



# Inspection systems

for the textile industry

# **Reliable, precise and user-friendly**

## **Metal detectors and separators from Mesutronic**

### **Why detect foreign bodies?**

Despite all safety precautions, the contamination of textile products with foreign substances is unfortunately a problem in every manufacturing company. The effects are often dramatic if these are not reliably detected and removed from the production chain. Damage to processing machines, problems during audits, loss of supplier contracts and, in the worst case, severe image problems among consumers are often the result of inadequate control systems.

### **Why Mesutronic?**

For more than 30 years, we have been developing inspection systems with and for companies in the textile industry. These are used for inspecting fibres, non-woven fabrics and technical textiles. For all those who value "Quality – made in Germany", we are both experienced, solution-oriented, internationally active specialists and loyal partners.

We deliver the highest degree of safety – in other words:

plant and product protection – through functionality, reliability, flexibility and ingenuity.

We achieve this because everything from development to design and installation, up to service and maintenance is consistently geared towards individual industry and customer needs.

» **Machine protection and quality assurance  
- reliable and user-friendly.**

**Manufactured in Bavaria, used throughout  
the world.** «

Christian Boxleitner  
Managing Director



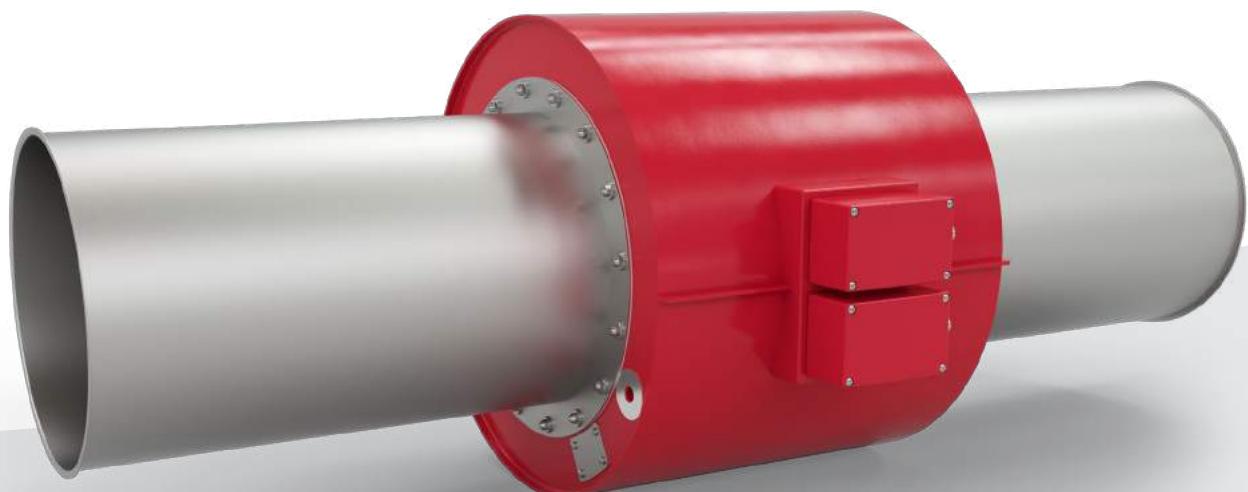
## Fibre processing

In the incoming goods area, metal detectors are usually used to check raw fibres. Natural fibres in particular carry a high risk of introducing metal into production. However, even with synthetic fibres, parts of the packaging material or from the cutting process can penetrate into the production cycle. It is at this point that contaminants are usually traced back directly to the supplier.

The first stage of the control process, which usually takes place in the blowroom, are metal detectors of the **METRON 05 PWT** type. Under the name »PowerLine«, they represent the standard in the field of metal detection in countless companies worldwide, and are often also delivered by one of our many OEM customers. Due to their design, they are almost immune to external electromagnetic interference, deliver excellent, field-proven detection accuracy, and do not create any problems with regard to static charging, even with critical fibre types.

The **HighSpeedTEXREJECT** reject system is the ideal complement to this metal detector. The robust design of the pneumatic components, together with the specially manufactured lightweight flap, provides a fast and, above all, extremely long-lasting solution for the separation of metals. In combination with a spark detector, it can also be used for the separation of glow portions. It is supplemented by various application-specific container options.

For special applications, the inspection of staple fibres or bale goods on the conveyor belt can be useful. Special conveyor belt systems and metal detectors of the **METRON 05 C** or **METRON 05 CI** type are usually used for this purpose. These systems deliver stable detection accuracy, even with large diameters.



## Non-woven fabric production

Various processes in the production of nonwoven fabrics carry a risk of contaminating products with metal parts. Probably the biggest challenge here is needling. However, even with other compaction methods, protection against claims for compensation by customers alone can justify reasonable investment in metal detectors.

The **METRON 04 PR** is the best solution for examining non-woven fabrics up to a material thickness of 20 mm. In particular, if the non-woven strip is cut to size, accurate identification of the positions of metal parts is necessary. This is the only way that either a quick manual follow-up inspection or marking the affected number of metres on the finished cut roll is possible. For this system, widths of more than 10,000 mm are available. The standard segment width is 300 mm, optionally 150 mm. Special versions for thicker non-woven fabrics, high material temperatures or high residual moisture are also available, as is an extensive range of accessories, including mounting clamps and additional relays and active outputs per segment. The accuracy of this system is independent of the web width and sufficient to reliably detect even small needle fragments or other metal parts.



If exact spatial resolution of the impurity with respect to the width of the material web is not necessary, as is often the case in calander protection, a **METRON 05 PR** is sufficient. This plate metal detector is equipped with the AMD 05 and can therefore deliver a high degree of reliability and detection accuracy, especially for strips of up to 4,000 mm.

The use of a tunnel metal detector is reasonable for special applications before compaction or for uncompressed products with product heights of 50 mm or more. While this requires increased installation work, it is superior to the plate metal detectors of the »ProfiLine« series for large product heights. In carding protection in particular, the special-design **METRON 05 CI** can make an important contribution.

## Digital products and services

The successful operation of inspection systems is no longer solely dependent on purchasing of the right product, but also on how well the system is connected to the people and machines in its environment. Mesutronic offers a wide range of support services that increase the integration of our products.

Depending on the type of electronics used, our systems can already provide information as standard via analogue signals, various bus systems or Ethernet. Information is received by either controllers, process control systems or other, higher-level machines along the line. In addition to other protocols, with digital networking the OPC UA protocol is used here for the smooth transmission of operating conditions and production-critical values.

If a networking solution is desired purely at the level of foreign body detectors, here **mesuNET** offers optimal performance for the simple creation of reports, evaluation of statistical data, central backup of the event history and as an intermediary to higher-level databases or control systems. This facilitates the easy collection of important OEE data with secure, web-based access without attachment to a single computer.



The **mesuEXPORT** software feature is another easy, automatic and cost-effective way to back up reports. Here, systems with the AMD 07 electronics series are connected to the customer's network drive via Ethernet. The system can then be configured to store event reports for specific events or at specific times. Data is therefore redundantly backed up and cannot be lost - even if the system is completely destroyed.



**mesuREMOTE** allows our service specialists from Kirchberg im Wald to access any connected system, often avoiding time-consuming on-site deployment. Communication is secured according to current IT standards, encrypted and takes place solely after approval by the customer at all times.

All of this can additionally be secured on the hardware side via a key switch. This means that any uncoordinated manipulation of systems by Mesutronic or third parties is reliably excluded.



The electronic **autoTEST** tester allows significant reduction in manual test cycles in devices of the 07 electronics series.

Signals from physical test bodies are copied via an interference coil that operates independently of the detector. As a result, short test cycles, and thus maximum process reliability, can be implemented without additional effort.



In order to reduce introduction barriers and ensure smooth, long-term operation, we recommend our **training programmes**. We offer a wide range of solutions, from simple operator training included with commissioning to multi-day events on our premises. As with our physical products, we strive to make training as efficient and economical as possible for our customers while still in the coordination phase. The content is recommended by us and then individually adapted to your needs according to the number of participants, their educational background or previous experience.



We are also happy to offer regular training courses at a reduced rate in connection with **maintenance contracts**. These courses are also designed to be customer-oriented. Frequently selected options include, for example, annual on-site maintenance or reduced prices for spare parts. It is also possible to flexibly add or remove devices from the scope of the contract.

Options for maintenance contracts and training in our systems are usually also available for indirect customers of our local partners or OEMs.



The cornerstone of our **after-sales service** is our motivated, trained and customer-oriented service staff. Our promise of "detecting what matters" includes accessibility without compromise and without additional costs, 24 hours a day, 365 days a year. This is supplemented by our cost-effective board exchange programme with reprocessed electronic components as well as the possibility to repair every system ever sold to the market.

## Customer-specific projects

Special challenges may arise in particular when retrofitting inspection systems into an existing production environment. The development of solutions for these tasks is one of the core competencies of Mesutronic GmbH. The ways shown range from simple consultation on the deployment of a standard solution in an unusual way, through smaller and larger modifications, to the complete, customised customer system.

We focus on the permanent, reliable and economically optimal fulfilment of your requirements. This is made possible by our company's competent team of employees, who are trained in all relevant areas from sales to application, mechanical and electronic development, up to production and after-sales. They are supported by modern work equipment and a process world embedded in ISO 9001.

We make projects, which we see as a permanent dialogue, transparent for our customers at all times.

The way we see it, our work is not finished when products are delivered, but when production is again functioning smoothly after conversion.





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