

Industrial Metal Detectors

For the protection of consumers and production equipment



Metal detection is an important control point in the production systems in many industries. All Minebea Intec products and systems are based on German Quality combined with several decades of experience in designing, building and servicing metal detectors.

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





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 metal detectors – a secure investment

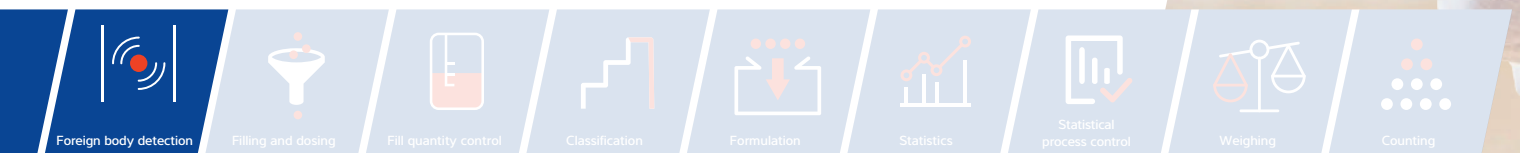
Minebea Intec develops and manufactures industrial metal detectors and metal detection systems for the inspection of food and other products. The systems are capable of detecting both ferrous and non-ferrous metals. Reliable separation systems ensure that all products, which have become contaminated with these metals, are reliably removed from the production or packaging line.

We offer two types of industrial metal detector: one for protecting production systems and one for protecting consumers

The protection of production systems is typically an application for the chemical, plastics, rubber, recycling and timber industries. In the chemical industry for instance, metal detectors are used for the inspection of recycled plastics with the objective of avoiding damage to expensive moulds.

For the protection of consumers, many applications can be found in the food industry. The aim is to ensure that products leaving the factory are free from metal contamination. Through this Minebea Intec metal detectors support compliance with industry standards such as HACCP, IFS and BRC, protect brand reputation and avoid costly product recalls.

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 metal detectors help me comply with industry standards and avoid costly product recalls.'

To learn more about metal detection in general, download our **White Paper** here!



Vistus® metal detectors for optimum consumer protection

Vistus® metal detectors are capable of detecting both ferrous and non-ferrous metals and are specifically designed for the food industry. They are available with a rectangular opening for use on conveyor belts and with a round opening for use on pipes.

All Vistus® detectors feature:

- Multi-frequency technology offering premium detection performance
- Fast and easy switching between product batches via extensive product memory
- Via the automatic learn-function, products can be set up or adjusted fast and error-free by line operators without requiring special training or knowledge and without the involvement of an engineer
- Access protection via user individual passwords or finger print authentication avoiding unauthorized system changes
- A wide variety of available interfaces allows an easy integration into data networks



Metal detection conveyer Vistus®

Metal detector Vistus® with rectangular openings for use on conveyors

- Available standard coil sizes: 7.5 x 3.0 cm up to 275 x 60 cm (w×h). Other sizes are available on request
- Extremely compact: control unit fully integrated in detection coil
- Standard IP65 protection class, IP69 optionally available for enabling high pressure water cleaning



Metal detector Vistus®

Metalldetektionssysteme Vistus®

In Vistus® metal detection systems, the metal detector is mounted on a belt or chain conveyor, allowing for easy and fast integration in the production or packaging line. Our systems feature:

- Sturdy and torsion free construction made of 1.4301/AISI 304 stainless steel
- High quality drives: maintenance free three-phase motor with worm gear or three phase drum motor
- Maximum detection performance through optimum vibration control and metal free zone
- Vistus® metal detection systems can optionally be equipped with the required sensors and devices for full compliance with industry standards such as IFS, BRC and M&S. These options include among others, protective covers, reject monitoring, bin full monitoring, air pressure monitoring and lockable rejection bins



Metal detection conveyor Vistus®

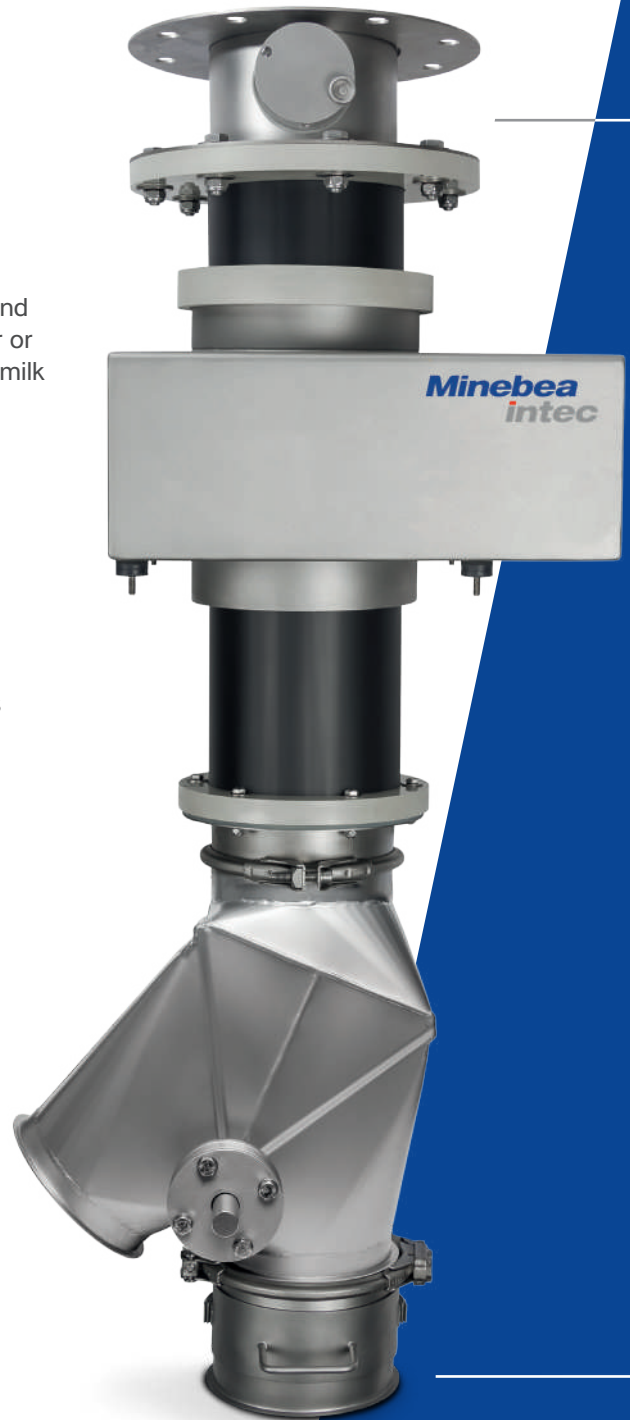
Freefall metal detection system Vistus®

The freefall metal detection system Vistus® ensures the reliable inspection and removal of metallic foreign bodies from any kind of food products in powder or granule form that is transported with the use of gravity through a pipe, e.g. milk powder, wheat, nuts or cornflakes. Vistus® freefall metal detectors feature:

- Minimum installation height for easy integration into any application
- Cost effective control of up to four search coils via one terminal
- True In-Process Validation. This functionality guarantees correct performance testing
- The ATEX variant is suitable for use in potentially explosive atmospheres



Explosion protection



Freefall metal detection system Vistus®



To learn more about Vistus® freefall metal detection systems, scan the QR code and watch the video



Test piece opening



Test piece stopper

Unique: True In-Process Validation

The patented True In-Process Validation guarantees correct performance testing during running operation. It allows a test piece to be dropped through the centre of the metal detector, the area of any detector with the lowest sensitivity. Any other position than the centre would produce false validation results.

To ensure that undetected test pieces are removed from the product flow, a stopper is installed beneath the separator to allow products pass through while catching the test pieces.

Pipeline configuration system

Vistus® freetail metal detector systems with round openings for use on pipes can be configured to suit your individual requirements by choosing from the following standard components: operator terminal, search coil, pipe, separator and True In-Process Validation.

Search coils



Vistus® R
For maximum detection sensitivity combined with a compact design.



Vistus® RMFZ search coil
Features reduced metal-free zone, allowing installation in the immediate vicinity of metal structures.



Pipes



PP pipe
Made of heavy-duty polypropylene; it is the universal solution for products that are not susceptible to electrical discharge, such as coffee or spices.



ESD pipe
Continuously neutralises static electricity thus offering maximum reliability when inspecting dusty products. Fully meets EU food safety standards 10/2011 and 1935/2004.



Separators



ST separator
Suitable for a wide range of applications featuring minimum product give-away when removing contaminants from the product flow.



FL separator
Features minimum installation height making it ideal for applying it on a Vistus® RMFZ search coil with reduced-metal-free-zone.



EC separator
The easy-clean design makes for easy installation and quick cleaning as it can be mounted and removed using a standard tool.



SW separator
The solution for very high product throughput.



Operator terminal

For efficient control of up to 4 search coils. Equipped with colour touch screen display.

Vistus® RS

For applications in which space is particularly limited, the search coil Vistus® RS has an installation height of just 79 mm (except metal-free zone).

Ceramic pipe

Extreme wear-proof and heat-resistant. Ideal for highly abrasive products and high temperatures.



Secus[®] for protecting production systems

Minebea Intec offers a full portfolio of metal detectors for protecting expensive production equipment in various industries, including: chemical, plastics, recycling, rubber, wood, power plants, mining, tobacco and clay.

Secus[®] features:

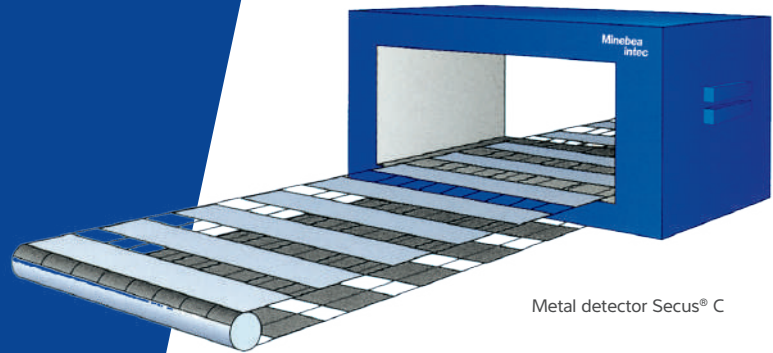
- Robust design combined with optimum detection sensitivity
- Extremely easy operation resulting in optimum user acceptance
- Available as standard with aperture dimensions of up to 2200 x 1200 mm (w×h).
Larger sizes available upon request
- Protection class IP55, IP66 optional



Different coil designs allow for perfect integration into the production process

Secus[®] C

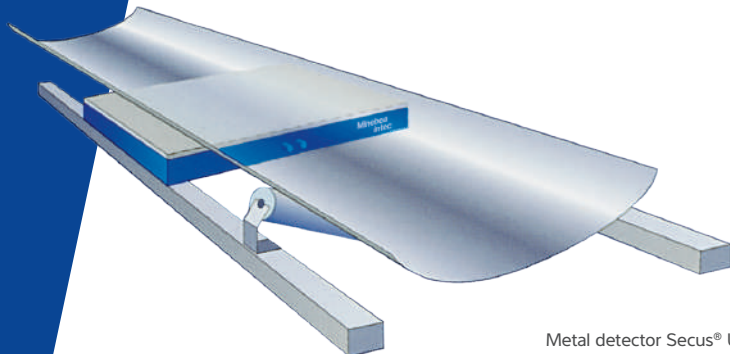
Standard coil for installation on conveyors



Metal detector Secus[®] C

Secus[®] U

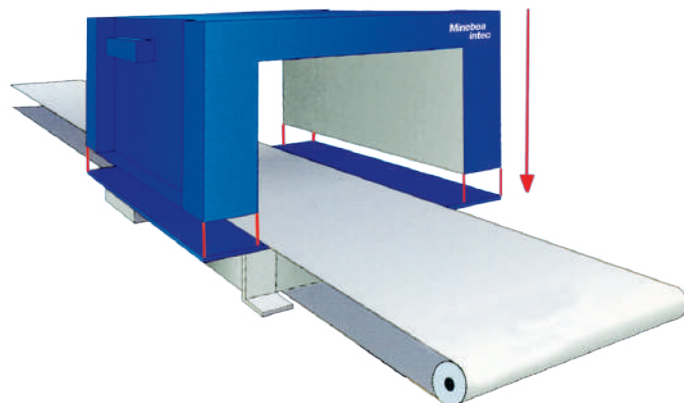
For installation beneath the conveyor



Metal detector Secus[®] U

Secus[®] D

Splittable coil, for convenient installation on existing conveyors



Metal detector Secus[®] D

Configuration options and complementary products

Rejector and separator systems

As part of our metal detection 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. The rejector systems include the following possibilities for conveyor applications: pusher, blower, swivel arm, flap/trap door, telescopic retract conveyor and multilane rejection system. For pipe applications you find an overview of available separators on page 10.

Test pieces

Most quality management systems require a regular testing of the detection performance of your metal detection 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 metal detection application. All Minebea Intec test pieces are of course made of FDA approved materials.



SPC@Enterprise

The pre-packaging and statistical process control software SPC@Enterprise helps you 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 intervene quickly in the production process.



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

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 and contamination detection.

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 also offer design-in support for the integration of our machines and solutions into the production or packaging line. Specifically for foreign body detection applications, our team can run tests with products and provide advice on the achievable detection sensitivities.

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)

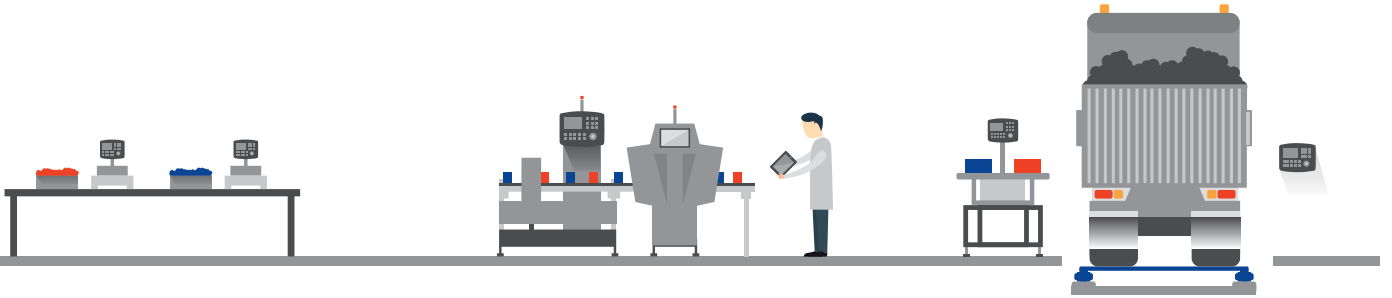


Weighing of incoming goods



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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