



SNR bearings: an essential ingredient
in the agri-food process.



SNR - Industry



Agri-food:

a fast-expanding industrial world

Few sectors have experienced such a profound transformation as the agri-food industry: new ingredients, new modes of consumption and new preservation processes have appeared at an increasingly rapid rate in recent years. In this fast-changing market, the industrial facilities must maintain high performance and reliability to guarantee sustained productivity.

For the machinery, food processing sometimes has a bitter taste...

Regardless of the quality of the ingredients used in food processing, they are often "indigestible" for the mechanical components, and particularly for bearings. In this environment, all the physical stresses are combined: sticky and powdery materials, health requirements, constraints of very frequent cleaning, temperature changes, humidity.

Bearings must therefore have specific properties, such as resistance to corrosion and contamination, or suitability for cleaning and dis-infection.

Four golden rules must be applied for the maintenance of equipment in contact with foodstuffs:

- constant and ongoing optimization of its operation at high and low temperatures,
- maintenance of the integrity of the surface of the installations,
- cleanliness of parts,
- anti-bacteria effect.

The indispensable standards (USDA H1) concerning health and food safety, subject to strict regulations, are key considerations for SNR.

SNR at the core of the agri-food sector

SNR has extensive experience in all the agri-food sectors. From industrial packaging of fish to meat cutting. From fluids production to the bakery industry. Although all these sectors have common requirements, each trade also has its specific features, necessitating a particular response in terms of bearings. Confronted with a multitude of practical cases, our engineers have developed a wide variety of solutions, forming a very complete product range. This enables SNR to provide tailored answers for each agri-food application.



An SNR solution at each manufacturing step

SNR standard bearings and automatic lubricator



SNR has a full range of standard ball, roller and needle bearings. Any type of machine incorporating a standard open bearing and a lubrication system can be fitted with an automatic lubricator. Our SNR AL1 food-grade grease conforms to the **USDA H1** standard, which stipulates what are at present the most severe requirements with regard to health and the purity of the raw materials of the grease.

The SNR automatic lubricator gives you:

- Constant, uniform lubrication.
- Reduced maintenance work in hazardous places and reduced maintenance costs.
- Visual indication of proper grease flow.
- Great versatility of use.

SNR bearings with solid lubrication: Lubsolid LSA



- Porous polymer matrix capable of containing 3 to 4 times more oil than with grease alone (longer life).
- Concept eliminates downtime and need to regrease.
- Environmentally-friendly food contact grade grease.
- Operating temperatures: -5 F or -60 F to +175 F or +210 F.
- Concept applicable to all types of sealed, shielded or open bearings (ball, spherical, tapered).

SNR two-part cast iron bearing units



- Easier installation.
- Perfect sealing (felt seal, V-ring seal, nitrile or fluoroelastomer double lip seal).
- Operating temperatures: -20 F to +230 F.

FOR YOUR CONVEYOR MACHINERY
> contact with foodstuffs and presence of water

SNR thermoplastic self-aligning bearing units



- Exceptional resistance to corrosion and chemicals: stainless steel rings and bearings.
- Has a smooth surface which avoids any retention of dust, mold or bacteria.
- Stainless steel bolt hole reinforcements and grease fitting.
- Problem-free operation in the event of temperature variations (-5 F to +230 F).
- A food-grade grease for unintended contact with foodstuffs.
- Excellent mechanical, thermal and chemical properties.
- Perfect sealing: rubber seals, shields, protective end covers.

SNR stainless steel self-aligning bearing units



- Stainless steel housing and bearing.
- Stainless steel attaching bolts and grease fitting.
- Operating temperatures: -5 F to +250 F.
- Closed protective covers for shaft ends.
- Open protective covers for continuous shafts with silicone rubber double lip seal.

FOR YOUR CONVEYOR MACHINERY
> ancillary installations

SNR cast iron and pressed steel self-aligning bearing units



- SNR bearings (sealed and delivered pre-lubricated) with eccentric locking collar or set screws.
- Greater clearance J30 (C3).
- Operating temperatures: standard (-20 F to +230 F), special (-40 F to +480 F).
- Wide choice of sealing levels: - Effective sealing: nitrile double lip seal, - Reinforced sealing: lip seal and shields, - Maximum sealing: triple lip seal (protection against external contamination and water splashes).
- Can be fitted with protective covers.
- Conform to ISO standards.
- High-performance lubrication (food-grade grease).

What the agri-food industry

expects from bearings....: the SNR answer

These are the properties required of bearings in the main agri-food areas.

- **Withstand high temperatures:**
ovens in bakeries, chocolate-making, blanching of fruit and vegetables, etc.
- **Withstand low temperatures:**
cold rooms, deep-frozen products, ice creams, fishmonger, etc.
- **Be compatible with wet areas and water splashing:**
many food-processing applications, and more particularly the fluids sector, fruit and vegetables, etc.
- **Absorb any vibrations:**
crushing of cereals, sorting of fruit and vegetables, etc.
- **Correct installation misalignments:**
conveying machinery, transfers between the different work stations, etc.
- **Guarantee optimum hygiene quality and safety:**
all applications, with particular attention to products intended for preservation.

In general, it is therefore important to avoid the accumulation of moisture and areas of stagnation, and to favor access of all parts of the installation to cleaning solutions.



FOR YOUR GENERIC INSTALLATIONS

SNR ball bearings (high and low temperature): TOPLINE range

This range meets very precise operating requirements with suitable products. The criteria considered for selecting the appropriate series are temperature, speed and safety requirements.

TOPLINE incorporates the latest innovations:

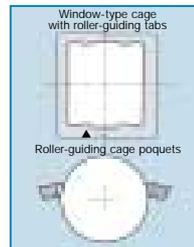
- Heat treatment suitable for extreme conditions (hot and cold).
- Lubrication with the grease chosen according to the requirements of the applications.
- Sealing with "high and low temperature seals and shields".
- Operating temperatures: -75 F to +400 F.
- Performance at high speed and/or low torque.
- Optimized internal geometry, with reduced tolerances and greater precision for the HV series.
- TOPLINE range:
 - FT 150 and FT 150 ZZ: High temperature: 300 F peak. High speed up to 500,000 n.dm.
 - HT200 and HT200 ZZ: High temperature: 400 F peak. Medium speed up to 150,000 n.dm.
 - LT and LT ZZ: Low temperature down to -75 F.
 - HV ZZ: High speed up to 700,000 n.dm.



FOR YOUR SORTING TABLES AND SHAKER APPLICATIONS

SNR spherical roller bearings: Series EF 800

- Designed for particularly demanding applications.
- One-piece solid brass cage: optimum rigidity and vibration resistance.
- Cage centered on the rolling elements: no blockage in the event of thermal variations.
- Optimized fitting: reduced tolerances.
- Special radial clearance: J40 (C4).
Also available in J30 (C3).
- Recommended fits:
 - Interference fit with the housing, class P6.
 - Sliding fit on the shaft, class g6.



FOR YOUR GRINDING AND CRUSHING MACHINERY

SNR steel-cage spherical roller bearings (EA): Series 22000, 23000, 24000, etc.

- Suitable for standard applications (higher limiting speed).
- J30 (C3) radial clearance.
- Inner and outer rings heat stabilized for operation up to 400 F.
- Wrap-around cage: perfect roller guidance to avoid overheating.
- Greater volume between the two rows of rollers:
 - Increases lubricant reserves.
 - Facilitates lubricant flow inside the bearing.
 - Optimizes bearing life.
 - Increases load capacity.

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