

X-ray Inspection Systems

For ensuring product safety, integrity and quality



X-ray inspection systems from Minebea Intec support compliance with industry standards such as HACCP, IFS and BRC, protect brand reputation and avoid costly product recalls.

We make daily life safer

Minebea Intec provides products, solutions and services to the industry for increasing the reliability, safety and efficiency of production and packaging lines. This we give evidence through our promise to our customers and consumers: 'We make daily life safer.'

Our core market position, that of a leading global product and solution provider together with our aim to set strong standards in all areas of our business, are both reflected in our company motto: 'The true measure'.

We have more than 147 years experience in supporting the industry to ensure that manufactured goods have the right quality and do not contain any foreign bodies. Our ability to do this is based on the 'German Quality' of our products and services combined with our continuous investment in developing leading technology. As a result, tens of thousands of customers put their trust in our company, having allowed us to supply them with millions of products and solutions during our long history.

Via our world-wide presence, we stand beside our customers around the globe and through the whole life cycle of our products and solutions; from assistance with selecting the right equipment, design-in support, installation & calibration and maintenance & repair services, up to realising equipment upgrades and refurbishments and providing user trainings.

Our products and solutions make an important contribution in the following industries:



Food and beverages



Pharmaceutical



Logistics



Machinery





The MinebeaMitsumi group

The MinebeaMitsumi group is a global precision electromechanical components manufacturer, providing products for various industries. Minebea was founded in 1951 in Japan, Mitsumi in 1954 and today has more than 78,000 employees as well as production and sales & service facilities in 16 countries around the globe. For many products, the MinebeaMitsumi group is No. 1 in terms of its global market share.

Investing in an X-ray system pays off

The use of X-ray inspection systems in the food industry has significantly increased over the last years as they have proven to be a good investment for ensuring product safety, integrity and quality. Their ability to detect products containing foreign bodies and remove these reliably from the production or packaging line, supports compliance with industry standards such as HACCP, IFS and BRC, protects brand reputation and avoids costly product recalls.

While identifying products contaminated with metal, glass, rubber, stone, dense plastics or calcified bone, X-ray inspection systems can simultaneously perform in-line quality checks, including measuring mass, counting components, identifying missing or damaged products, monitoring fill levels and inspecting seal integrity.

Minebea Intec offers a wide range of X-ray inspection systems for different applications. All systems feature:

- Intuitive operator control through an icon based user interface. Products can easily be set up or adjusted by line operators without requiring special training or previous X-ray knowledge and without the involvement of an engineer



Scan the QR code and watch the video to convince yourself of our intuitive user interface

www.minebea-intec.com/en/videos/interface

- Outstanding detection performance while ensuring maximum line speeds
- Multi-lane solutions for up to eight lines through one detector
- Integrated network compatibility, allowing remote access by technicians for quick error diagnosis and support
- Powerful interfaces, including USB and Ethernet, allow an easy integration into data networks. Optional also via OPC-UA and SPC@Enterprise

Always the right solution for each of these applications:



Foreign body detection

'Minebea Intec X-ray inspection systems help me protect the reputation of our brand and avoid costly product recalls.'

To learn more about X-ray inspection in general, download our White Paper here!



www.x-ray-inspection.info/en

X-ray inspection systems for packaged food products

Minebea Intec offers a complete portfolio of X-ray systems for inspecting packaged products. Typical applications include cartons, boxes, pouches, bags, trays and sachets that can contain a wide variety of dry or liquid food products. The models Dylight and Dymond are specifically designed for these applications and feature:

- Hygienic design, following EHEDG principles featuring sloped surfaces and curved edges allowing easy inspection and cleaning, resulting in considerable time and cost savings
- Combining high detection sensitivity with low power consumption
- 15" colour touchscreen display
- Covering belt widths from 200 mm up to 800 mm
- A wide range of standard possibilities for ensuring product integrity and quality, including:



Hygienic Design



Checking completeness



Determining product mass



Determining compartment mass

Are you looking to check specific quality attributes on your products? Please ask us. Through our Engineering Support services we offer individual software solutions for this.



For more information on Minebea Intec, our products and services or for locating our office and partners in your country, please visit www.minebea-intec.com.



Dymond 80

Dylight

The Dylight X-ray inspection system is a true 'Plug and Play' solution, combining all functions in one compact unit. It is perfectly suited for the inspection of small products such as snacks, energy bars and sweets. Further features include:

- Extremely small width of only 1 metre, allowing you to integrate the unit in your packaging line, even when only very limited floor space is available
- Complete with integrated reject mechanism and collection container for contaminated or faulty products



Dylight

Dymond 40/80/120/160

The Dymond Series of X-ray inspection systems is extremely versatile. Featuring 4 models it is able to cover the majority of applications for inspecting packaged products. With belt widths up to 800 mm it is ideal for multi-lane applications of up to 8 traces.



Dymond 120



Dymond 160

X-ray inspection systems for bulk materials

For all goods introduced into the production process 'straight from the field', Dymond Bulk offers the efficient detection and elimination of foreign bodies of all kinds.

Dymond Bulk

- Outstanding detection performance for raw materials such as vegetables, nuts, dried fruits or cereals



Dymond Bulk

X-ray inspection systems for large packages

With increasing product size and material density, high energy systems are required to ensure a reliable detection of foreign bodies. This is what the Dyxim FB Series offers.

Dyxim FB

- For inspecting large packages such as sacks and boxes up to a size of 700 mm x 360 mm containing dry or liquid food products
- While identifying product contaminations, the FB Series can simultaneously perform in-line quality checks, including measuring mass, counting components and identifying missing or damaged products



Dyxim FB

X-ray inspection systems for tall containers such as bottles, cans and jars

With the Dymond S, Dyxim S and Dyxim D, Minebea Intec offers a comprehensive product portfolio for inspecting tall containers. Next to reliably identifying products contaminated with foreign bodies, these systems can simultaneously perform in-line quality checks, e.g. monitoring of fill-levels.

Dymond S

The Dymond S combines high detection sensitivity with low power consumption. The unit is optionally available with a so-called chicane belt. Ideal for those situations where only very limited space is available.



Dyxim S

The Dyxim S is a high power system for reliably inspecting tall containers at very high speeds.



Dyxim D

The Dyxim D is a dual beam X-ray inspection system that produces two X-ray images at a 90° angle. This improves the ability to detect contaminations in plastic and glass containers, jars and bottles particularly in comparison to single beam systems. Below pictures show some of the situations in which the Dyxim D proves its value.



Raised bottoms



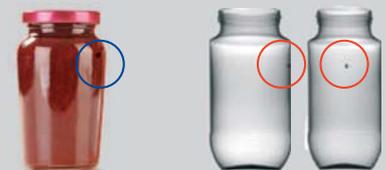
The dual beam X-ray inspection system prevents blind areas when inspecting jars.

Large thin foreign bodies



Reliable detection of a thin glass sliver, most likely not detected with a single beam system.

Inspection along the glass wall



Small foreign bodies near the glass are reliably detected with a dual beam system.

Configuration options and complementary products

Rejector systems

As part of our X-ray inspection solutions we offer a wide range of high-speed rejector systems for guaranteeing a reliable and effective removal from the line in case of a detected contamination or a non-compliance of a product attribute. The rejector systems include the following possibilities: pusher, blower, swivel arm, flap/trapdoor, telescopic retract conveyors and multi-lane rejection systems.

Test pieces

Most quality management systems require a regular testing of the detection performance of your X-ray inspection system.

We can provide you with a comprehensive range of certified test pieces that ensure that you collect accurate and consistent validation data. The test pieces are available in a variety of materials and sizes for use in any X-ray inspection application. All Minebea Intec test pieces are of course made of FDA approved materials.



SPC@Enterprise

The statistical process control software SPC@Enterprise helps you secure product quality, food safety and productivity.

The proven software offers configurable interfaces for recording data from a wide variety of machines, equipment and sensors in the processing or packaging line. It transforms this data into information via powerful and comprehensive reporting functions, making it possible to react instantly if and when required.

All Minebea Intec X-ray inspection systems can be linked to SPC@Enterprise.



Customer individual solutions

Today's wide variety of different food products are being offered in an even larger variety of packagings, each having individual requirements when it comes to product handling, contamination detection and the checking of quality attributes.

Although our standard systems offer extreme flexibility, in some cases bespoke solutions or in-depth consultancy are required. Our in-house Engineering Support team offers both. They can also provide you with design-in support for integrating our machines or solutions into your production or packaging line. Specifically for foreign body detection applications, they can run tests with your products, advising you of achievable detection sensitivities.

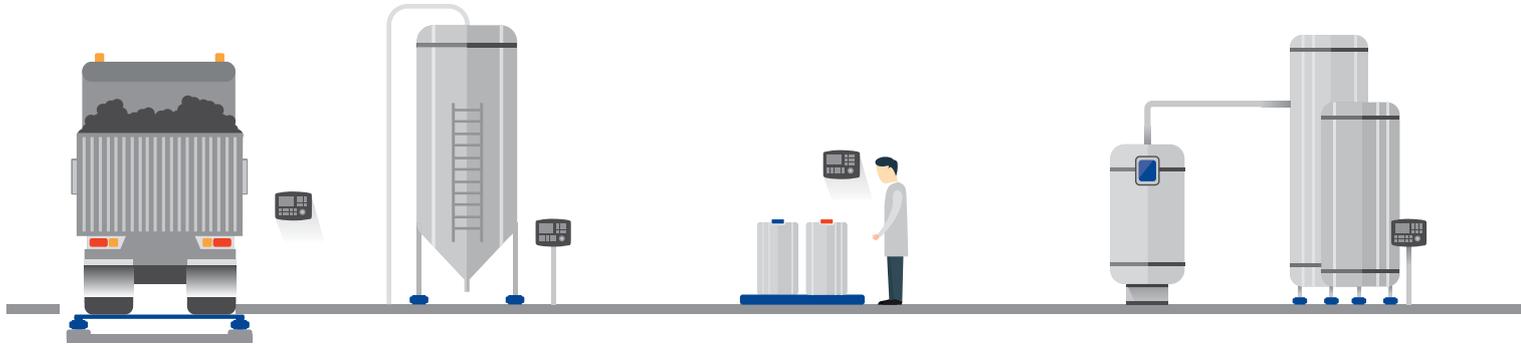


For more detailed information, please visit our website or contact sales.ac@minebea-intec.com



engineering support
by Minebea Intec

Our product portfolio



Acceptance and storage of loose materials

Incoming goods

Acceptance of piece goods

Automated production systems

Precise control of delivered and stored materials

For complete process control



Components and solutions for truck scales



Silo weighing solutions



Metal detection systems for loose materials



Floor scales



Dosing solutions

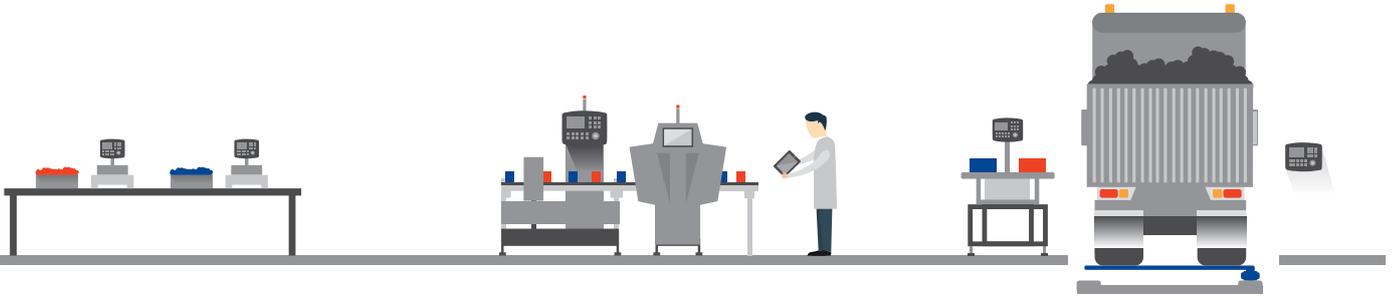


Process container weighing (standard/digital solutions)



Process container weighing (hygienic solutions)

We supply industry with products, solutions and services that increase the reliability, safety and efficiency of production and packaging lines. Our portfolio covers all applications from incoming goods inspection right through to goods delivery, including automatic and manual processes as well as filling and packing.



Manual production

Packaging

Outgoing goods

Solutions that ensure accuracy and traceability

Guaranteeing product quality and food safety

Quality assurance of final product



Portioning and checkweighing



Formulation and manual recipe weighing



Metal detection



Checkweighing



X-ray inspection



Filling solutions



Statistical process control



Floor scales



Checkweighers for heavy loads



Components and solutions for truck scales

Our services

Via our world-wide presence, we and our certified partners stand beside our customers across the globe throughout the entire life cycle of our products and solutions, from assisting them in selecting the right equipment and systems to performing upgrades and refurbishment, as well as conducting user training sessions.

Engineering Support – ensuring optimal solutions

- Advice on choosing the best products or solutions with regard to the desired performance, precision and costs
- Design-in support when integrating our products and solutions into existing designs
- Customer-specific products or solutions – adapted to individual needs

engineering support
by Minebea Intec



Commissioning – ensuring that production starts on time

- Mechanical and/or electrical installation, commissioning and instructions on set-up and use
- Calibration or conformity assessment of equipment and systems according to statutory measuring technology requirements
- Equipment qualification (IQ/OQ)



For more detailed information,
please visit our website or contact
info@minebea-intec.com

Maintenance and repair – ensuring equipment availability and performance

- Calibration or preparation for verification of equipment and systems according to measuring technology standards and statutory requirements
- Preventative maintenance safeguarding continued availability and performance
- Repair services, including emergency service contracts for a guaranteed response time
- Professional spare parts service
- Remote services



Upgrades – prolonging equipment life time and boosting performance

- Hardware and software upgrades
- Equipment refurbishment

Training – enhancing staff capabilities

- User training covering daily operation and/or minor repair and maintenance work
- Seminars providing knowledge of regulations and technologies

academy
by Minebea Intec





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