

Ameridrives

Bauer Gear Motor

Bibby Turboflex

Boston Gear

Delroyd Worm Gear

Formsprag Clutch

Guardian Couplings

Huco

Industrial Clutch

Inertia Dynamics

Kilian

Lamiflex Couplings

Marland Clutch

Matrix

Nuttall Gear

Stieber

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Svendborg Brakes

TB Wood's

Twiflex

Warner Electric

Warner Linear

Wichita Clutch

# Stainless Drives Take Over at Fish Processing Plant



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# Stainless Drives Take Over at Fish Processing Plant



The fish processing lines can be reconfigured for different products.



Variable speed drives ensure conveyor speeds are matched precisely.

*Creating a reliable, efficient and robust processing line for a hygienic environment that can also operate at  $-43^{\circ}\text{C}$  ( $-45^{\circ}\text{F}$ ) is no simple task. However, having found a solution that met so many requirements, one major international fish supplier chose to upgrade its conveyor drives to stainless steel variants to improve the mechanical resilience of the system.*

Processing fresh fish requires a hygienic environment, regular washdowns and very low temperatures for freezing the final products. Keeping the whole process moving, while still offering low costs of ownership, requires specialized equipment that can endure the environment while providing reliable and efficient service. The solution for one leading international fish supplier came from Bauer Gear Motor, which has supplied the latest stainless steel gear motors for use throughout the company's facility in Urk, Netherlands.

## Designs for Hygienic Applications

Van Der Lee Seafish processes approximately 200 tons of fresh fish every week and every last product is moved through the sorting, filleting, breaching, freezing and packaging processes by conveyors. The drives for these conveyors must be able to meet the strict hygiene requirements of the food industry as well as offering a host of other features.

Willem Van der Lee, Technical Director at the company, explains: "The quality of our products is paramount, and that requires the fish to be processed quickly and efficiently. At any given time, we have seven processing and five packaging lines operating and each one uses a variety of motors and drives. All of this equipment requires spare parts to be kept in stock to minimize any downtime in the event of a breakdown."

In an effort to standardize the equipment on the production lines, the company was introduced to Bauer's gear motor concept, which would allow a single product line to be used throughout the factory. The AsepticDrive from Bauer Gear Motor, which is part of Altra Industrial Motion Corporation, offered a hygienic design with smooth surfaces and no cooling fins, preventing the accumulation of bacteria.

## Improved Efficiency, Lower Costs

The introduction of the AsepticDrives greatly reduced the spare parts inventory, saving the company both time and money. The permanent magnet synchronous motors (PMSMs) offer excellent energy efficiency, especially under partial load. Furthermore, the synchronous design of the PSM motor means that not only is it superior at converting electrical energy into mechanical power, but it also offers the added benefit of maintaining constant speed independent of the load. This means that motor speed does not vary, despite overload variations, or cases of voltage drop, as long as the main frequency is kept constant.

Having installed the new gear motors several years ago, the company reviewed their performance and found that, on the whole, they had delivered beyond expectations. The only exception was the hygienic coating, which had suffered mechanical damage caused by other equipment thus jeopardizing the hygienic design of the units.

This led to a discussion with engineers from Bauer who explained that since the AsepticDrive units had been installed, Bauer had created a stainless steel version of the HiflexDrive range. This offered considerably greater mechanical resilience as well as hygienic design and the ability to withstand a heavy washdown environment.

### **Versatility Improves Productivity**

Willem Van der Lee explains: “This really is the ultimate solution for our business. The AsepticDrive has delivered a number of savings in terms of spare parts inventory. The new HiflexDrive in stainless steel will be a direct replacement and still be able to operate reliably in our frozen storage areas, which are so important in maintaining the quality of our products.”

Bauer’s HiflexDrive is offered in a modular format that allows the ideal combination of gearbox, electric motor and external finish to be selected for every application. Motors rated up to IE5, according to IEC TS 60034-30-2, offer excellent energy efficiency and the addition of variable speed drives allow the conveyor speeds to be set exactly.

Including a PMSM in the drive arrangement offers several key benefits. It reduces heat losses from the rotor by 100%, total losses by approximately 25% and increases total efficiency by 10% or more. These savings represent a significant advantage, especially for stainless steel versions, which dissipate heat less efficiently than aluminum or cast iron.

The excellent flexibility of the HiflexDrive system makes it ideal for a wide range of tasks in the food and beverage industry. Choosing the stainless steel construction eliminates hygiene risks due to mechanical impacts or long operation in areas with intensive cleaning regimens. The design provides the best possible ingress protection, up to IP69K, which is a special designation for washdown applications where high pressure high temperature water is used.

For Van der Lee Seafish, this flexibility means that conveyors can be moved from one process area to another and still operate reliably and efficiently. The implementation of the stainless steel HiflexDrive units will provide the level of mechanical resilience that is required in this application and ensure continued productivity.

**Click here to watch video**

<https://p.widencdn.net/gw0w3q/V-0134-BGM>



The AsepticDrive units reduced the spare parts inventory and offered excellent energy efficiency.



The stainless steel variant was introduced in areas where increased mechanical resilience was required.

## About Altra Industrial Motion

Altra is a leading global designer and manufacturer of quality power transmission and motion control products utilized on a wide variety of industrial drivetrain applications. Altra clutches and brakes, couplings, gearing and PT component product lines are marketed under the industries' most well known manufacturing brands. Each brand is committed to the guiding principles of operational excellence, continuous improvement and customer satisfaction. Highly engineered Altra solutions are sold in over 70 countries and utilized in a variety of major industrial markets, including food processing, material handling, packaging machinery, mining, energy, automotive, primary metals, turf and garden and many others.

Altra's leading brands include Ameridrives, Bauer Gear Motor, Bibby Turboflex, Boston Gear, Delroyd Worm Gear, Formsprag Clutch, Guardian Couplings, Huco, Industrial Clutch, Inertia Dynamics, Kilian, Lamiflex Couplings, Marland Clutch, Matrix, Nuttall Gear, Stieber, Stromag, Svendborg Brakes, TB Wood's, Twiflex, Warner Electric, Warner Linear and Wichita Clutch.



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