

Best practice

# Latest generation of metal detection coils impresses leading automotive supplier



*Delays in detecting minute core breakages can prove costly in the manufacture of injection moulding components and machines for automotive electrical engineering products.*

## Key facts

Complaints from customers can be extremely unpleasant and expensive, and usually cause considerable hassle. In order to avoid this, several types of machines were equipped with the latest generation of metal detection coils Vistus RS 100 as part of this project.

## Application

Detection at the very highest level is needed to be able to register and record extremely small core breakages with a diameter of just a few tenths of a millimetre.

## Product

- 2-channel metal detection technology Vistus RS 100

## Customer benefits

- Professional consultation during the engineering phase including demo equipment
- Global service and sales network
- Compact, robust and easy to use
- Quality product with German Quality

## Customer

The customer is a world-leading technology company. It researches and develops solutions for safety, environmental protection and networking, in order to keep developing mobility in a sustainable way. The injection moulding company currently employs 147,000 people and operates 14 technical centres as well as production locations and customer service centres across 45 countries.



## Project goal and implementation

The aim was to detect core breakages just a few tenths of a millimetre in size inside injection moulding tools as quickly as possible in order to prevent complaints, unnecessarily high costs and loss of time. The metal detector Vistus RS offered a range of benefits for the customer; the sensors are much more sensitive than competing products and they also provide more in the way of statistics. These can then be used for internal quality control and to improve the production process.

The plant that was nominated to lead the way produces products on nearly 120 injection moulding machines with more than 800 injection moulding tools. Moulds (also referred to as tools) for the production of automotive connectors in particular often have very low core diameters and up to 32 cavities. The pressures and forces present within the tool can cause the cores to wear out and subsequently break. The 'cores' can be seen within the tool as a positive contour and create the negative within the connector into which the pins (contacts) can subsequently be clipped. These types of connectors are used for example for engine control units, speedometers, sat nav systems and any other types of electronic components within a vehicle.

Production takes place at the customer's premises on the latest injection moulding machines combined with the latest process technology: flexibility, efficiency and quality form the foundation here. After reviewing several concepts from a variety of different providers and several months of testing, the company opted for the freefall metal detection system Vistus RS from Minebea Intec, whose clear benefits are its detection sensitivity, ease of use and batch traceability.

Vistus is usually used in food technology but in this pilot project in the plastics industry the product impressed the customer with benefits such as maximum detection performance through optimum vibration control. The product was specifically tailored to the customer's needs for this project. This involved two detection coils being attached to one electronic unit and the software also being adapted for the customer. During the engineering phase, the team

*"Flexibility, efficiency and quality are values that matter to everyone. The use of Vistus RS 100 and the 2-channel search technology in the customer's factory ensured that the plant meets the highest requirements."*

*Lukas Fischer (Sales, Minebea Intec)*

from Minebea Intec provided the customer with comprehensive support and were on hand with advice and assistance at all times. This ensured that the best solution was found for the customer.



Contact the experts  
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The metal detector Vistus RS is available with a 100 or 150 diameter.



Example of a connector (each hole in the surface of the connector goes all the way through and needs its own core)



Are you interested? We'll make you an offer!  
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