

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. A diverse portfolio supports quality assurance from the moment goods arrive at customers' premises to the moment they leave.

The true measure

Minebea Intec is a leading manufacturer of industrial weighing and inspection technologies. Our mission is to increase the reliability, safety and efficiency of our customers' production processes. To do this, we provide high-quality products, solutions and services that ensure a high level of safety.

Minebea Intec's excellent performance is based on 150 years of experience, our distinct German Quality and continuous investments in the development of innovative technologies. Our strong global presence and an extensive network of distribution partners ensure that our customers can rely on top Minebea Intec quality – any time, anywhere. Our goal is to set strong standards in all areas of our company, which is reflected in our brand slogan, 'the true measure'.

By purchasing Minebea Intec products, every day, customers all over the world are choosing more than just innovative technologies: they are also choosing top-quality service performance and comprehensive support throughout the entire life cycle of their product. Our aim is to fulfil our customers' requirements no matter what the industry, and to be the first port of call for weighing and inspection technologies. In short: the best expert you could have!



Products and solutions from Minebea Intec are firmly established in many sectors



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. The company currently employs around 80,000 people and has more than 120 production sites and sales and service locations around the world. For many products, the MinebeaMitsumi group is No. 1 in terms of its global market share.

- Minebea Intec Sales - Service
- Minebea Intec Production - Sales - Service
- Distribution Partners (size refers to amount of Partners)
 - up to 5
 - up to 20
 - above 20

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 without the need for special training or previous X-ray knowledge and without the involvement of a service technician



Scan the QR code to experience how intuitive our user interface is.

- 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:



Why Minebea Intec?

Minebea Intec is a byword for quality and cutting-edge technology. Our innovative German Quality solutions have proved themselves all over the world, handling the very toughest of conditions and the strictest of requirements. We offer on-site support and services throughout the entire life cycle of our products. This means our customers always have the best possible solution for their requirements.



German Quality



'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!



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" to 21" 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:



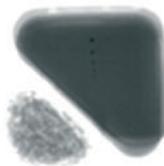
Hygienic Design



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.



X-ray inspection system Dymond 80

X-ray inspection system 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



X-ray inspection system Dylight

X-ray inspection system 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.



X-ray inspection system Dymond 120



X-ray inspection system Dymond 160

X-ray inspection systems for tall, upright packaging

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

X-ray inspection system Dymond S

The X-ray inspection system 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. All Dymond S systems feature the following as standard:

- Integrated Nema 4X cooler for easy cleaning
- 500-W monoblock generator for high throughput rates and low installation and maintenance costs
- Chicane for guiding and shielding products



X-ray inspection system Dymond S

X-ray inspection system Dymond D

Dymond D is a dual-beam X-ray inspection system that produces two X-ray images at a 90° angle. Whether it's tins, Tetra Paks or glass jars, multi-sided radioscopia provides maximum safety thus opening up a wealth of possibilities for manufacturers in product design.

- Maximum inspection performance with dual-beam technology: 2 × 90 kV, 9 mA
- Dymond D is equipped with a customised product feeder, chicane and shielding device



X-ray inspection system Dymond D

Dual-beam technology for maximum inspection performance

Raised bottoms



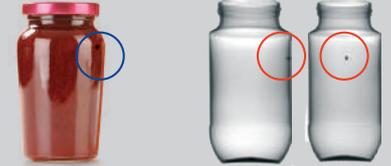
The dual-beam X-ray inspection system prevents blind areas when inspecting jars.

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.

X-ray inspection system 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.

X-ray inspection system Dymond Bulk

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



X-ray inspection system
Dymond Bulk

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 the event that foreign bodies are detected 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 provide a comprehensive range of certified test pieces that ensure the collection of 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 manufacturers to guarantee 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 design-in support for integrating our machines or solutions into the production or packaging line. Specifically for foreign-body detection applications, they can run tests with products and give advice on 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

Reliable checking of supplied and stored materials

For complete process control



Components and solutions for vehicle weighing (analogue/digital)



Components and solutions for silo weighing



Batching and formulation



Foreign object detection (metal detection/X-ray inspection)

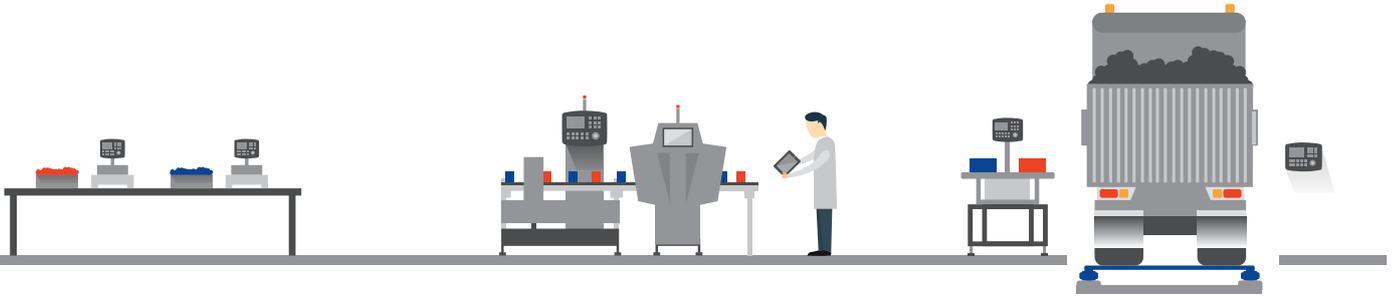


Weighing of incoming goods



Components and solutions for vessel weighing (analogue/digital)

This is a cross-section of our extensive product portfolio. We offer tailor-made solutions for a range of requirements: from simple to complex; from explosion protection solutions to hygienic design.



Manual production

Solutions that ensure accuracy and traceability



Portioning and checkweighing



Formulation and formulation weighing

Packaging

Guaranteeing product quality and food safety



Checkweighing/metal detection



X-ray inspection



Pre-packaging checking and statistical process control

Outgoing goods

Quality assurance of final product



Weighing/order picking of outgoing goods



Checkweighers for heavy loads



Components and solutions for vehicle weighing (analogue/digital)

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 choosing the right equipment and systems to upgrades, replacement parts and training.

Engineering Support and Global Solutions – ensuring optimal solutions

- Consultation on selecting the best products and solutions with regard to the desired performance, precision and costs
- Design-in support for the integration of our products and solutions in existing constructions
- Customer-specific products or solutions – tailored to individual requirements



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



engineering support
by Minebea Intec



Commissioning – for a timely start to production

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

Upgrades – to update systems and improve performance

- Hardware and software upgrades
- Equipment refurbishment

Training courses – to improve skills

- Practical training content that reduces operating errors, downtime and maintenance costs and therefore increases the performance of the equipment and the efficiency of the line
- Seminars providing knowledge of regulations and technologies

academy
by Minebea Intec



Maintenance and repair – for guaranteed availability and performance

- Calibration or verification preparation of equipment and systems according to statutory requirements for measuring technology
- Preventative maintenance safeguarding continued availability and performance
- Repair services, including emergency service contracts for a guaranteed response time
- Professional replacement parts service
- Remote services such as the service tool miRemote based on augmented reality – for first-line support on site



Everything from a single source

Minebea Intec provides products, solutions and services to improve the reliability, safety and efficiency of production and packaging lines in virtually all industries.

From goods receipt to goods issue – our portfolio comprises a variety of automatic and manual weighing and inspection solutions, software and services for a wide range of applications and industries.

Process weighing and automation

- Vessel and silo scales
- Components for truck scales
- Bench and floor scales
- Batching and formulation

Quality assurance

- Checkweighers
- Metal detectors
- X-ray inspection systems
- Statistical process control

Services

- Technical support
- Commissioning
- Maintenance and repair
- Upgrades
- Training courses



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