

## NTN UNVEILS ITS “SENTINEL SERIES” RANGE: INNOVATIVE BEARING SOLUTIONS FOR THE FOOD INDUSTRY

The very essence of its commitment, NTN innovates and designs differentiating products to deliver the perfect solutions to the issues and constraints of today and tomorrow. The world leader in precision mechanics has made safety and customer satisfaction its priority in order to provide the best applications to the markets it serves. In line with its values and new identity of “bringing the best solutions and innovations to your production”, the manufacturer is unveiling its latest “SENTINEL SERIES” solid lubrication bearing solution. This eco-responsible innovation, which has met with great success across the Atlantic, was designed to improve the safety, efficiency and production of food manufacturers.

### Food processing: a competitive market

The food industry is a highly competitive market requiring particularly robust bearings, but one that NTN has not been previously addressing. They must be able to meet the industry’s requirements for strict hygiene and environmental standards while ensuring safety and productivity. With this in mind, NTN has chosen to stand out from the competition by deploying a range of certified, more premium and more qualitative bearings with a high level of sophistication. This range is perfectly adapted to the food-processing market and reduces:

- Overconsumption of grease
- Costs associated with maintenance and frequent bearing replacement
- Operating stops



Launched in 2017 by the American subsidiary, the SENTINEL SERIES range has proven itself in one of the world’s most dynamic markets which is particularly attentive to the latest innovations. A significant commercial success and a great technological achievement, it was awarded the product design award twice in 2018 and 2019.

### SENTINEL SERIES: NTN’s premium answer to the complex food-processing market

This SENTINEL SERIES all-stainless steel designed to withstand corrosion, is currently applied to two types of products: insert ball bearings with stainless steel or thermoplastic bearing units and standard ball bearings 6000 to 6008 and 6200 to 6208 series.

SENTINEL SERIES bearings are commonly used in food-processing for conveying, filling machines and brushing machines. But they can be used on all applications exposed to corrosion, high-pressure washing or where a high level of cleanliness is required. Thanks to the use of solid lubrication, grease leakage is limited.

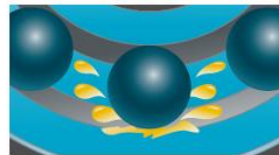


### An innovative and high-performance composition

The special feature of this range is its composition. The standard grease is replaced by a porous polymer matrix filled with an NSF category H1 certified food-grade lubricant. It thus acts as a “sponge”: at each rotation it releases the quantity of oil necessary for the proper functioning of the bearing and then absorbs the excess remaining during production downtime. In this way, the flow of oil is limited, which ensures the cleanliness of the machine and increases the service life of the bearing.

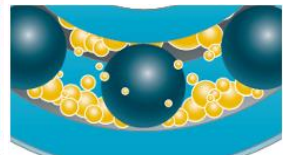
Unlike conventional greases, this solid lubrication is not forced out or dissolved from the inside of the bearing, especially during machine washing. It also contains 3 to 4 times more oil than standard grease.

Operation of the bearing with standard grease



Due to mechanical and thermal stress, the grease is rolled and driven out of the contact surface between the rolling element and the raceway. This loss demands frequent re-lubrication (case of self-aligning bearing units).

Operation with solid lubrication



The solid lubrication cannot be ejected, it constantly supplies the bearing core with oil. This eliminates all downtime and re-lubrication (case of self-aligning bearing units).

This system, which combines technical quality and high-performance materials, ensures safety and quality. It also enables NTN to guarantee manufacturers benefits in terms of productivity as well as profitability thanks to:

- A bearing with an extended service life
- The elimination of maintenance campaigns for re-greasing and the reduction in bearing replacement operations
- Reduction in production downtime

Adaptable to all bearing types, this matrix is filled either:

- At 100% of the free volume, known as “Full pack”, which enables maximum protection against all forms of contamination in the food-processing industry.
- Or by packet between the rolling housings, known as “Spot Pack”, which combines the advantages of solid lubrication while maintaining high rotation speed.

### A positive environmental impact

This range is also part of a 100% eco-responsible approach by fighting against waste and the concept of "wear" parts. By reducing bearing waste, grease consumption and maintenance interventions, it enables players in the food-processing sector to be perfectly in line with their ISO 14001 certification and/or any corporate CSR approach.

Eliminating grease leaks on production lines for improved quality and safety also creates a positive perception during customer audits and visits.



### Finalised tests and positive feedback

For several months, NTN, which produces this range in France, in a factory near Annecy, has been preparing its commercial launch in order to rapidly and massively develop its offer from next September.

For tests, the manufacturer installed the SENTINEL SERIES bearings in some plants of large French food manufacturers. The purpose of these trial periods was to

measure the interest shown by end customers in the product as well as to demonstrate its performance in real-life situations. The feedback was more than encouraging and promising for the world leader in precision mechanics, which is already transforming its trials into actual orders.

*"We have seen a great deal of interest from our customers in this very special range. We are delighted to offer our technical expertise to the food-processing industry. In the long term, we hope to achieve the same success as in the United States and to develop this range so that other players such as bottling plants, which are also subject to great stresses, can benefit. Although the range is intended for Europe, we would also like to eventually address other continents that are likely to show a great interest in the SENTINEL SERIES,"* says Alain Blanchard, Market Manager.

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