



**SCANMAR**







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# SCANMAR

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*Scanmar was the pioneer of cable-free Catch Systems in 1980 and has remained the world leader of development and production for the global fishing industry.*

Close collaboration with fishermen, research institutes and others in the industry has given us the knowledge to develop products with high utility value, ensuring increased efficiency and cost savings.

Our sensors and bridge systems are acknowledged for their advanced technology and high quality, and we are constantly aiming to improve our products by listening to our customers and users.

Since the beginning, we have invested around 400 million Norwegian kroner in the development of robust, reliable and innovative products.

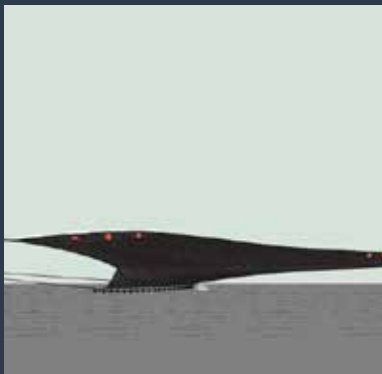
Our close collaboration with the fishing industry, combined with our genuine interest and technical approach has been critical to our success. Globally, we have sold over 5,000 bridge systems and 40,000 sensors.



# Areas of use

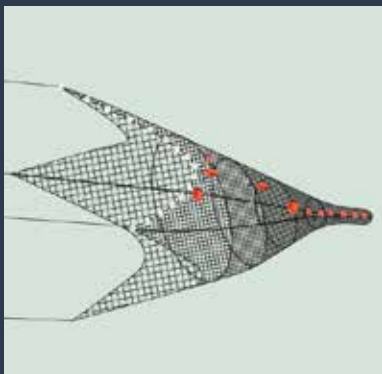
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*Our reliable systems consist of bridge equipment, robust sensors, hydrophones and receivers with advanced filters to remove noise affecting the signals from the sensors.*



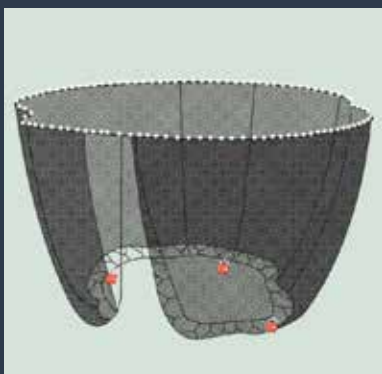
## ■ Bottom Trawling

During bottom trawling the equipment is particularly vulnerable to impact, abrasion and high pressure at great depths. All components in Scanmar's sensors are therefore embedded in a solid plastic construction that reduces damage and wear.



## ■ Pelagic trawling

During pelagic fishing overfilling of the bag can be a challenge, as the bag can burst when it reaches the surface. The SuperCatch function on the CatchSensor gives the skipper the opportunity to start hauling much earlier and avoid damage to the equipment.



## ■ Fishing with Seine

During fishing with purse seine, Scanmar SS4 sensors with Depth function give accurate information about the equipment's performance while the Height/Depth sensor ensures tight control of the movement and the position of the seine.



## Why Scanmar?

Scanmar was the pioneer of catch control systems, and is still the preferred choice for skippers and fishing research institutes across the world.

### Efficiency

Scanmar users combine their skill and years of experience with the information provided through Scanmar's cutting edge catch control systems, to achieve significant increases in efficiency.

We often see that even on a small vessel, a system can pay for it self in a year or two through simply fishing better.

For example: a UK customer was able to achieve his quota in eight trips instead of ten last season. This vessel spends approximately £6,000 in just fuel per trip, not including crew expenses etc. Larger vessels of course benefit exponentially more.

Something less frequently considered is the myraid of situations where Scanmar's catch control systems play a key role in detecting and averting catastrophic failures.

These situations don't just include towing for hours with a twisted trawl, or fallen doors in bottom trawling. An American vessel which relied heavily on cable sonar was in a lot of trouble when it failed during the 2016 B-Season for pollock. Normally they would have had to turn back and get it repaired, ending the season early.

Luckily for them, they had installed Scanmar's TrawlEye and catch sensors, and were able to finish the season with the help of only using the Scanmar gear. For reference, one trip typically yields \$1,000,000 worth of pollock. They now no longer see the need for cable sonar in bottom trawling, and have upgraded all but a single vessel of their entire fleet with full scanmar systems.



A fishing boat with a white hull and red stripe, named 'SENIOR 1356', is shown from a side-on perspective, moving through the water. The boat has green equipment on deck. In the background, there are dark mountains under a sky with scattered white clouds. The water is a deep blue with some white foam from the boat's wake.

### **Durability and longevity**

We have had our sensors dragged along the seabed under several tonnes of weight, only to suffer cosmetic damage. We've had countless fishermen try to smash sensors with a sledge hammer, in our famous durability tests, without even putting a dent in them.

There are systems that were purchased in the early 1990's, still in operating flawlessly to this day. We have recovered a trawl eye from the bottom of the ocean, which had laid there for over 15 years. After a quick battery change, it was ready to be used again. This legendary durability is the result of years of research and development, specifically aimed towards creating sensors which could be described as being indestructible.

### **Accuracy and reliability**

Whether it is ending a haul at the right time with the help of catch sensors, or towing at the correct water flow speed and angle with the help of the flow sensor, or the myriad of other efficiency optimizations that Scanmar products enable, it all hinges on accuracy. But scientists are every bit as dependent on accurate data, to ensure the validity of their research. This is why Scanmar scanmar is the preferred system for fishing research institutes across the world. With technological advantages such as automatic temperature correction, our products remain the only option for those unwilling to compromise.



# ScanBas 365



## Introducing Scanmar's new revolutionary Catch System

- Fully customizable to your preferences
- Modular drag and drop layout
- Intuitive and user friendly graphical display
- Multiple screen support standard
- New SpiderPanel feature

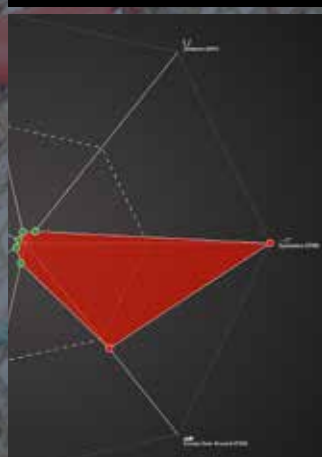






## ■ Drag and drop

The user is given complete control, and can put any sensor data on up to 6 different monitors, scaled to any size. This gives the option of having screens with lots of details in one window, or even having just one parameter featured. The configurational possibilities are endless.



## ■ Spider panel

The new spider graph simplifies the overview of crucial data, displaying it all in a way that quickly shows the parameters with deviations outside the set tolerances. It is essentially a customizable cruise control feature.



## ■ Unique profiles

It can often be desirable to change completely between various visual arrangements. Depending on the area you fish, or maybe multiple skippers on the same vessel. Customized layouts can be saved to individual user profiles, which allows users to quickly load a range of configurations.



# Door Height Sensor

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## ■ Scanmar's new Door Height Sensor

- Measures door distance to bottom, crucial in semi pelagic trawling.
- The Door Height Sensor is a cable based module to the SS4 DoorSensor. It shares the DoorSensors power and uplink.



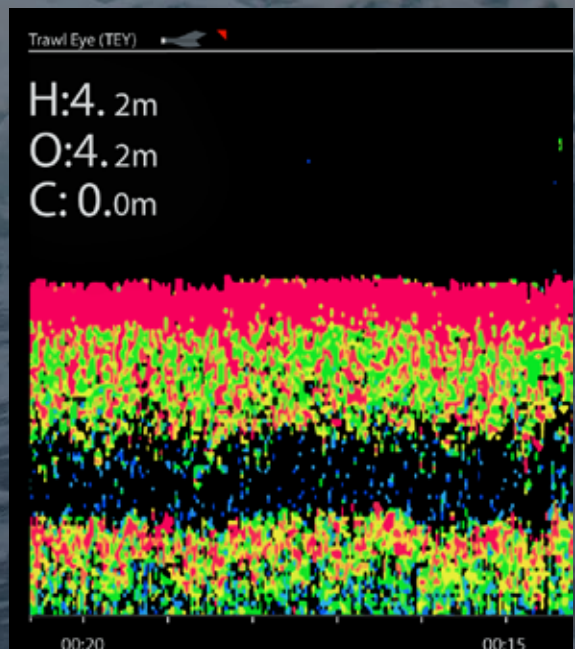


# Trawl Eye



## ■ The Trawl Eye Detects fish and shrimp not visible on the vessel's echo sounder

- Measures the height of the trawl opening, the height of the headline to bottom, and bottom contact or clearance
- Enables skippers to optimize trawl geometry
- Narrow beam and wide beam options for optimal detection
- Includes two batteries





# Sensors

## ■ SS4 Door Sensor

An important factor in all kinds of trawling is having control of your trawl doors. Water flow, speed, depth, wire length, bottom conditions and under water currents will affect the performance of your doors and the trawl efficiency



## ■ SS4 Clump Sensor

To avoid asymmetry when fishing with twin or triple trawl it is important that doors and clump are in line. Information about the doors' and clump's position in relation to each other is therefore essential.



## ■ Trawl Sounder

The TrawlSounder is an advanced echo sounder showing the height of the trawl opening, if the trawl is on the seabed and the distance between the trawl and seabed.



## ■ SS4 Catch Sensor

Multifunctional sensor, with Catch, SuperCatch, filling indicator, Up/down, Temperature and Rlp. Gives important information to help avoid overfilling, twisting and rips or tears in the net.





### ■ SS4 Depth Sensor

The DepthSensor is an invaluable tool in trawling and Purse Seine fisheries, providing accurate information of the sinking speed and depth, which enables the skipper to decide when to start trawling/pursing.



### ■ Flow Sensor

The FlowSensor has two available functions: TrawlSpeed and Symmetry. Trawl speed measures the speed of the waterflow into the trawl opening, and the symmetry function measures the side currents into the opening.



### ■ Grid Sensor

Used to fish more efficiently with grid. Measures the grid's angle, indicating the catch volume. Also shows if the waterflow through the grid is blocked, resulting in loss of catch.



### ■ Height/depth Sensor

Scanmar's new Height/Depth sensor for Purse Seine provides important and reliable information about the position and the movement of the seine at all times, increasing the catch ability and reducing the danger of tearing up the seine.





# Trawl Hydrophones

Scanmar's trawl hydrophones are developed in close cooperation with more than a thousand of fishing vessels, and are specifically designed for trawler applications.

The narrow vertical beam greatly improves the immunity to propeller noise, while the wide horizontal coverage simplifies operation.

Our hydrophones are available in two variants:

**Standard trawl hydrophone**

**Standard trawl hydrophone with temperature sensor**

**Hydrophone for Purse Seines**

Under certain conditions, the temperature at the surface provides a good indication of the temperature profiles further down in the sea. By logging over time, this can give good estimates of the possible presence of fish.





Good hydrophone positioning is key to a stable signal transfer between the sensor and the receiver, and there are several options here depending on the type of the vessel and purse seining. In general, a compromise is found between clear line of sight to the sensors, propeller noise, interference from other equipment and air bubbles under the hull.

For keeled vessels operating under difficult conditions, hydrophones can be mounted on the keel or in trunks specially produced for Scanmar.

In recent years it has become more common to install two sets of hydrophones. Two in front and two back. On new vessels for full coverage. This is in order to optimize the signal reception in difficult cargo and/or catch conditions.



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