



100 million ultrasound sensors from Bosch

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- 100 million Bosch ultrasound sensors produced since 1993
- Bosch parking assistant technology in some 200 vehicle models worldwide
- Production at three locations in Europe, Asia, and America

The one hundred millionth ultrasound sensor has rolled off the production lines at Bosch. It gives the vehicle its 'sense of touch', allowing it to register its surroundings. The success story of these ultrasound sensors began in 1993, when Ford offered a reverse parking aid in its Scorpio saloon. Its obstacle warning function met with great interest among drivers. The second generation of sensors soon followed, and was installed by Mercedes-Benz in its S class. In 1995, Bosch sold 100,000 ultrasound sensors to the automotive industry. Five years later, this total had risen to 2.5 million sensors a year. Currently, 14 automakers worldwide install Bosch parking assistant technology in some 200 vehicle models.

The technology has matured considerably, and is now in its fourth generation. "We have been able to reduce the volume of today's sensor to one-fifth of the ultrasound sensor of 1993. The smaller installation volume and a variable connector design make it much easier for automakers to install these sensors in bumpers," says Rainer Kallenbach, Executive Vice President Sales in the Automotive Electronics division. Bosch covers worldwide demand for ultrasound sensors and the electronic control units that go with them at three manufacturing sites in Europe, Asia, and America.

From the parking aid to the parking assistant – more applications for the ultrasound sensor

The ultrasound sensor was originally developed for the classic parking aid, which kept drivers informed during parking manoeuvres about the distance between the bumper and the nearest obstacle. More recently, ultrasound sensors have formed the basis for a modular system which allows Bosch to provide all the ultrasound-based functions associated with the vehicle. The latest example is the parking assistant, which is available as an optional feature in the most recent Mercedes-Benz A- and B-Class. This assistant uses ultrasound sensors to identify suitable parking spaces and, with the support of electric power-assisted steering, to automatically park the vehicle in just a few seconds, even in the tightest of spaces. All the steering movements are performed by the assistant, while the driver controls the parking manoeuvre by accelerating and braking.

On the basis of the same ultrasound sensors, Bosch also offers a variant of the parking assistant for vehicles with conventional hydraulic power steering. Here, the driver still has to steer, but is guided into a perfect parking position by clear instructions from the assistant as to steering-wheel position and ideal points at which to stop or to reverse the steering. The debut of this variant was in the Vauxhall/Opel Insignia and the Mercedes E-Class.

By 2011, 17 vehicle models will be equipped with the Bosch parking assistant. The supplier expects that many further models will soon follow suit. There is a good chance they will do so, as by then the second generation of this electronic parking assistant will be ready for series production. It will not only be able to parallel-park, but also provide automatic support for parking at a right angle and driving out of a parking space.

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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.