

INNOVATION

SPOTLIGHT from the brands of Altra Industrial Motion Corp.



BOSTON GEAR STAINLESS STEEL GEAR DRIVES ENHANCE FOOD SAFETY

Hardly a day passes without a new FDA recall of some food product. And, despite the signing of the Food Safety Modernization Act into law in 2010, the most sweeping reform in food safety in more than 70 years, the number of Americans falling ill from food contamination infections continues to rise at an alarming rate – about a 45% increase in the last three years alone.

While there are many causes of food contamination, food processing equipment design plays a part. Motor and speed reducer drivetrains are found on all types of conveyors and equipment in food processing plants producing everything from beef and poultry to processed ready-to-eat products – in fact anything that people or their pets consume. So, food processing equipment design, engineering and materials can play a big part in a plant's drive for food safety excellence. Anything that can be done to minimize contamination and reduce the costs of sanitizing these units is a worthy investment.

Since powertrain components are subject to severe high pressure, high temperature and corrosive solutions during washdowns, the materials from which they are constructed and how they are physically designed are key factors in whether they contribute to the problem or are part of the solution for safer food.

STAINLESS STEEL WITHSTANDS EXTREME WASHDOWNS

Harsh washdowns can cause severe damage to the protective paints and coatings used on typical cast iron and aluminum drivetrain components. Chips of dislodged coatings and paint can enter the food process stream. Exposed cast iron and aluminum housings can result in rust drippings, which can also cause processed product contamination.



 **Boston**
Gear

An Altra Industrial Motion Company

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Over the past decade, drivetrain components made of stainless steel have grown in popularity to become the preferred choice due to their ability to provide the highest resistance to corrosive washdown solutions.

Boston Gear has been at the forefront in the development of innovative stainless steel worm gear reducers, gear motors and other components including motors and bearings assemblies.

REVOLUTIONARY BOSTON GEAR SS700 STAINLESS STEEL SPEED REDUCERS

For decades, the food processing and packaging industries have relied on the proven performance of Boston Gear 700 Series worm gear technology. The Stainless Steel 700 Series speed reducer takes that trusted performance to new levels by providing maximum corrosion resistance in the most challenging, caustic washdown environments.



This 26' long by 102" wide custom lettuce mixing system consists of five sections, each section features a belt conveyor which transfers product to a cleated inclined conveyor. Boston Gear SS700 Series speed reducers were installed on all ten conveyor drives in the system.

Boston Gear recently redesigned its 700 Series worm gear speed reducer for poultry, meat, fruit and vegetable processing applications that need, not only long-life materials, but specialized design advantages to withstand the corrosive chloride salts and high acid levels in most washdown solutions.

A unique rounded housing, which replaced the traditional flat-top design, eliminates fluid pooling on the unit. The housing is made from 316 stainless steel. Exposed hardware is shielded by smooth-surface covers that help prevent particle and bacteria accumulation. The redesigned unit is NSF certified and has the same footprint of the standard 700 Series for easy replacement.



BOSTON GEAR EXPANDS ITS STAINLESS STEEL OFFERING WITH NEW SS2000R HELICAL BEVEL GEAR DRIVES

Early in 2014 Boston Gear introduced the Series 2000 line of right angle helical bevel gear drives and gear motors. OEMs, end users and distributors were asked what mattered most when it came to gear motor design. Their responses helped guide Boston in the development of the new Series 2000 product line.

These new gear drives and gear motors were loaded with unique performance and convenience features to meet a wide variety of application requirements. The Series 2000 provided customers with advantages including enhanced performance, design flexibility, fast and easy installation, and low maintenance. They were also designed to be dimensional drop-in replacements for a select competitive product.

Boston Gear has recently introduced stainless steel 2000R helical bevel gear drives to meet the growing demand of the food processing and packaging industries.

SS2000R units feature the premium efficiency of ground helical bevel gearing, 316 Series stainless steel exterior, and domed crown and rounded corners for superior washdown run-off.

Other features include:

- Mounting registers to speed-up installation
- Motor coupling designed for easy removal
- Motor flange with O-ring for positive sealing
- Automatic entrapment of metallic wear debris to prolong product life
- Laser-marked nameplate impervious to the effects of caustic washdowns
- Optional high-pressure washdown deflector to protect seals against highly aggressive environments