



## Automated fish filleting solution ensures quality and cost efficiency at Seafood Parlevliet

Raw brined herring is an acquired taste and holds a special place in many Dutch people's hearts. Combined with a sprinkling of raw onions, many say that taking a bite of the herring while holding onto the tail is the only right way to eat it. However, this poses special requirements during the filleting process, since the tail of the fish must be properly preserved.

Netherlands-based company Seafood Parlevliet has produced packaged fish products since 1968 at a family-owned factory in the harbor of IJmuiden. Specializing in delicacies such as herring and mackerel, Seafood Parlevliet is a market leader in the retail sector and supplies to the wholesale trade and the healthcare and catering markets as well.

Filleting herring involves several manual steps that generally must be performed by skilled and experienced workers. In Northern Europe, the seafood market is very competitive, making it difficult to find the right employees. Seafood Parlevliet started working with local automation partner Innovotech BV to develop a new prototype to ensure competitive production by automating the manual steps.

In March 2018, the factory went through a complete rebuild to automate the entire production line, with three lines now in operation.

### Business need

Fish manufacturer Seafood Parlevliet needed to relieve the pressures of a skilled labor shortage by automating its fish filleting processes.

### Unique solution

The manufacturer worked with Innovotech BV to build a solution using control and vision technologies from Omron.

### Customer benefits

Seafood Parlevliet has achieved a 75% reduction in manual labor requirements while speeding up its production by a factor of five.

# The solution

## Automated filleting with Omron vision and control



### The need

Several considerations stood in the way of automating the meticulous fish filleting process, as high quality, safety and hygiene must be ensured throughout. For one thing, the fish need to be cut to exactly the right size while keeping the tail; the skin and fins must consistently meet customer requirements; and there must be no traces of blood present.

Since the herring must be frozen for a minimum of 48 hours to ensure that no parasites are present, Seafood Parlevliet stores the fish in a frozen warehouse in bags of brine. This also ensures that the fish can be harvested at the best time in the summer and prepared for consumers on demand. Once thawed, the herrings go through the automated filleting process in several steps. The solution also includes adding the diced onions as well as placing the fillets into their final packaging ready for consumers.



### The technology

The automated production line includes various Omron components, such as frequency regulators, servo drives, feeding solutions and safety blocks as well as the brain of the machine in the panel solution. The panel building for the electrical control of the system was carried out by A. Hagoort Besturings Techniek, a specialist in machine control solutions.

In addition, the Omron FH vision system and cameras, paired with lighting and machine vision software, were implemented to carry out several vision checks during the process. The inspection ensures that the appearance of the fillets meets the company's quality standards. Any fish that does not meet the requirements will be removed from the production line.



### The outcome

Since the introduction of the first prototype and thanks to the progress made from the vast amount of data collected throughout development, the speed of fillets handled by one worker has gone up from approximately 200 per hour to nearly 1000 with the latest version of the automated solution. The machine can handle any type of herring with the consistent high levels of precision and accuracy expected by customers.

The new system has so far resulted in a 75% reduction in manual labor for Seafood Parlevliet, with the only manual step in the process being the pick-and-place of the fish to the production line. The company is very happy with the support from Omron and is looking forward to working together on further projects.

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