

## The new Mercedes E-Class runs on Brose products

**Coburg/Hallstadt/Würzburg (08. April 2009)** The new E-Class shows that sophisticated design and a maximum level of comfort and safety do not need to be at odds with environmental sustainability. Brose does its part in this regard with its lightweight construction, integrated functionality, and efficient energy management.

The company supplies the new luxury model from Stuttgart with door systems, seat components, and cooling fan modules. In addition, the T-Model, whose market debut is planned for the fall of 2009, will utilize an electric liftgate drive from Brose. This spindle drive is already offered as an option for the Mercedes GLK as well as the T-Model of Mercedes' C-Class.

As a specialist for mechatronic systems and electric motors, Brose strives to satisfy the increasing demands for comfort, safety, and environmental sustainability with equal emphasis. Brose seeks to save fuel and reduce CO2 emissions with lightweight construction, integrated functionality, and efficient energy management. For example, cooling fan modules will be used in the new E-Class which feature – depending upon the engine size of the car – brushless motors rated at either 600 or 850 watts.

These motors are characterized by minimal energy consumption and comparatively low weight. The cooling fan module's integrated electronic interface to the engine control unit governs the rotational speed of the fan wheel, thereby always insuring the optimal engine temperature.

### **Engine fan with louvers"**

The louvers" of the cooling fan modules contribute additional advantages: they limit the amount of air allowed to reach the engine depending upon the driving situation, thus improving the car's aerodynamics. Since the louvers are closed when starting the engine, not only is engine noise upon startup noticeably reduced, but the optimal operating temperature of the engine and therefore its low-emission operation is more quickly achieved.

In addition to this optimized energy management, for decades Brose has been making an important contribution towards the reduction of fuel consumption with its lightweight door-system construction. The new E-Class includes integrated door systems with functional carriers made of aluminum: by reducing the thickness of the panel to one millimeter, weight savings of about 30 percent compared to traditional steel units could be achieved. This lightweight construction component, which is being used in six vehicle derivatives, is consistent with Mercedes' automotive concept for optimized resource consumption.

This multiple utilization of identically made components results in economies of scale and investment savings for the automobile manufacturer. Brose even goes a step further: the consistent use of standardized components from Brose's modular parts system for

Mercedes cars enabled common parts to be comprehensively identified already in the development stage of the E-Class and the planning of their use in various other model series.

The systematic continuation of the modular strategy allows the greatest possible utilization of identical functional carriers in the door systems of the C and E classes. In this way the development work and expenditures could be reduced, not only for the customer but as well for the supplier, and also enabled a robust quality control even in the initial start-up phase.

Brose manufactures the door systems just-in-sequence” at its Sindelfingen production facility, which began operation in 2006.

#### **Lean Award” for Brose**

In 2007 the publication AUTOMOBIL-PRODUKTION and the firm Agamus Consult presented the Brose factory in Sindelfingen with the Automotive Lean Production Award. Brose was judged especially strong in the areas of process optimization, flexibility, defect prevention, and standardization. In terms of dependability, efficiency, and transparency of production logistics, the supplier has clearly profited from the transition to e-production”: the entire process chain operates by way of a paperless information system.