Brose at the IAA 2011: Competence in Mechatronics

Coburg (11. July 2011)
“Brose - Competence in Mechatronics” is the theme of the international automotive supplier’s year's product presentation this year. It focuses on the high standards the company sets for its systems: Selected exhibits clearly demonstrate Brose’s ability to perfectly coordinate its mechanical, electrical and electronic components and systems. The family-owned company has in depth expertise that spans its whole range of products, enabling Brose to develop and
manufacture its entire portfolio in house, from individual components to complete systems. In addition, every product is available in every region worldwide with the same processes and technologies for customers’ global platforms.

The mechatronic specialist’s development efforts focus on lightweight engineering that does not sacrifice safety or comfort. The lightweight seats, weight-reduced window regulators, door systems made of renewable raw materials and intelligent rear vehicle and thermal management system solutions showcased by Brose in Hall 4, Room “Europa” fulfill these requirements.

Moreover, the family-owned company will also be launching its e-mobility product portfolio, theresult of a joint venture established at the beginning of 2011.

Renewable raw materials improve the life cycle assessment of door systems

International climate targets are leading to more stringent legal requirements worldwide – this applies to both CO2 emissions and the life cycle assessment (LCA), from the development to

the scrapping of vehicles. This means that the use of renewable raw materials is becoming increasingly important. The market leader for door systems is currently addressing this challenge with highly integrated functional carriers made of polypropylene reinforced with wood fibers instead of glass fibers: This renewable raw material not only improves ecobalance of vehicle production, but also lowers weight while providing both thermal and noise-reduction benefits – all without sacrificing safety or producing additional costs.

Promising: cost-neutral lightweight design

A compact window regulator that is just as light as a similar product made of aluminum yet is as cost-effective as a steel-based solution thanks to its superior functional integration is just one of the examples the automotive supplier offers for implementing cost-neutral lightweight design.

For its product group seat systems, Brose applied its expertise in lightweight, functional front seat design to the 2nd and 3rd rows. The solution presented by the automotive supplier weighs 15% less than a comparable series variant and offers other advantages as well. The optionally
available “Business-Comfort-Rear-Seat” can be ergonomically adjusted to optimally suit the passenger's preferences and also offers an electromechanical massage feature. Brose is presenting concepts for cost-neutral lightweight seat design at the motor show with both conventional and new materials and innovative manufacturing methods.

Brushless: reducing fuel consumption with new drives

Brose's weight and performance-optimized electric motors also improve efficiency. Among other innovations, the company is also presenting new drive concepts for HVAC blowers and cooling fan modules that cut CO2 emissions considerably. One example: With its new, brushless-driven HVAC blower, the automotive supplier succeeded in reducing weight by approximately 400 grams compared to its predecessor.

The low-noise cooling fan module also fitted with a brushless drive has yet to be matched in terms of efficiency (> 80% for the drive), low weight and reduced space requirements. In combination with the active grill shutter system patented by Brose, vehicle thermal management can be optimized to achieve a fuel savings of 0.1 to 0.2 liters per 100 km.

Ready for the mobility of the future

Lightweight design for seats and doors, low-noise drives as well as intelligent function integration not only increase the efficiency of internal-combustion vehicles but can also be translated to electric vehicles with very little application expenditure.

The family-owned company has also expanded its portfolio over the years with products that advance vehicle electrification suitable for use in both traditional internal-combustion and electric vehicles. Examples are drives for power steering or electric parking systems.

Brose-SEW: promising solutions for large-scale e-mobility

At the beginning of 2011, Brose and SEW-EURODRIVE - one of the world market leaders in electric motors, gear units and control systems for industrial applications - set up a joint venture. The objective is to develop and manufacture drive systems with different motor technologies and designs for individual vehicles ranging from 15 to 150 kW.

In this joint venture, both partners are pooling their respective technical expertise, their experience in manufacturing electric motors and corresponding electronics and charging systems, thus offering OEMs a unique combination of existing R & D expertise and production facilities for electric drive systems.

The modular system for e-mobility motors allows the implementation of energy-efficient drive solutions tailor-made to suit customers' needs.

In addition, the company's inductive charging technology provides a promising solution for large-scale e-mobility: “Power fuel stations” are no longer required since the contactless charging technology ensures “intermediate charging at every stop”. The automotive supplier is presenting the Brose-SEW Elektromobilitäts GmbH & Co. KG portfolio to automotive experts at the 2011 IAA.