

Ameridrives

Bauer Gear Motor

Bibby Turboflex

Boston Gear

Delevan

Delroyd Worm Gear

Deltran

Formsprag Clutch

Guardian Couplings

Huco

Jacobs Vehicle Systems

Kilian

Kollmorgen

Lamiflex Couplings

Marland Clutch

Matrix

Nuttall Gear

Portescap

Stieber

Stromag

Svendborg Brakes

TB Wood's

Thomson

Twiflex

Warner Electric

Warner Linear

Wichita Clutch

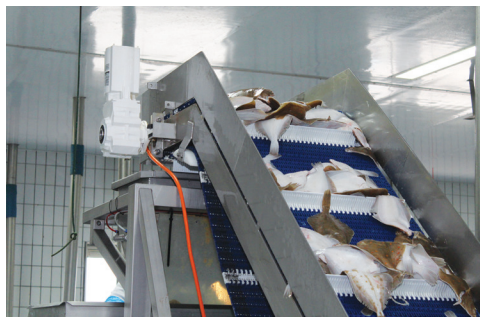
Stainless Steel:

**The Favored Option for Geared Motors
in Food and Beverage Applications**



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From conveyors to processing machines, geared motors are utilized across the food and beverage production process. While specialized coatings exist to ensure they offer the cleanly compliance required in this highly regulated industry, specifying stainless steel geared motors has become the industry standard.

Yasar Yüce, Product Manager at Bauer Gear Motor, a premier brand of Altra Industrial Motion Corp., explores why stainless steel is often considered the best option, but also examines if this is always the case for end users.

The challenges facing motors in the food and beverage industry are many. Rigorous hygiene standards govern all equipment on production lines. Washdowns with high pressure water and chemicals happen with regularity, so any device operating in these conditions must offer high ingress protection to defend a device's internals from damage. A high IP rating is a must.

These washdowns are employed to limit the spread of contaminants. To further limit this spread, components such as geared motors should offer a smooth design to limit opportunities for contaminants to gain a foothold. This smoothness must also be achieved with durability, as geared motors will be expected to operate to the same hygiene standards for many years without risking the quality of the food or beverages processed on the line. Corrosion poses the same risks, so a highly resistant exterior is the minimum requirement for any geared motor.

Hygienic standards are dictated by national and federal legislation, so any coatings or materials utilized in a design must match up to these pre-existing regulations. Organizations such as the FDA and NSF uphold these standards.

Stainless steel geared motors are often selected as they meet all application requirements without the need for further coatings. As a base material, stainless steel is inherently resistant to corrosion and chemicals, ensuring that repeated washdowns do not adversely affect the reliability or FDA compliance of the geared motor.

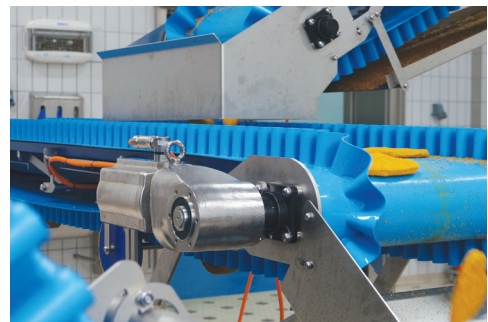
A stainless steel solution will be easier to maintain than a geared motor that relies on a specialized coating for its hygiene compliance. When stainless steel is scratched, it does not

compromise the corrosion or contamination resistance of the geared motor, preserving its FDA conformity. With coatings however, if the top layer is scratched or flakes, it provides an opportunity for contaminants to gain a foothold while losing many of its corrosion protection properties. In areas of mechanical risk, where the geared motors are likely subject to impact damage or excessive maintenance checks, this fragility is less than ideal.

For maintenance engineers working on-site it's important to consider that any loss of regulatory conformity in a geared motor will result in production downtime as the problem is remedied. In an industry that operates with low margins per unit, protecting uptime is vital to ensuring profitability. So, with lower maintenance requirements and increased durability leading to longevity of FDA conformity, stainless-steel geared motors remain the industry standard.

The beauty of engineering is that every application is varied, so that's not to say that stainless steel is the optimum solution for every food and beverage production area. In areas with no impact risk, specialized hygiene coatings can provide an alternative option to plant operators. Bauer Gear Motor recognizes this and offers a range of aseptic geared motors with optimized coating systems resistant against nearly all common industrial cleaners in the pH2 to pH12 range – including an IE4 super-premium efficiency permanent magnet motor solution.

Our engineers help customers to assess their environments and provide expert guidance on what solution is most appropriate. We then work in conjunction with the customer to specify, install and maintain an optimum geared motor solution that will preserve uptime. In our experience it's correct that stainless steel has become the industry standard solution in the food and beverage industry – however it's important to offer customers the solution best suited to their needs.



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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, Delevan, Delroyd Worm Gear, Deltran, Formsprag Clutch, Guardian Couplings, Huco, Jacobs Vehicle Systems, Kilian, Kollmorgen, Lamiflex Couplings, Marland Clutch, Matrix, Nuttall Gear, Portescap, Stieber, Stromag, Svendborg Brakes, TB Wood's, Thomson, Twiflex, Warner Electric, Warner Linear and Wichita Clutch.



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