



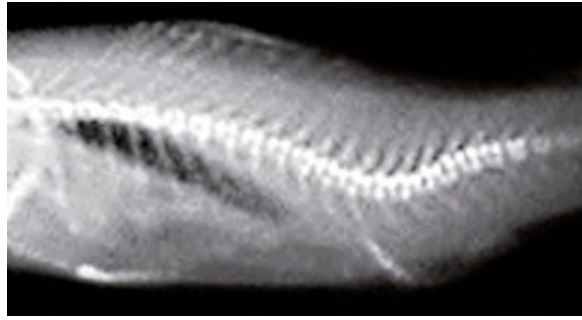
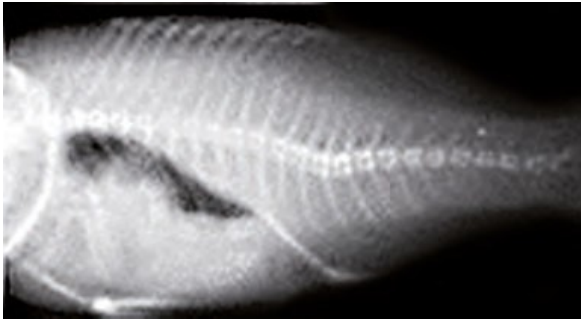
AQUADEF

THE SOLUTION THAT OPTIMISES THE RESOURCES
OF YOUR AQUACULTURE BUSINESS.



INNOVATION

AQUADEF® is the first automatic system for the detection and separation, in real time, of fry with malformations. Highly technological equipment that also accurately determines the number, size and average weights of the fry, separating batches of different species by size for the aquaculture sector.



The main innovation that AQUADEF® introduces to the sector is the automation of the depuration process. The system allows to know the number and size of the fry population and to easily manage all their biometric and morphological data thanks to the detailed reports that AQUADEF® generates automatically.

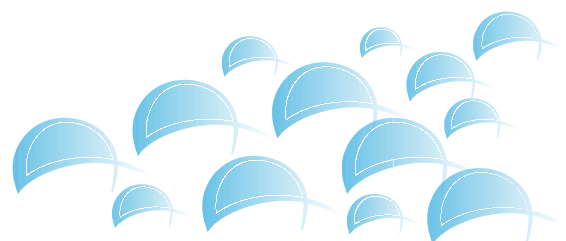
The direct impact that AQUADEF® has on the aquaculture farms where it is integrated has a direct effect on the reduction of costs (fixed and variable), making these businesses profitable by helping to manage them in an optimal way.





Throughout several years of research and development, different prototypes of the AQUADEF® equipment have come to light thanks to experts in engineering and artificial vision and the technical collaboration of important companies in the sector. The equipment has been optimised to its final version, presenting a new product that represents a real technological revolution for the sector, making the processes of aquaculture farms more profitable.

MAREXI offers the AQUADEF® system, an equipment that, thanks to its innovative and precise fish inspection process, is capable of providing substantial advances in farming techniques that improve the welfare of the fry and favour the obtaining of benefits for the company, as the return on investment is very short term.



TECHNOLOGY

AQUADEF® incorporates a unique and innovative high-definition, high-precision vision system based on machine vision techniques.

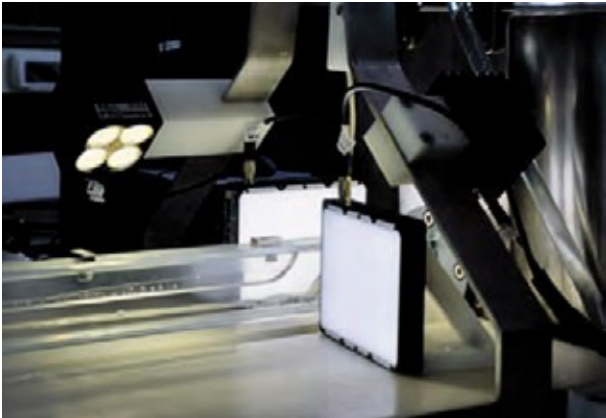
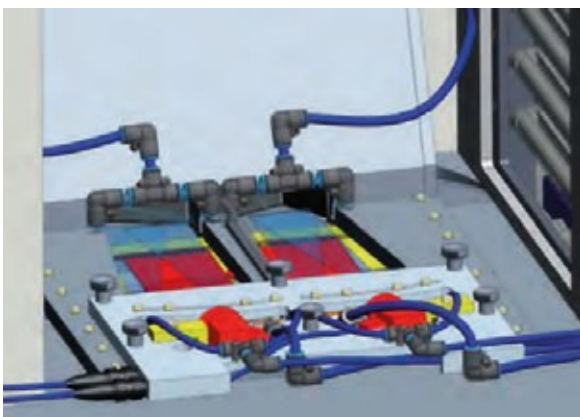
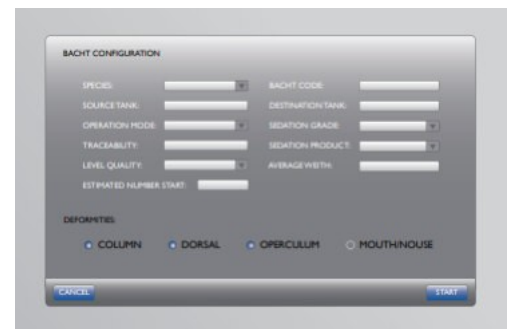
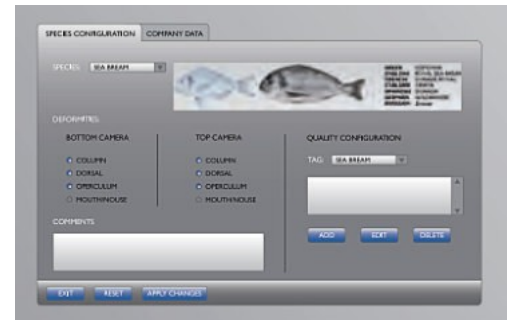
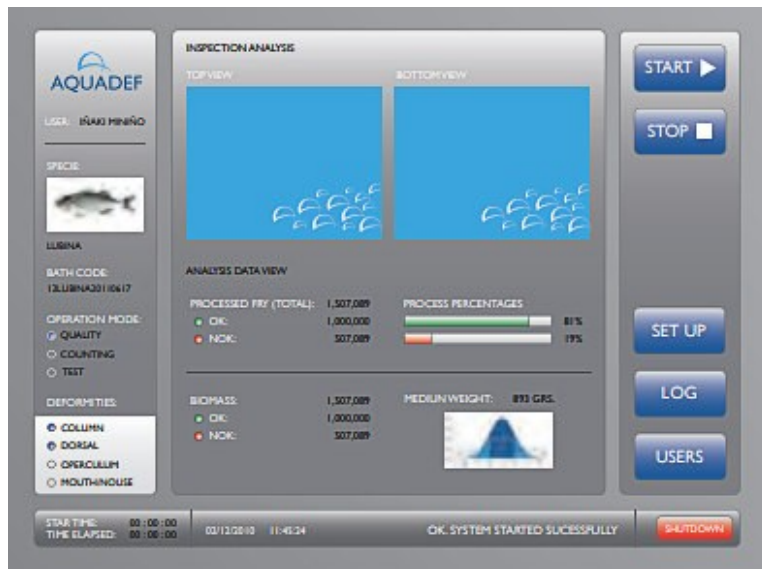


Image captures are performed by dedicated photosensors combined with an integrated high-frequency illumination system. The analysis and decision making is performed by a microprocessor module, which uses algorithms specifically developed by our vision engineers. A precise combined hydro-pneumatic system handles and separates the fry inside the AQUADEF®.

The functional design of each component of the system allows the AQUADEF® to offer a very high effectiveness in the detention of unfit fry according to the quality standard of each producer (configurable by software), as well as in the counting and estimation of fry size, and all this at the working speeds required in an industrial plant.



Communication between the AQUADEF® system and the user, the so-called human-machine interface, is via a flat touch screen with high luminosity and maximum protection for aggressive environments.



In order to optimise the operation of the system, MAREXI has developed a complete computer application for control and management, called AQUAVISIOSOFT, whose basic functions are the supervision and control of each of the elements that make up the system (with self-calibration and alarm management capacity) and a graphic display that shows, in real time, how the different programmed tasks are being carried out (e.g. counting in the processes of unfolding tanks, deliveries and receptions, estimation of biomass, characterisation of deformities in batches, etc.). programmed tasks (e.g. counting in tank splitting processes, deliveries and receptions, biomass estimation, characterisation of deformities in batches, etc.).

All these actions, together with all the information generated in the process with AQUADEF®, are recorded in the unit's database and can be stored internally, as well as exported (Wifi or USB memory) in different formats (Excel, Word, etc.). This data can be visualised and printed in complete reports supported with 3D graphic representations and with the ability to be customised (e.g. with the company logo).

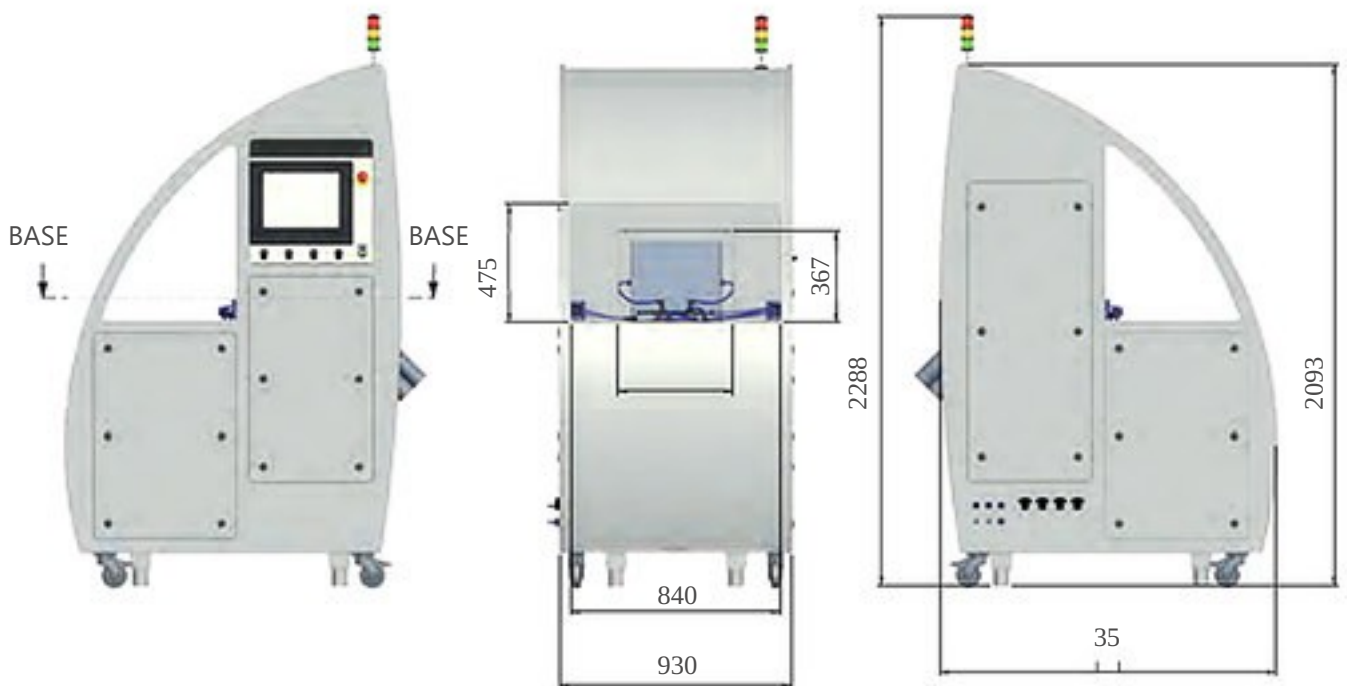
To facilitate communication between company departments (e.g. with the quality department, the technical department or management), AQUADEF® integrates wireless connectivity via Wifi, allowing data transmission to printers, tablets, PCs and other Wifi enabled equipment.

ADVANTAGES

The main objective achieved by integrating AQUADEF® is the automation of processes that are currently carried out manually, allowing producers to set tasks for culture tanks knowing exactly the total number, the real biomass of the fry and the exact percentage of deformed fish. All this at a more competitive cost by contributing to the optimisation and better management of available resources.

AQUADEF® offers the following advantages:

- Automate production.
- Eliminate human error.
- Obtain highly accurate automatic detection of deformities in fry.
- To know the exact number of fry processed.
- To know automatically and in the same movement, individual and total biometric data.
- Guarantee parameters (number, size and quality) in the purchase and sale of batches of fry.
- Increase processing speed (purification and sampling):
By early disappearance of fry considered unfit, costs for production maintenance (volume-surface, feed, treatments, etc.) can be optimised, as well as minimising the time between culture phases.
- Automatically standardise the quality control of the fry production process to the customer's needs.
- Improve stocks as there are no more specimens that are not valid for fattening.
- Obtain detailed and accurate reports with the results of the entire process, automatically and easily, by means of the advanced management software that integrates AQUADEF®.
- Offer the customer a product guaranteed by the quality of the AQUADEF® guarantee.
- Low maintenance costs.
- Equipment equipped with international remote assistance via internet.



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*Once again Marexi innovates
at the service of the food industry*



Company founded in 2004 in Vigo, SPAIN.
Marexi researches and develops technological solutions.
Marexi products and solutions are protected by international patents.

*Technological solutions for fisheries,
aquaculture and environment*

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