START SUBSEA AT

6000

METERS DEEP

Aquaculture
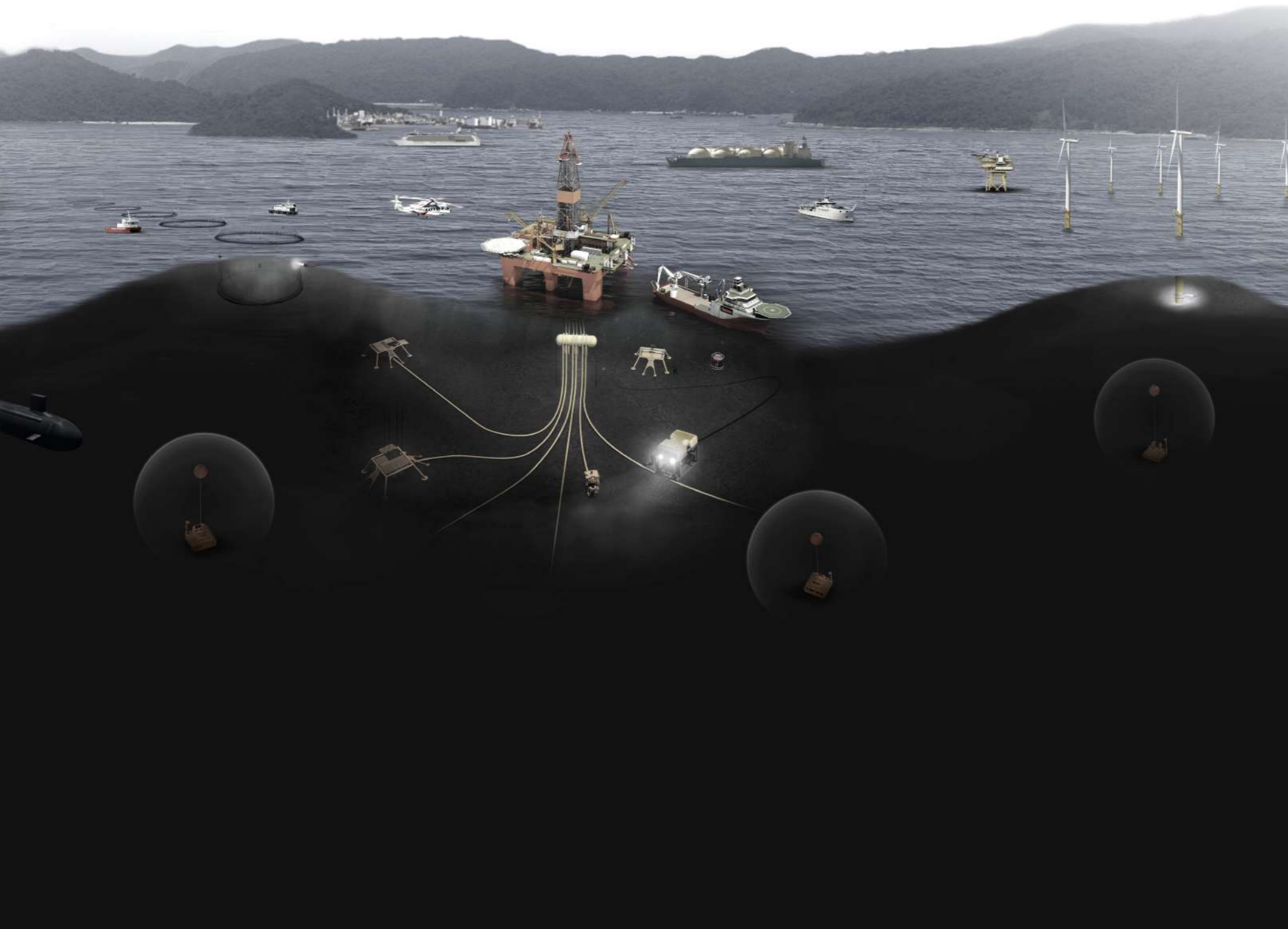## Cameras & Fish Welfare

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**COMPLETE, RELIABLE SOLUTIONS
WITH EXCEPTIONAL IMAGE QUALITY**

imenco
AQUA

Imenco was established in 1979 as an engineering company and has since been involved in numerous of underwater projects.

Over the years, Imenco has grown through the development of our own solutions and through acquisitions of other companies. Imenco is now a group of companies that mainly work in five main business areas: Aquaculture, offshore oil and gas, offshore renewable energy, marine and military industry.

We have a leading position in underwater camera, aquaculture camera technology, lighting, laser and electronics technologies, retrofitting systems for underwater corrosion protection, military and civil aviation fuel systems, underwater and top-side lifting and handling solutions, military and civilian visual surveillance CCTV systems and underwater acoustic communication and positioning systems. We are also a major player in hydraulic systems, machining services, diving systems and EPC contracts.

RENEWABLES | OIL & GAS | INDUSTRIAL | MARINE & NAVAL | AQUACULTURE   imenco AQUA   INNOVATION STARTS HERE IMENCOAQUA.COM

Insight Series

Pixelite

Feeding camera with exceptional image quality

NEW

Fish Welfare

Lice counting and biomass estimation

NEW

Smart Winch

Winch with smart features, designed for weather-exposed locations

NEW

**COMPLETE, RELIABLE SOLUTIONS WITH EXCEPTIONAL IMAGE QUALITY.
SEE WHAT WE MEAN HERE: TINYURL.COM/IMENCO**

Gemini

Dual IP feeding camera

Taurus

Winch designed for weather-exposed locations

A TYPICAL TOTAL DELIVERY

CAGE

- Winch
- Electrical cabinet
- Surface camera
- Gemini feeding camera

ON BARGE

- Surveillance camera
- Management software
- PC monitors
- Electrical cabinet
- Wireless or wired connection to the system

Pixelite INSIGHT

IP-based underwater camera with industry leading image quality

IP CAMERA SYSTEM THAT CATCHES THE DETAILS

Features

- Dual IP colour camera (the two lenses allow you to look up and down in the cage at the same time)
- High light sensitivity / colours in dark environments
- Integrated sensors
- Modern technology
- 360 degree viewing angle
- Ethernet: 100/1000Mbit TP
- Ethernet video streaming protocol: RTSP
- Ethernet control protocol: ONVIF
- Video compression: H.264 AVC up to 8Mbps (x2)
- Video resolution: 1080p@25fps - 4K Video

Our solutions give you total control - above and below water. You are rigged for future data collection.

Camera and components can be delivered separately and integrated into other solutions, or it can be delivered as a complete system pre-installed with all necessary components.

Fish Welfare INSIGHT

Fish welfare and feeding camera with lice counting and biomass estimation

UNPARALLELED OVERVIEW OF THE FISH WELFARE

Features

- Precise biomass estimation
- Automatic lice counting - approved by the Norwegian Food Safety Authority
- Integrated sensors for O2, temperature and depth
- High sensitivity and premium colour reproduction under water
- Connection: 5G, ethernet or Wi-Fi
- Continously insight and control over the fish welfare status in the cage
- Detects operative welfare indicators automatically

The Fish Welfare camera is also available as a standalone camera.

The next generation Fish Welfare Camera.

We introduce the first Multi Camera to the Aquaculture industry. With a combination of the Imenco Feeding and Inspection Camera and the new Imenco Fish Welfare Camera, you gain full control over feeding, biomass estimation, lice counting and the overall fish health status in the cage.

Combined with the Createview user-friendly software, the system gives you a brand new and unparalleled overview of your fish.

RENEWABLES | OIL & GAS | INDUSTRIAL | MARINE & NAVAL | AQUACULTURE

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Createview

Smart Winch

Designed for weather-exposed locations

REMOTE CONTROL VIA ETHERNET USING A SPECIAL CONTROL UNIT

Powerful and intelligent winch available in the Imenco Insight series. The winch is produced in weather-resistant materials and has brackets for flexible attachment to various cage systems. The winch can be remotely controlled via Ethernet using a separate control unit or by local switches.

The winch motors have a stainless steel shaft and are equipped with a motor brake. The user can set the winch to move the camera to a set position for depth (z) and length (x) in the cage using the new Imenco Insight software.

Three pre-set positions available in the software: home, feeding and dead fish.

Dimensions bxhxd	366 × 255 × 335 mm
Material housing	POM
Material brackets	Aluminium
Max rope capacity, 3mm	90 meter
Traction - travers	30 Kg

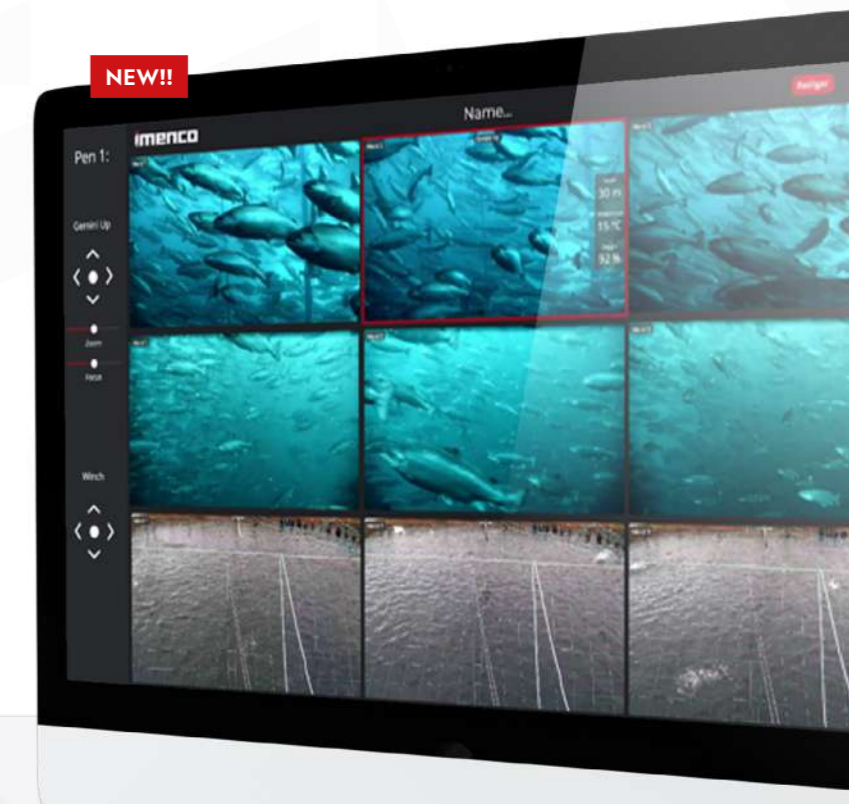| Traction - lift	30 Kg
Minimum holding force	> 50 Kg
IP rating	IP67
Power	24VDC / 410W
Weight Kg	14,8 Kg

Insight

Software for the aquaculture industry

IMENCO IS READY TO PRESENT A NEW SOFTWARE FOR THE AQUACULTURE INDUSTRY

This new software integrates various products like Gemini, Pixelite, Morus, Taurus Winch, Smart Winch. Imenco Insight provides a unique experience for controlling the entire system, a user-friendly interface, intuitive controller and high adaptability.

Features

- Supports 4K video streaming
- User-friendly Interface
- Streaming with short delay *
- Easy to use pan / tilt, zoom / focus / light / winch control and video settings
- Sensors and compass overlays
- Video and image recording / archive
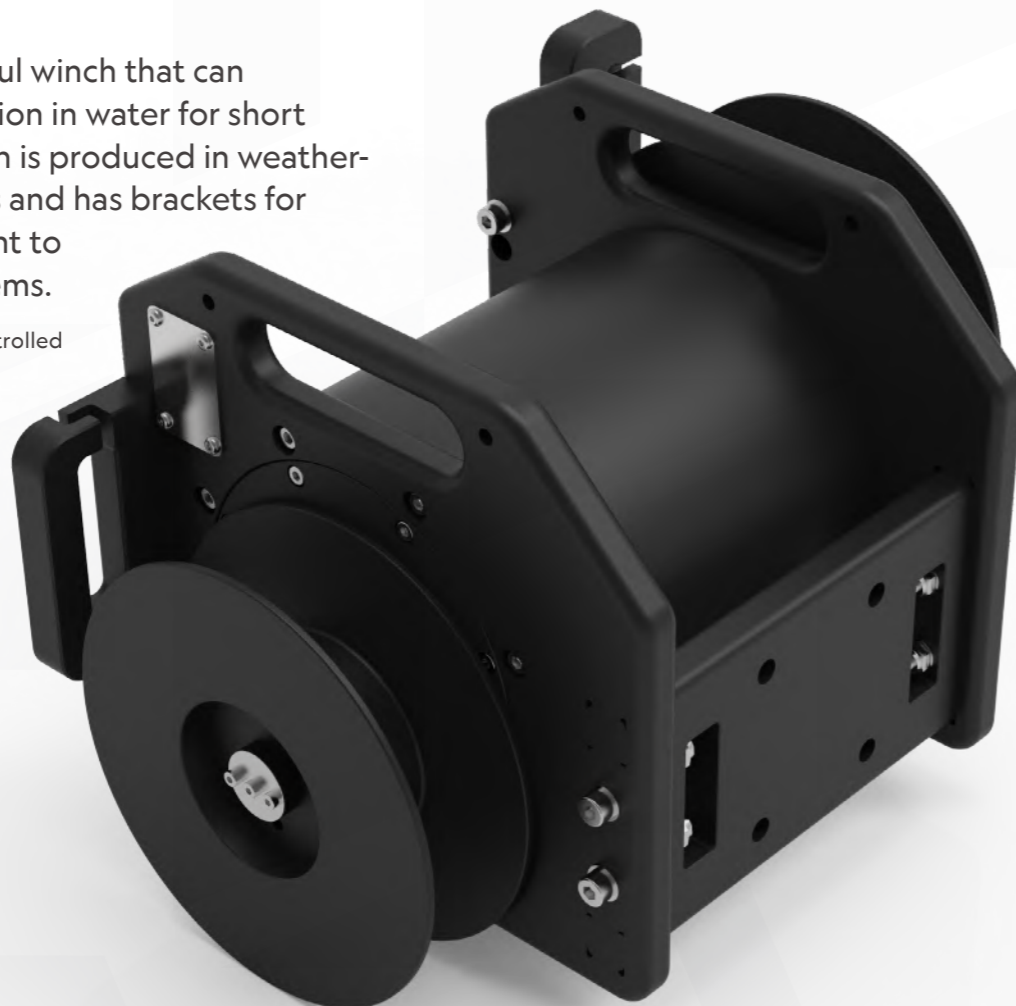- 25 views
- Integrated system

NEW!!

* 350 ms @ wired ethernet, glass to glass latency

Taurus

Taurus is a powerful winch that can withstand immersion in water for short periods. The winch is produced in weather-resistant materials and has brackets for flexible attachment to various cage systems.

The winch is remotely controlled via Ethernet using a separate control unit or by local switches. The control unit is located in a cage cabinet or separate cabinet. The winch motors have a stainless steel shaft and are equipped with an engine brake.

Gemini

With the GEMINI aquaculture camera, Imenco presents HD IP Video of high quality to the aquaculture industry.
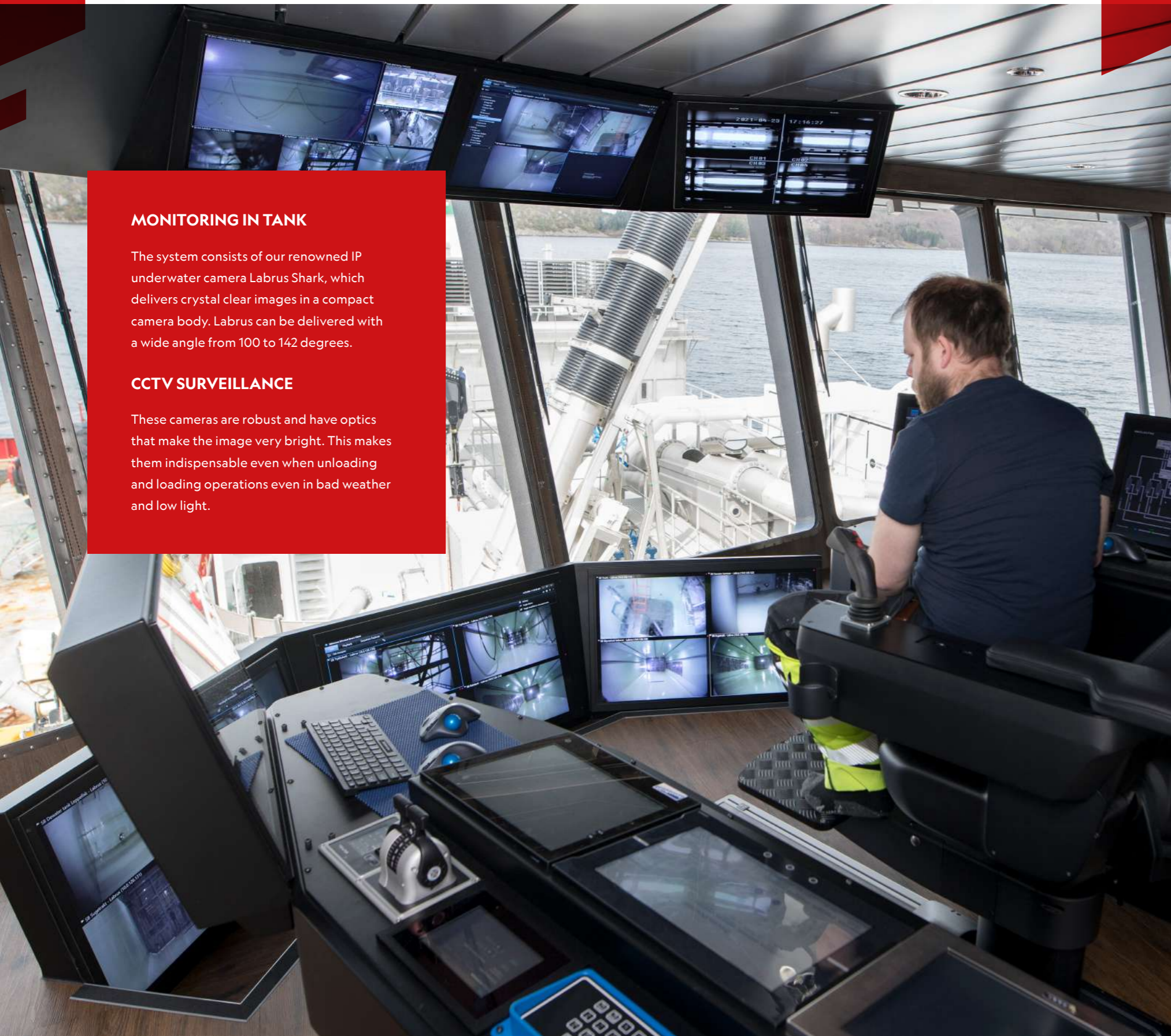
Features

- Two HD PTZ units in one house
- High light sensitivity / colour images in low light conditions
- Integrated sensors
- Specially adapted Software Client
- Advanced image enhancement algorithms
- Ethernet: 10 / 100bit TP
- Ethernet video streaming protocol: RTSP
- Ethernet control protocol: ONVIF
- Video compression: H.264 AVC up to 8Mbps per camera
- Video resolution: 1080p @ 25

Dimensions b x h x d	366 × 255 × 335 mm
Material housing/spools	POM
Materiale brackets	Aluminium
Max rope capacity lift, 4mm rope	90 meter
Traction - travers	30 Kg

Traction - lift	30 Kg
Minimum holding force	> 50 Kg
IP rating	IP67
Power	24VDC / 500W
Weight Kg	14,8 Kg

Configuration	1080p zoom colour camera up and down
Pan	360° continuous
Tilt	+- 90°
Optical zoom	30x
Viewing angle at zoom	61,2°
Colour sensitivity	0,002 Lux
Dimension	Ø237 × 562 mm
Material	POM / bronze

Depth capacity	85 meter
Standard connector	SubConn DBH13
Power	24VDC / 40 W
Weight in air	18 Kg
Weight in water	3,0 Kg
Depth sensor	Standard
Temperature sensor	Standard
O2 sensor	Option

Camera systems for boats
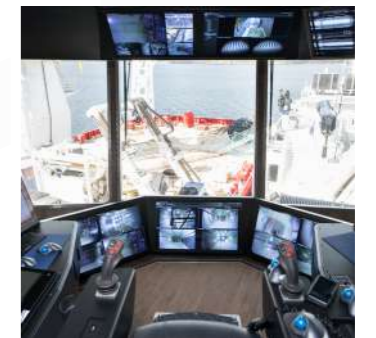
MONITORING IN TANK

The system consists of our renowned IP underwater camera Labrus Shark, which delivers crystal clear images in a compact camera body. Labrus can be delivered with a wide angle from 100 to 142 degrees.

CCTV SURVEILLANCE

These cameras are robust and have optics that make the image very bright. This makes them indispensable even when unloading and loading operations even in bad weather and low light.

COMPLETE DELIVERY

Our system delivery contains what you need of servers, monitors, Junction boxes, etc. We tailor the system to provide an optimal experience with a focus on operational reliability and the market's best image quality.

Labrus

Imenco Labrus is a low-cost, compact IP HD camera with colour. This overview camera has a wide angle and is designed for operations down to 150 m.

With excellent image quality, compact and robust design and flexible mounting options, this is a first choice if you need a quick check of the situation in your facility - or to check other things underwater.

Features

- Compact and robust
- House in POM and front port in acrylic
- Can be set up as a compact mobile camera system for quick and easy transport and trans

Castor PTZ

Imenco Castor PTZ Camera is a very compact underwater camera that provides a good overview and can be used on many applications. The camera has the freedom to look around freely without having to turn the housing the camera is mounted in.

The camera has a very versatile application and is easy to mount. It can also be used as a stand-alone inspection camera for quick and easy deployment.

Features

- IP colour camera
- High sensitivity / colours in dense environments
- State-of-the-art technology
- Software client
- 360 degree viewing angle
- Ethernet: 100 / 1000Mbit TP
- Ethernet control protocol: ONVIF
- Video format: H.265 / H.264 - RTP / RTSP / UDP
- Video resolution: 1080p @ 30fps

Video resolution	1080p @ 30fps	View angle in water – 3,6 objective	100° dia. / 92° hor
Video Format	H.264 – RTP / RTSP / UDP	View angle in water – 2,8 objective	122° dia. / 115° hor
Delay (glass to glass)	~250ms	View angle in water – 1,8 objective	142° dia. / 137° hor
Minimum lighting	0,2 Lux	Dimension (ex coupling)	Ø79/74×123 mm
Camera housing	POM (Delrin)	Weight air/water	0,6 Kg/0,2Kg
Power	PoE		

Configuration	1080p @ 30fps zoom colour camera	Materials	POM / brass
Pan	360° continuous	Depth capacity	90 meter
Tilt	+- 90°	Cable effective range	85 meter
Optical zoom	12x	Standard connector	SubConn DBH13
View angle at zoom	1x 58,2°	Power	PoE
Colour sensitivity	0,005 Lux	Weight in air	6,5 Kg
Dimension	Ø192,5 × 200 mm	Weight in water	3,0 Kg

Morus

Morus is an overview PTZ camera from Imenco that gives you a full overview in everything from demanding applications such as on the edge of the cage to inside your hatchery. With Morus, you have control over the vessels and the fish's behaviour towards and during feeding without even being present and disturbing.

With 12x optical zoom, you have the opportunity to zoom in on small details in the area where the camera is located. Comes with various stainless steel brackets for installation.

Video resolution	1080p @ 30fps – 2Mpx		Cable connection	Nipple
Video Format	H.264 / H.265 – RTP / RTSP / UDP		Temperature range	-30ºC to +60ºC
Light sensitivity	0,005lux (colour) – 0,0005lux (s/h)		Power	PoE
Optical zoom	12x		IP classification	IP66
Pan	360º		Dimension	Ø169 × 160 mm
Tilt	90° (autoflip)			

Worldwide service

As a world-leading manufacturer and supplier of monitoring for fish farming and boating, it is important to be able to offer a total package that also means offering a reliable and dependable service to our customers.

We know the local conditions and have service technicians with practical experience from operational operations both at sea and on land with in-depth knowledge of our products.

Our service technicians take care of installation / maintenance / service of new and existing facilities. We also store all service history in our service program.

Spotting and counting sea-lice under water has been a challenge, but not anymore.

Our crystal-clear images from our fish welfare camera makes it easy to detect and count sea-lice without handling the fish.

Data algorithms can do the job of counting and estimating the number of sea-lice in a cage at any given time. The automatic sea lice counting is approved by the Norwegian Food Safety Authority. Operators can also view images manually to have a look at it with human eyes to have a more detailed image when determining the fish health status in the cage. The camera can be used for multiple different operations and catches the smallest details.

imenco AQUA

Createview