



BEST SENSORS

CASE STUDY



SONTEC SENSORS DETECT TEMPERATURES IN AUTOMATED WMF MACHINES

For the perfect coffee experience

GEISLINGEN (WI) – Espresso, cappuccino, latte macchiato – today people enjoy coffee in various forms. One of the global players on the market is the WMF Group, which has been supplying high quality coffee machines to gastronomy and sophisticated private customers for decades. There is a lot of technology inside the machines that really enhance the coffee experience. Application-specific sensors from the house of **SONTEC** ensure, among other things, that the brewing and drinking temperatures are ideal.



WMF - The German population associate these three letters with quality and elegance when it comes to cutlery, cookware, kitchen utensils, cutting tools or table and lifestyle accessories. Not many people know that the Württembergischen Metallwarenfabrik AG, founded in Geislingen an der Steige in 1853, already had a high quality coffee machine on the gastronomy market in 1927.

In 1969, the Swabian inventor presented the world's first fully automated coffee machine and is still one of the few providers that serve the world market. Over 6,000 employees worldwide „create“ for the WMF Group. Including about 200 specialised retailers in German-speaking areas and a customer service network with about 300 service employees for commercial coffee machines. WMF has sales of over a billion Euros to show for itself.



Up to this day the coffee machines are exclusively developed and manufactured on location in Geislingen thereby rightfully bearing the „Made in Germany“ seal of quality. „Our fully automatic coffee machines can be found worldwide in sophisticated hotels as well as on cruise ships, in offices, cafés and bistros“, explains Ralf Weber, who is in charge of sensor purchasing. „We offer our customers custom-made coffee system solutions: Whether the focus is on the newest specialties or high cup capacities or on whether hot or cold milk foam or milk toppings are required.“

SENSORS FOR THE HIGHEST COFFEE ENJOYMENT

In order to guarantee the highest coffee enjoyment there is a lot of mechanics and electronics at work inside contemporary WMF machines. „To name an example, we have to determine the temperatures in the hot water and steam boiler or that of the milk and foam in seconds, so that the machine can quickly re-heat itself as needed and maintain the desired temperature“, Ralf Weber explained. „This can only be done with reliable temperature sensors.“

The buyer has nothing negative to say about the technology coming from the Sauerland manufacturer **SONTEC** Sensorbau. „At first we obtained **SONTEC** sensors from a system distributor“, he remembers. „After they switched to a different manufacturer, the quality of all the supplied sensors collapsed. We couldn't and still cannot afford such difficulties - just think of the consequences of a coffee machine breaking down on a cruise ship.“

CUSTOM-MADE SENSOR ARE OPTIMISED

After doing some market research WMF came across the original sensor manufacturer and „we were very satisfied with their products.“ Since then, **SONTEC** is on the



There is a **SONTEC** NTC plug-in sensor in the compact hot water boiler that registers the current water temperature with a fast response time of T05 within 1.5 seconds.

Swabian company's supplier A-list. The sensor specialist from Lennestadt creates many customised sensor, cable, connector and fixing solutions for a number of WMF machines – like WMF Made in Germany. „We value our collaboration with **SONTEC** for their development expertise and flexibility“, Ralf Weber explained. For instance, **SONTEC** has replaced a NTC temperature sensor, which previously consisted of three expensive turned parts, with one sensor with a deep-drawn hull. „It is also tapered at its tip and outfitted with a special thermo-lubricant in order to optimise the sensors response behaviour.“ This way a WMF machine can regulate its temperature even faster.

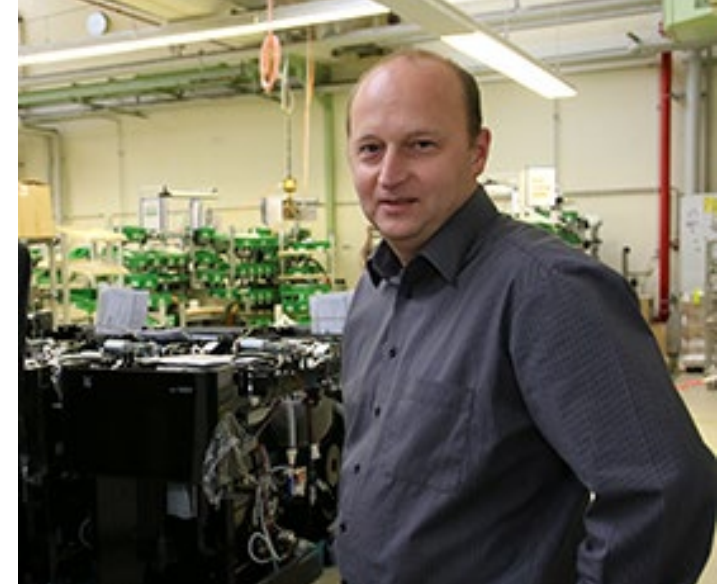
Supply reliability and the complaint rate, which is next to zero, are also just as important to the buyer. It is no surprise that **SONTEC**'s orders keep increasing. In 2013, the company from Sauerland supplied about 23,000 sensors to Geislingen; in 2014 it was already over 62,000 sub-divided into nine different types. „We are so convinced of the **SONTEC** quality that we have already recommended their sensor solutions to our Swiss subsidiary Schaefer.“



A high level of security for a steam boiler: The TE4-U plug-in sensor with swivel nut reaches fast response times thanks to a laser welded D4mm test prod.



There is a SONTEC sensor at the lower end of the auto-steam lance that registers the temperature of the milk and foam within seconds so the coffee machine can maintain best values.



WMF buyer Ralf Weber: „We appreciate SONTEC's high quality sensors and solution expertise.“

SONTEC + SONDEV + SONDIS AN INTELLIGENT COMPANY CONCEPT BUNDLES KNOW-HOW

With a good 100 experienced employees and a highly diverse production range, the owner-operated medium-sized company SONTEC operates with great flexibility in customer service and throughout the production process. Together with the modular design of SONTEC products, individual customer solutions at economic conditions are an option at any time. Practice-oriented technological solutions for many demands are created from new ideas at the independent development company SONDEV. This includes the development of hardware and software in the areas of measuring technology, sensors and industrial electronics as well as ongoing product maintenance.“

The distribution company SONDIS supplies customers worldwide with SONTEC standard solutions as well as with additional measurement and control technology products.

„Our sensors can also be found in WMF's new espresso machines. An NTC immersion sensor sits, for instance in the auto-steam lance, in order to quickly and reliably measure the temperature of the milk and foam“, explained Patrick Sonntag, firm owner of SONTEC.

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