

Increasing demands from pet owners puts additional pressures on pet food manufacturers

The pet population boomed across many continents during COVID-19 lockdowns as many of us spent our working days at home. Combine this with a population that's increasingly knowledgeable about food and ingredients and we find ourselves in a position whereby pet owners are demanding more from their pet food.

Ensuring products are safe and contamination-free has always been the most important premise for the pet food industry. However, new trends in pet food production are forcing manufacturers to be flexible whilst complying with regulations, directives and sustaining supply. With its broad product portfolio of weighing and inspection solutions, Minebea Intec offers manufacturers the right solution for future-proofing their business.

Pet food has long ceased to be merely a source of food for pets, but often reflects the lifestyle of their owners. Nowadays, pets are a member of the family and pet owners often have the same demands on their pet food as they do on their own diet. New topics such as sustainability or organic products, for example, are playing an increasingly important role in pet food. Such new products are initially produced in smaller batches. To achieve this, the machines used in the production line must be flexible and allow changes even after the initial installation.

The variety of pet food also requires production lines to be increasingly flexible with products taking such varied formats; dry (kibble), wet (canned and sachets), semi moist, fresh, dehydrated, freeze-dried and raw-infused food, treats and chews. Slight variations in moisture within a product can be a common cause of high reject levels due to an increased level of conductivity in the pet food when wet – so called product effect is an issue the metal detectors of Minebea Intec can cope with.

The global volume for the pet food industry has shown a steady increase since 2014 and is expected to show a volume growth of 5.3% in 2023. In 2018 there were 471 million dogs and 373 million cats kept as pets worldwide. This huge and ever-growing pet population is also reflected in the increasing turnover of pet food producers.

But how do producers ensure that they can meet the changing demands of the market?

Flexibility in production – solutions from Minebea Intec

Minebea Intec, one of the internationally leading manufacturers of industrial weighing and inspection technologies, has long-standing relationships with many of the pet food producers. Therefore, the requirements and complexities of these businesses are well known and understood.

"We can offer manufacturers and producers of pet food flexible, high-performance and highly bespoke solutions for every required process step," says Matthias Rehren, Global Sales Manager Key Account and OEM business. "Our portfolio includes systems for all areas: Load cells and platform scales for use in incoming goods, for intermediate storage of raw materials, for the actual production process as well as dynamic weighing and inspection products for packaging and final quality check. Our solutions are thus optimally designed for the needs of the industry from incoming goods to despatch". Rehren names the dynamic checkweighers Flexus® and Synus® both of which are equipped with electromagnetic force compensated load cells for most accurate weighing. He also names the Vistus® C metal detector and the SPC@Enterprise software (for statistical process control and recognition of optimization potential) as products that exactly meet the requirements of the industry. Minebea Intec offers its products in a variety of configurations, some of which can be adapted even after initial installation. Thanks to around 150 years of experience, tailor-made solutions for customers are also possible. Product quality and consumer safety are our top priorities.

Minebea Intec meets the highest demands for foreign object detection

Over time many new quality systems have been introduced to pet food production such as HACCP, BRC, IFS etc. Many of these systems are the same as those used for human food production. Metal detectors as well as X-ray inspection equipment are used at several critical control points in pet food production to exclude contamination by foreign bodies made of metal, stones, plastic or other materials. This starts even before processing, where the basic ingredients are examined for possible contamination. During later processing steps, such as mixing the ingredients, product contamination can be caused by rubbing from containers or machines and finally, packaging is also checked by inspection solutions.

Established pet food manufacturers rely on the Vistus® metal detection systems from Minebea Intec to ensure raw material and ready-made products are metal-non-contaminated, no matter whether they are inspected in the packaging line or one step before, in the food processing. For readily packed products, the Vistus® can either be mounted on existing and technically suitable conveyors or integrated as stand-alone system. For non-packed products, the Vistus® can alternatively be used as a free-fall unit, checking the products at the time of filling. Integration is not complicated and special product guiding pipes are available as part of the Minebea Intec supply. In the food processing stage, the use of Vistus® is popular as being a part of a pipeline system. Like the free-fall application, integration is not complicated and special product guiding pipes are available.

At the end of the production chain, the manufacturer's versatile X-ray inspection systems are not only suitable for the final detection of foreign objects but also for checking for completeness or fill level. The inspection solutions detect foreign objects regardless of the type of packaging. After all, as with people, defective products and the associated recall campaigns can cause severe

damage to the company's image and financial losses. To avoid this, metal detectors and inspection devices are used which can be individually designed to meet legal requirements and production needs.

Precise weighing eliminates product give-away

In addition to the foreign object check, the checkweighers and load cells from Minebea Intec are ideal for maintaining the exact quantities of components in each recipe. When weighing packages containing individual products such as pet food chunks, the best-seller from Minebea Intec, the Synus® checkweigher, will ensure that each individual pack contains the correct quantity of product and that it complies with the regulations for average weight control by weighing 100% of the production.

If space in the production line is limited, the use of the Cosynus® combi device is recommended – a combined solution consisting of the Synus® checkweigher and the Vistus® metal detector: here, the user controls and configures two machines via a common interface, which is both clear and time saving.

The new range of Vision systems by Minebea Intec including the VisioPointer® provide a substantial quality check to give producers complete peace of mind. The multiple uses and configurations of this system include both top, bottom and side cameras which enables packs and products to be checked from any side. Common uses are label checking, both for content and position, identification of seal contaminations and further packaging details.

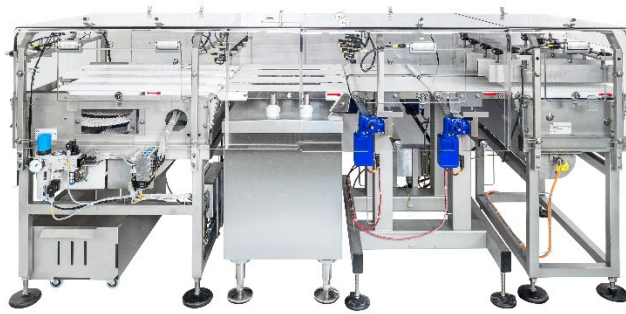
Meeting customer expectations

The pressures on pet food manufacturers to meet increasing demands from pet owners requires not only flexibility in machinery but also reduced waste, higher efficiency, automation and reliability. Proven customer success stories from within the industry exemplify how Minebea Intec solutions enable producers to keep up with supply whilst achieving these business goals.

For more information visit our website at www.minebea-intec.com

Article

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Minebea Intec High Speed Checkweigher: Flexus®



Minebea Intec Vistus® Pipeline



Minebea Intec VisioPointer®

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