Washdown Gear Drives & Gear Motors for the Food & Beverage Industry

The Best Choice for Food & Beverage Safety

Bauer Gear Motor®
Altra Industrial Motion

Boston Gear®
Altra Industrial Motion
ALTRA INDUSTRIAL MOTION PROVIDES
POWER TRANSMISSION SOLUTIONS FOR THE
FOOD AND BEVERAGE INDUSTRY

Tightened federal regulations regarding food safety and hygiene in food processing and beverage industries has forced producers to continue to adapt their equipment to meet those changing requirements.

The areas in production facilities where drive systems are located are often the areas that have the most stringent requirements for hygiene and sanitation, due to their proximity to the food product. The key to food safety is prevention of microbial contamination and bacteria growth. Equipment in these areas needs to be resistant to alkali or acid based cleaning agents and disinfectants. This is the primary focus of most HACCP analyses.

For installations where the drive system is located above the food product, there is a higher risk of product contamination due to rigorous cleaning standards. For these installations special attention must be given to drive design & materials, so that bacterial growth on surfaces will be avoided. Drive systems with the most extreme protection such as stainless steel and aseptic units are most often utilized in these applications.

For installations located near but below the food line, exposure is less likely but still possible. Therefore, it is recommended that the drive units be readily accessible, easy to clean, and have resistance to commonly used cleaning products. In these applications, painted drive systems are often used.

In other areas of the plant where there is no contact with open product flow, the hygiene requirements are typically less strict, allowing for standard finish drive products.

Some producers use highly caustic wash down solutions; others use high-pressure hot water. Equipment can also be exposed to process by-products such as sugar, seasonings, brines, or animal blood. Whatever challenges the integrity of your drive system, Altra has a solution for you. The family of gearing & motor products manufactured by Boston Gear and Bauer Gear Motor includes varying degrees of protection against the harsh elements increasingly used in the prevention of microbial contamination and bacterial growth in hygiene sensitive environments.

www.AltraFoodandBeverage.com
AS THE LEADING INNOVATORS IN GEARING & GEAR MOTOR TECHNOLOGY...

Boston Gear and Bauer Gear Motor provide a full complement of worm and helical gear drives together with helical, bevel and parallel shaft gear motors with varying degrees of sanitary protection to meet the needs of the diverse requirements within a production facility. Boston Gear products enable flexible motor assembly independent of the manufacturer while the gear motor solutions from Bauer Gear Motor provide compact space saving integral geared motor solutions. The varying drive system products shown below are designed for not only for harsh-duty washdown typically located at or above the food product but also for applications where hygiene and cleanability are of upmost importance.

STAINLESS STEEL  Highest mechanical resilience in washdown applications

**BOSTON SERIES GEAR DRIVES**

- **Helical Bevel Gear Drive**
  - SS2000R Series
- **Worm Gear Speed Reducer**
  - SS700 Series
- **Helical Inline Gear Drive**
  - SS2000 Series

**BAUER SERIES GEAR MOTORS**

- **Helical Bevel Gear Motor**
  - HiflexDRIVE – SS
- **Helical Gear Motor**
  - Series BG – SS

**SHAFT ACCESSORIES**

- Mounted Bearings
- Jaw Couplings
- Universal Joints
- Shaft Collars

ASEPTIC  Guarantees highest hygiene levels through smooth water repellant coated surfaces

**BAUER SERIES GEAR MOTORS**

- **Helical Bevel-Gear Motor**
  - HiflexDRIVE – Aseptic
- **Helical Worm Gear Motor**
  - Aseptic Series BK
- **Helical Gear Motor**
  - Aseptic Series BG
- **Helical Parallel Shaft Gearmotor**
  - Aseptic Series BF
FEATURES VIRTUALLY ELIMINATING RISK TO FOOD PRODUCTS:

**EXTERIOR DESIGN FEATURES**

<table>
<thead>
<tr>
<th>Features</th>
<th>RIGHT ANGLE</th>
<th>INLINE OR PARALLEL SHAFT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SS700</td>
<td>SS2000R</td>
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<tr>
<td></td>
<td>HiflexDRIVE</td>
<td>SS/SS2000R</td>
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<tr>
<td></td>
<td>SERIES BG SS</td>
<td>SERIES BG/BF Aseptic</td>
</tr>
<tr>
<td></td>
<td>SERIES BG SS</td>
<td>SERIES BG/BF Aseptic</td>
</tr>
</tbody>
</table>

- **Domed Crown™ Technology**: Standard
- **Graded Surfaces**: Standard, Standard, Standard, Standard, Standard, Standard
- **Laser-Marked Nameplate**: Standard, Standard, Optional, —, Standard, Optional
- **Aseptic Coatings**: —, —, —, Standard, —, —
- **External or Covered Hardware**: Standard, Standard, Standard, Standard, Standard, Standard
- **Certifications**: NSF International Certified, —, —, FDA Approved Coating, —, —
- **Washdown-Friendly Mounting Features**: Optional Base Feet / Optional Output Flange, Optional Base Feet / Optional Output Flange, Optional Output Flange, Optional Output Flange, Optional Output Flange, Optional Output Flange
# FEATURES VIRTUALLY ELIMINATING RISK TO FOOD PRODUCTS:

## SEALING FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Right Angle</th>
<th>Inline or Parallel Shaft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Vented Housing</td>
<td>Standard</td>
<td>Standard</td>
</tr>
<tr>
<td>Double-Lipped Shaft Seal</td>
<td>Standard</td>
<td>Standard</td>
</tr>
<tr>
<td>High-Pressure Washdown Seal</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Gasketed Shaft Cover</td>
<td>—</td>
<td>Optional</td>
</tr>
<tr>
<td>Internal Magnets to Prevent Metallic Wear</td>
<td>—</td>
<td>Standard</td>
</tr>
<tr>
<td>High-Pressure Washdown Seal</td>
<td>Optional</td>
<td>Standard</td>
</tr>
<tr>
<td>O-Ring Mounting Surfaces</td>
<td>Standard</td>
<td>Optional</td>
</tr>
<tr>
<td>Non-Ventilated Motor</td>
<td>—</td>
<td>Standard</td>
</tr>
<tr>
<td>Plug-In Motor Connection</td>
<td>—</td>
<td>Standard</td>
</tr>
<tr>
<td>*IP67 Compliance</td>
<td>Standard / Optional</td>
<td>Standard / Optional</td>
</tr>
<tr>
<td>*IP69K Compliance</td>
<td>Standard / Optional</td>
<td>Standard / Optional</td>
</tr>
<tr>
<td>Integral Brake/Encoder</td>
<td>—</td>
<td>Optional</td>
</tr>
</tbody>
</table>

*Approval pending for SS700, SS2000R and SS2000
EFFICIENCIES THAT MAXIMIZE **PRODUCTIVITY** & **PROFITS** IN A COMPETITIVE INDUSTRY

**LONGER PRODUCT LIFE**

Real Life Head-to-Head Testing at a Major Meat Processor

Top Competing National Brand
Stainless Worm Reducer
Boston Gear SS700 Series

Failure

Months of Operation

**HIGHER MOTOR EFFICIENCIES**

The BAUER Series integrated motors are available in efficiency classes from IE1 to IE4. All motors are optimized for partial load duty according to EN 50598-2 with the PMSM technology, allowing a proven energy savings of up to 40% under these exact conditions.

Energy efficiency IE4 Motor (ASM vs. PMSM at 50Hz)

**ASM = Asynchronous Motor**

**PMSM = Permanent Magnet Synchronous Motor**

ASM & PMSM 5,5kW; IE3; 50Hz
**HIGHER SYSTEM OPERATING EFFICIENCIES**

Efficiencies are tested and reported for the complete geared assembly, unlike many competing brands who report efficiencies per gear mesh. Many competing brands even assign Ratings that are not in accordance with AGMA guidelines. The test results below clearly demonstrate our performance advantages in both Operating Temperature and Operating Efficiency.

![Graph showing competitive comparison of operating temperature and efficiency](image)

**REDUCED INSTALLATION TIME AND MAINTENANCE COST**

- **Installation**
  - Tapered Bushing or Shrink Disc
  - Alignment Mounting Registers
  - Piloted Flanges
  - Plug-In Motor Connector
  - Quick Connect Cage Clamp®

- **Maintenance**
  - Higher Gear Drive Operating Efficiencies
  - Higher Motor Operating Efficiencies
  - Resistance to Caustic Washdowns
  - Synthetic H1 Food Grade Lubricants
  - Features Prolonging Product Life (Seals, Magnets)

**Time Saved [%]**

- 160
- 140
- 120
- 100
- 80
- 60

**Maintenance Savings [$]**

- 60
- 40
- 20
- 0

**Competitive Comparison of Operating Temperature**

- **Elapsed Time (Hrs)**
  - "Break-In"

**Competitive Comparison of Operating Efficiency**

- **Elapsed Time (Hrs)**
  - "Break-In"
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704-588-5610

Enclosed and Open Gearing, Electrical and Mechanical Components

The Brands of Altra Motion

Couplings
Ameridrives
www.ameridrives.com

Bibby Turboflex
www.bibbyturboflex.com

Guardian Couplings
www.guardiancouplings.com

Hucor
www.hucor.com

Lamiflex Couplings
www.lamiflexcouplings.com

Stromag
www.stromag.com

TB Wood's
www.tbwoods.com

Linear Systems
Thomson
www.thomsonlinear.com

Geared Cam Limit Switches
Stromag
www.stromag.com

Engineered Bearing Assemblies
Kilian
www.kilianbearings.com

Electric Clutches & Brakes
Matrix
www.matrix-international.com

Stromag
www.stromag.com

Warner Electric
www.warnerelectric.com

Deltran
www.thomsonlinear.com

Belted Drives
TB Wood's
www.tbwoods.com

Heavy Duty Clutches & Brakes
Twiflex
www.twiflex.com

Stromag
www.stromag.com

Svendborg Brakes
www.svendborg-brakes.com

Wichita Clutch
www.wichit clutch.com

Gearing & Specialty Components
Bauer Gear Motor
www.bauergear.com

Bostom Gear
www.bostongear.com

Delevan
www.delevan.com

Delroyd Worm Gear
www.delroyd.com

Nuttall Gear
www.nuttallgear.com

Engine Braking Systems
Jacobs Vehicle Systems
www.jacobvascularsystems.com

Precision Motors & Automation
Kollmorgen
www.kollmorgen.com

Miniature Motors
Portescap
www.poroscrap.com

Overrunning Clutches
Formsprag Clutch
www.formsprag.com

Marland Clutch
www.marland.com

Stiebler
www.stieblerclutch.com

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