



Vistus® | MDE | Observer Metal detection – Solid protection for your production lines





Increased Process Reliability through Detection of the Smallest Metal Contaminants

Sartorius metal detectors work to a very high level of accuracy and can detect various metal contaminants. The timely detection and rejection of contaminated products helps to avoid faulty batches and thus keeps costs down and avoids damage to your image. Rejection monitoring systems ensure that contaminated products are removed. The system provides complete, automatically recorded process data at any time.



Maximum Utilization of Equipment through Effective Protection

Production downtimes are always associated with very high breakdown costs. These downtimes are often caused by undetected foreign bodies in the production process. These contaminants can get into the process from wear and tear, abraded particles from processing machines, inattentiveness on the part of a production employee (dirt, hair clips, etc.), or from inattentiveness during maintenance work (screws, bolts, etc.) The use of metal detectors protects not only consumers, but also downstream machines and processes.



Avoidance of Additional Costs through Incoming Goods Inspections

Are the raw materials supplied to your production line also truly contaminant-free? By checking 100% of incoming goods for foreign bodies when they first arrive, you can assess your suppliers and also avoid any resulting damage in the production process.



Long-Term Customer Loyalty through Avoidance of Complaints

Contamination poses an incalculable liability risk for food manufacturers, as well as being dangerous to consumers. A single contaminated product can lead to health problems and cause long-term damage to a company's image. That is why product control using metal detectors is mandated more and more often. Metal detectors offer maximum protection against metal contamination in the end products and thus meet the requirements of modern production lines.

Vistus® | MDE | Observer

Metal detection – Solid

Seamless quality control, secure production processes and above all protection for consumers by shipping flawless products – your processes must satisfy these requirements 100% every day. Of special concern here are metal contaminations in products. According to HACCP regulations, control points must be set up to check products for foreign contaminants. This enables you to take immediate action if contamination is detected.

Analysis of potential risks to food in the processes of a food company

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Verification at regular intervals of food hazard analyses, the critical control points and the testing and monitoring systems (including any time there is a change to processes in a food company)

Quality
Sa

protection for your production lines

HACCP concept basics

HACCP: Hazard Analysis and Critical Control Points

- Hazard = Hazard to health
- Analysis = Analysis of the hazard
- Critical = Critical to containment
- Control = Control, monitoring of conditions
- Point = Point | Location in the process

There are many quality and safety standards based on the HACCP principle, for example, IFS (International Food Standards) and BRC (British Retailer Consortium). We offer many different metal detectors that can be integrated into your production system to ensure that you fulfill these quality and safety standards. Our products range from the cost-effective MDE (Metal Detector Economy) series, a special solution for aluminized packaging (Observer), to our premium series the Vistus® – we provide safety to your production system!



Identification of points in these processes where risks to food may occur



Determination of areas critical to food safety – “the critical points”



Specification and implementation of effective testing and monitoring systems for these critical points

The new benchmark

The Vistus® series from Sartorius is the next generation of metal detectors. With the Vistus® series, Sartorius is setting new benchmarks in terms of user-friendliness and performance. The Vistus® series achieves the highest level of detection performance and reliability thanks to the use of the highest quality components and a very wide frequency spectrum.

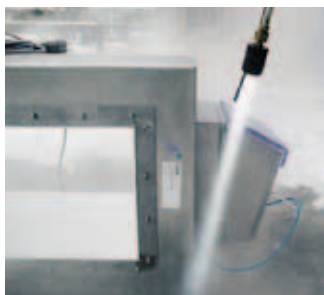


Versatile applications – quartz-controlled, multi-frequency technology ranging from 60–1000 KHZ

The Vistus® offers the option of up to 3 frequencies within the 60–1000 KHz frequency range and enables you to operate using the low, medium and high frequency range all from one device. This enables the Vistus® to be used for a wide range of product properties providing the highest sensitivities for all magnetic and non-magnetic metals.

Easy to clean – IP65 protection class, optional IP69k

Whether used in wet or dry environments, the Vistus® is designed to easily withstand cleaning using high pressure water jets.



Fast & Reliable – 200 products can be stored in memory

The Vistus® can automatically learn products and save all required parameters. This makes it fast and easy to switch between products during production.

Simple & Easy – New operating concept with a 5.7 inch color touch screen display

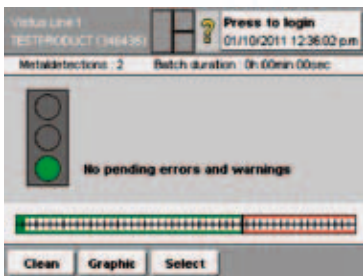
Whether administrator, quality manager, technician, service manager or regular operator on the production line, all of these user groups have specific requirements for the device operating system. The Vistus® provides specific dialogs for all of these user groups and drastically reduces the operating complexity of the metal detector in the process. Each user must log in with a specific password to access the system and their user-specific settings. These can include, among other things, touch screen settings as well as the language used for the device.



Individual passwords enable access to dialogs specially designed for specific user groups



Individual user settings managed by an administrator



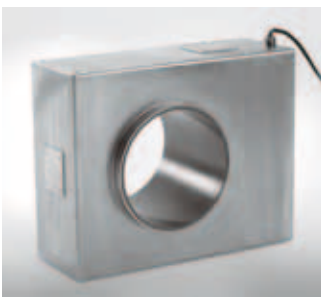
Vistus® start screen, log-in is required to operate the device



Diverse selection of options



Metal detectors can be used in many different industries such as the food or pharmaceutical industries. Each point of use differs on a case by case basis. Whether it's an incoming goods inspection of raw materials via discharge chute systems or at the end of production in which end products are inspected via metal detectors with a rectangular detection opening, each system is customized using specific properties to the specific production system. The Vistus® metal detector is therefore available in many different versions: from coils with rectangular gates of a few centimeters to several meters, round coils with a reduced metal-free zone to special detectors for checking individual tables. The Vistus® provides optimal performance in all application areas.



Vistus® is available with an optional, reduced metal-free zone. This option is available for both rectangular as well as round coils. Among other things, the reduced, metal-free zone is achieved by a modified winding in the coil design. This modification creates a counter field to the primary field of the metal detector thus limiting the electromagnetic field of the metal detector. This provides many advantages, above all, to limited installation spaces as is normally the case with discharge chute systems.

► Technical specifications:

- Can be used in ambient temperatures of -10 to +55°C
- Relative humidity 0-99%
- Intuitive user interface with wizard support
- Automatic access via a fingerprint sensor
- Network operation by connecting to the SPC@Remote and SPC@Inline software programs
- TCP/IP, RS-232, RS-422, CAN bus, fieldbus and profibus interface
- Report output via USB print option
- Atex 22 conformity
- UL/CSA approval
- Etc.

**CoSYNUS combi system –
A perfect duo**

CoSYNUS combines the electronics of a metal detector with our well-known checkweighing technology. Operation of the metal detector is fully integrated into the familiar user interface of the field-tested checkweigher. A single interface can be used to configure and control two machines quickly and easily, saving time and effort.

Even after delivery, it is no problem to adjust the height or change the direction of the conveyance. The combined CoSYNUS offers another advantage as well: when there is no floor space to spare in production, a single CoSYNUS is the space-saving alternative to solutions with a separate checkweigher and metal detector. A wide variety of options and accessories such as a USB flash memory drive, remote display and operating unit, statistics programs, catchment containers, trend controllers, printers and much more, round off this family of products.

All CoSYNUS models are distinguished by the monolithic electromagnetic force compensation (EMC) weigh cell from Sartorius, specially developed for dynamic checkweighers. Its most impressive features include the exceptionally high precision combined with extremely short stabilization times, unbeatable stability and rugged, industrial grade construction (IP protection rating: IP54, IP65 optional).



MDE | Metal Detector Economy

Price | Performance winner for metal detection technology

For simple metal detection tasks – MDE is a very cost-effective and attractive model.



The spectrum of performance and setting options available from the Vistus® series is not always required. In certain processes, a simple, cost-effective metal detection model is sufficient.

The MDE (Metal Detector Economy) was added to the Sartorius product line for just this reason. Above all, it is characterized by easy operation and an unbeatable price | performance ratio.

The microprocessor-controlled metal detector MDE was specially developed to be able to achieve the optimum detection sensitivity under all ambient conditions and therefore makes it possible to detect the smallest metallic contaminants in products. The detection sensitivity of the metal detector corresponds to the highest requirements of various industries. Along with magnetic metal particles, high-alloy steels as well as non-ferrous metals (copper, brass, aluminum, lead, etc.) are also detected.

When metal is detected, a relay is triggered whose potential-free two-way contact can be used for any control processes, e.g. shutting down the processing machine or conveyor belt, activating marking or rejection devices, etc.

The operator terminal is located on the housing cover and contains a 4-line, 20-character, alphanumeric, backlit LCD display, a keypad overlay with 16 keys as well as 3 LEDs. The metal detector can be very easily set exclusively via the function keys and display. Display texts and any error information are also available in different languages.



► **Your advantages:**

- Reliable consumer and equipment protection
- Numerous conveyor and rejection systems
- User-friendly operation
- Single frequency without a product type memory for optimal adjustment to the product
- Stainless steel housing (AISI304/BS304) that meets the strictest HACCP hygiene requirements



Metal contaminations in aluminized packaging

The Observer can detect magnetized iron and stainless steel contaminations in massive aluminum packaging. Contrary to conventional metal detectors, this technology does not encounter any product effect whatsoever. Thus this device is very easy to use and always provides optimal detection sensitivity.



The functional principle of the Observer

The Sartorius Observer metal detector is equipped with specially-developed sensors that use magnetic field measurement technology. The Observer detects the residual magnetism of a previously magnetized metal particle. It doesn't use conductivity for detection, but rather the residual magnetism of metal. Theoretically, only ferromagnetic materials such as iron can be magnetized. Non-ferrous metals such as aluminum, copper, brass, bronze, etc. cannot be magnetized and thus cannot be detected by the Observer thus causing no negative effects.

Detection of stainless steel in aluminized packaging

As a rule, stainless steel particles are non-magnetic and would thus not be detectable to the Observer. However, if their crystalline structure has been changed, e.g. due to shearing or deformation (as is normally the case during production processes), they can be magnetized and be detected by the Observer.

Simple operation

Because the Observer has very few settings for optimal product detection customization, it is very easy to learn how to operate requiring no previous knowledge. This is a major advantage over X-ray inspection systems, which are the alternative for the inspection of aluminized packaging.

Unbeatable sensitivity to ferromagnetic metals

Because of its unique functionality, the Observer can also detect metal abrasion or bore chips that may only be detected with great difficulty by conventional metal detection technology or not at all. Another functional advantage is that layer dependency of metal contaminations only plays a subordinate role in the detection process.

Therefore, the Observer can be tested using "realistic" contaminates and not using spheres.

► **Advantages over X-ray inspection systems:**

- Less expensive procurement and operation
- No wear parts making servicing less expensive
- No complex occupational safety and radiation protection measures during production operation.
- Detection of the smallest particle via high resolution
- Compact design
- Simple operation

► **Advantages over regular metal detectors:**

- Detection of stainless steel and magnetizable metals in aluminized packaging
- No negative influence on the product effect

Test pieces are pre-magnetized on the belt infeed. The magnetic field sensor then reliably detects any residual magnetism of any metallic particles present at high speeds.



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