



Production milestone at Bosch 100 million hot-film air-mass meters manufactured in Eisenach

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- Sensors for clean combustion in gasoline and diesel engines
- Five Bosch manufacturing sites worldwide
- Success story began in the 1970s

In October 2009, the one-hundred millionth hot-film air-mass meter (HFM) was produced at the Bosch plant in Eisenach, Germany. The sensor measures the engine's air intake, independently of air temperature and density. The data provided by the HFM provide the basis for metering the amount of fuel injected into the engine. Achieving the right air-fuel ratio ensures that the engine operates efficiently, which in turn also reduces emissions. Moreover, in modern diesel engines, hot-film air-mass meters serve also control exhaust-gas recirculation.

High-precision metering and a compact design

The new generation HFM7 is available with either an analog or digital interface to the control unit. The HFM7 is characterised by its high-precision metering, compact design, and sturdiness. Moreover, thanks to its spontaneous response characteristics, for instance after starting the engine in a vehicle equipped with a start-stop system, the HFM7 can quickly deliver reliable data relating to the air flow in the induction tract.

The success story of the hot-film air-mass meter began in the 1970s with the first air-flow sensor, which worked according to the dynamic-pressure principle. In the 1980s, the hot wire air-mass meter was the first to measure air mass using thermal measurement principles. The hot wire air-mass meter was first used in Formula 1 racing. In 1989, Bosch began manufacturing the first generation of hot wire air-mass meters for production vehicles. They were installed in the Volvo 240. In terms of volume, the HFM5 stands out from the rest. Launched in 1996, it is still being produced today. The HFM5 was the first micromechanical hot-film air-mass meter to be produced on a large scale. In 2006, Bosch launched the HFM6, the first generation to feature a digital interface. In order to make engines even more fuel-efficient and eco-friendly in the future, Bosch is working to further improve the hot-film air-mass meter's precision and flexibility. By integrating additional measuring signals into the HFM, such as temperature, pressure, or humidity, additional data can be made available for engine management.

At present, Bosch manufactures hot-film air-mass meters at five locations worldwide. The lead plant for hot-film air-mass meters is located in Eisenach, Germany. All the HFM models currently available in the market are manufactured here. The sensor is also manufactured in Saratov (Russia), Daejeon and Kunpo (both in South Korea), and Shanghai.

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Note to editors:

About Bosch

The Bosch Group is a leading global supplier of technology and services. In the areas of automotive and industrial technology, consumer goods, and building technology, some 280,000 associates generated sales of 45.1 billion euros in fiscal 2008. The Bosch Group comprises Robert Bosch GmbH and its more than 300 subsidiaries and regional companies in over 60 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. Each year, Bosch spends more than 3.5 billion euros, or eight percent of its sales revenue, for research and development, and applies for over 3,000 patents worldwide. With all its products and services, Bosch enhances the quality of life by providing solutions which are both innovative and beneficial.

The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant up-front investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

Additional information can be accessed at www.bosch.com.