No more human error.
The first scanner in the world that classifies tuna by species, size and quality

Standalone equipment.
Classifies pieces between 1 kg and 80 kg at speeds of up to 50 tons per hour

Automatic classification
of pieces in specific containers according to the client's criteria

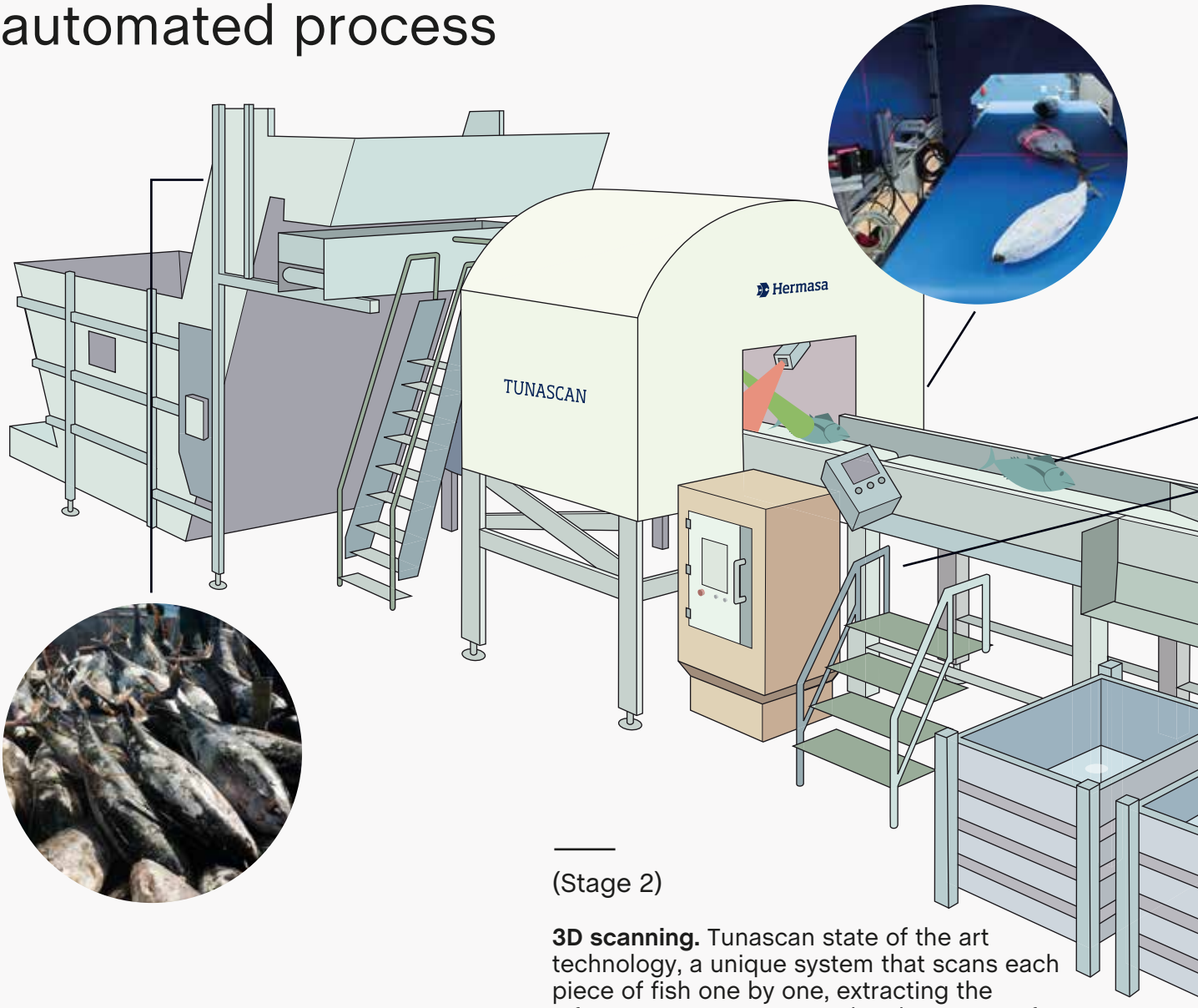
Tunascan®

3D Laser system
Automatic tuna classification system

TUNASCAN
3D LASER SYSTEM

Hermasa
Canning technology

The stages of an automated process



(Stage 1)

Feeding the line. The tuna, regardless of their mixture of species, size or degree of damage, are unloaded into a hopper, and they are separated and correctly aligned until they reach the 3D scanning area, using different transport elements.

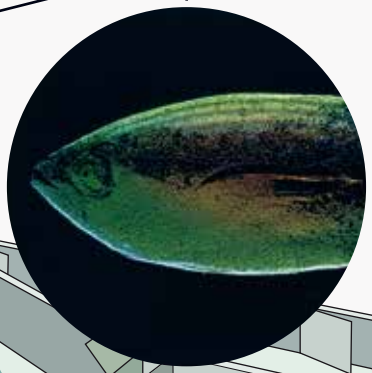
First scanner in the world that classifies tuna by species, size and product quality

(Stage 2)

3D scanning. Tunascan state of the art technology, a unique system that scans each piece of fish one by one, extracting the information necessary so that, by means of artificial intelligence algorithms and neural networks, they are correctly classified by species, size or quality. This process is not affected by the habitual presence of pieces of ice or frost.

(Stage 3)

Automatic classification in specific containers. The user can define the classification criteria, assigning a specific type of piece to each container (Species and size). The classification line designed by Hermasa allows stowage without the need for human intervention.



Efficacy of Tunascan in determining the species of tuna:

>95%

correct

Efficacy of Tunascan in determining the weight of the fish:

>98%

correct

Able to classify up to 50 tons of pieces per hour weighing between <1 and 80 Kg

(Stage 4)

Data management. All the information is stored in a database connected to the company's ERP. With the necessary authorisation, this information can be accessed in real time from any computer or mobile device, stored in history files and even used to generate work reports.

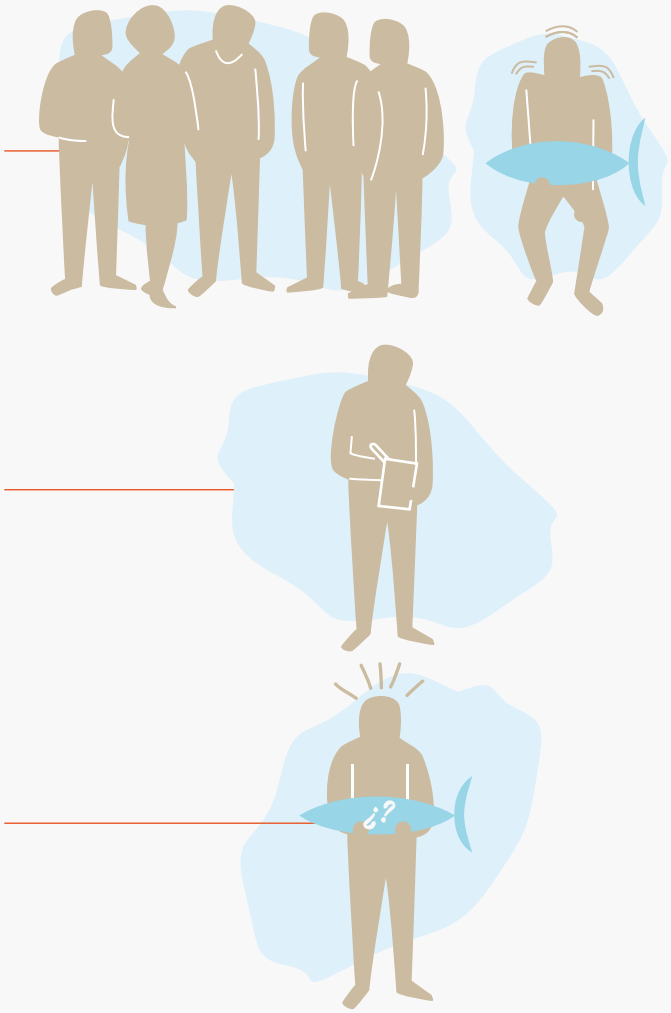
Automatic classification of the pieces in specific containers

A factory **without Tunascan®**

1. Personnel. The production area dedicated to receiving and classifying the tuna needs a numerous workforce. In addition to the physical process of moving and classifying the fish experienced workers with a high degree of concentration to visually distinguish different species, as well as weighing the fish, are required.

2. Data processing. To convert all this work into information for the company requires a great deal of effort for workers who have to take care of weight, types of fish, rejects, etc. and who have to use physical documents and then move them to different departments in the company. Then it is necessary to 'translate' all this documentation to the company's ERP. This is a process that can take hours.

3. Quality protocols. The procedure without Tunascan leaves the quality standards established by the company in the hands and attention and subjective judgement of the workers. Possible human error on discerning the pieces could affect the company's commitments with clients in the case of appearance of pieces of an undesired species, size or quality.



A factory **with Tunascan®**

1. Personnel. Once the fish is unloaded into the hopper, the process is totally automatic. It can classify 10 - 50 tons per hour, equivalent to 400 tons in an 8-hour shift. As the 3D processing and classification by size and weight in specific containers is automated, human error is eliminated and work hazards are reduced.

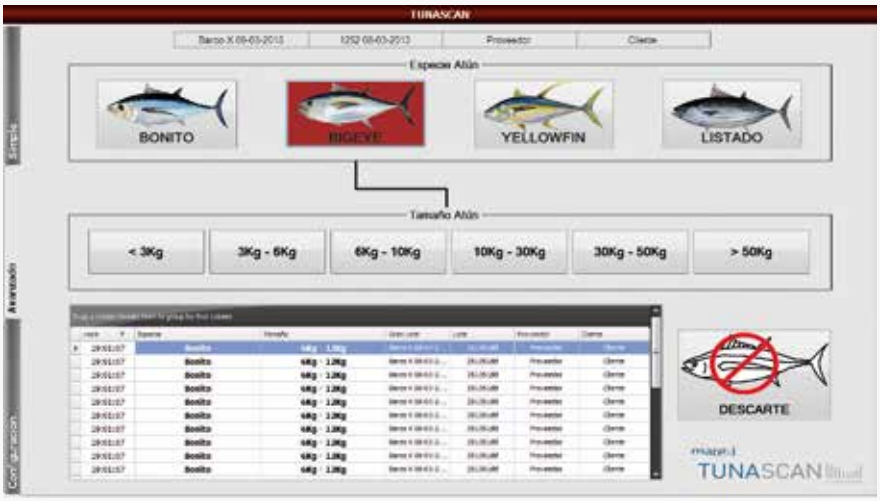
2. Data processing. The Tunascan database is connected directly to the company's ERP, allowing authorised workers to access the information generated, avoiding the risk of losing papers when moving from one department to another in the company.

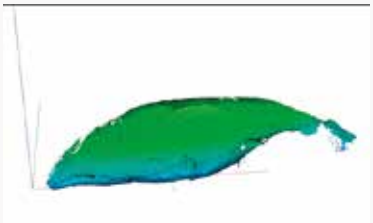
3. Quality protocols: Tunascan software enables the company to adapt classification criteria according to the requirements of each moment or of their clients. Once they have been established, they will remain constant and unaffected by the subjective interpretation of each worker. Thus client satisfaction is guaranteed, as they are offered optimum pieces according to the species, weight and quality criteria established.

How does it work?

The technology used to analyse the tuna is 3D laser profilometry that turns each scanned piece into a cloud of reference points in space. The real global innovation is the capacity of Tunascan to process this three-dimensional data and convert it into reliable results > 95 % correct in species and > 98 % in weight, or its ability to detect damaged fish.

The high processing speed enables classification of up to 50 Tons of tuna per hour. The greatest technological breakthrough in “how Tunascan thinks”.





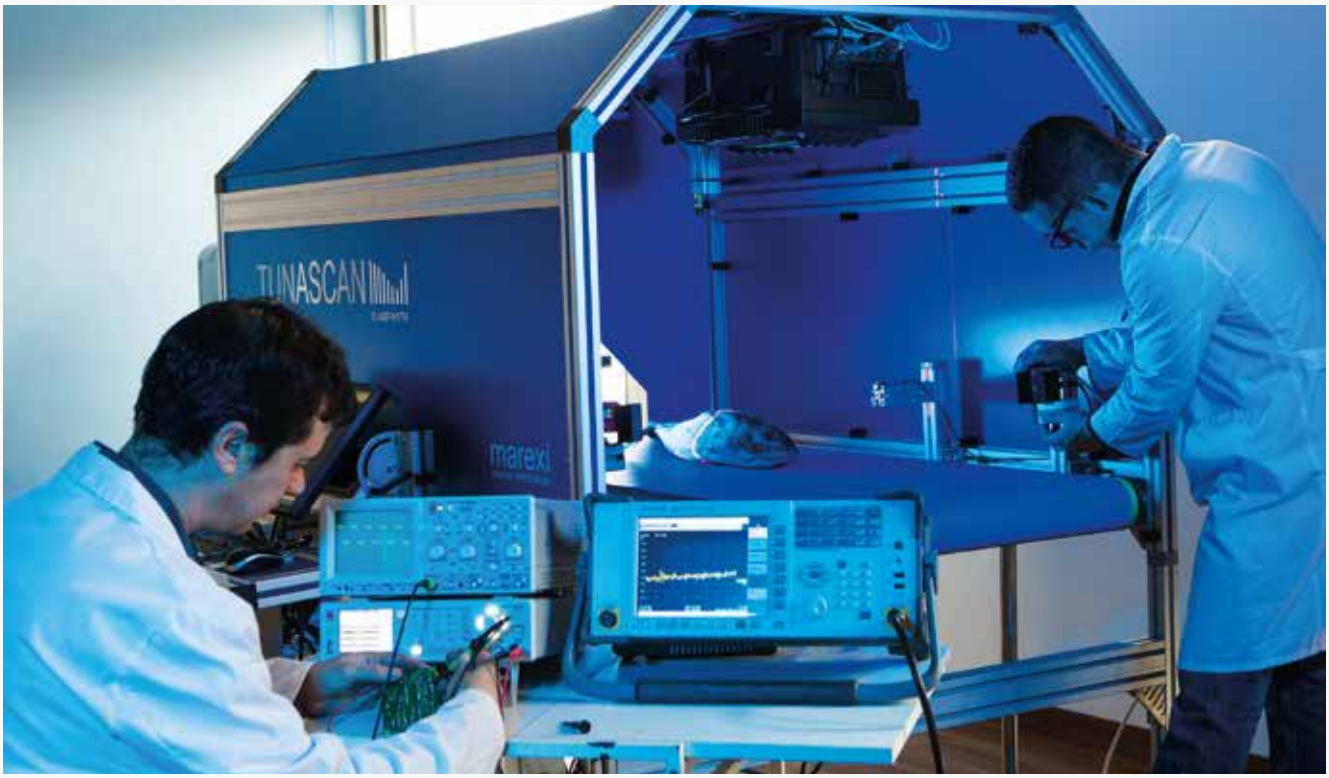
How does it 'think'?

A multidisciplinary team of biologists, physicists, engineers and mathematicians have worked for years to develop Tunascan, analysing the biomorphological characteristics of more than 10,000 tuna fish of the most commercialised species, in order to develop a series of algorithms and neural networks, the effectiveness of which has been proven by means of DNA analysis.

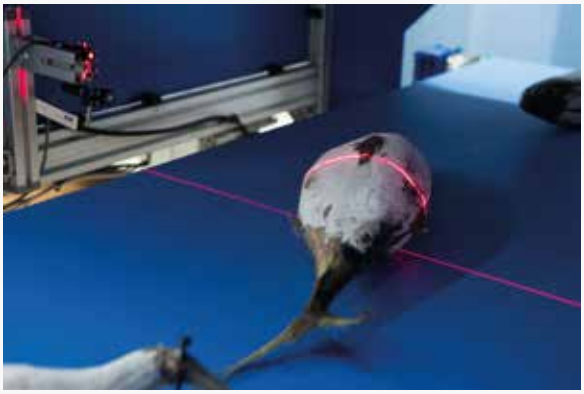
Hermasa and Marexi, the best manufacturing for the best idea

For more than thirty years Hermasa has been researching and manufacturing equipment and production lines sold in more than sixty countries. Our company is uniquely positioned in the global fish canning sector. This is the reason why we have worked with Marexi to develop and manufacture Tunascan.

Hermasa Canning technology + marexi marine technology



Marexi is a Spanish company exclusively dedicated to Research, Development and Innovation in technological products applied to the marine environment. Their Innovations are protected under different international patents. Hermasa will exclusively manufacture and commercialise Tunascan for the whole world. No manufacturer and distributor could be better positioned to market Tunascan on all five continents.



The technological world of canned tuna: Hermasa

The fish canning machinery sector is one of the most technological in global industry, requiring R&D&I companies such as Hermasa to offer levels of productivity, process automation and efficiency that were unthinkable only a few years ago. For many years the researchers in Hermasa are renowned for having revolutionised the global canned tuna sector with the famous Tunipack, the fastest and most efficient packing machine in the sector, with a capacity for producing 500 cans per minute, with the maximum level of automation. In addition to its machines, Hermasa manufactures and installs complete canning production lines in any location in the world.

Hermasa
Canning technology

Hermasa, design and manufacturing
of canning machinery

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