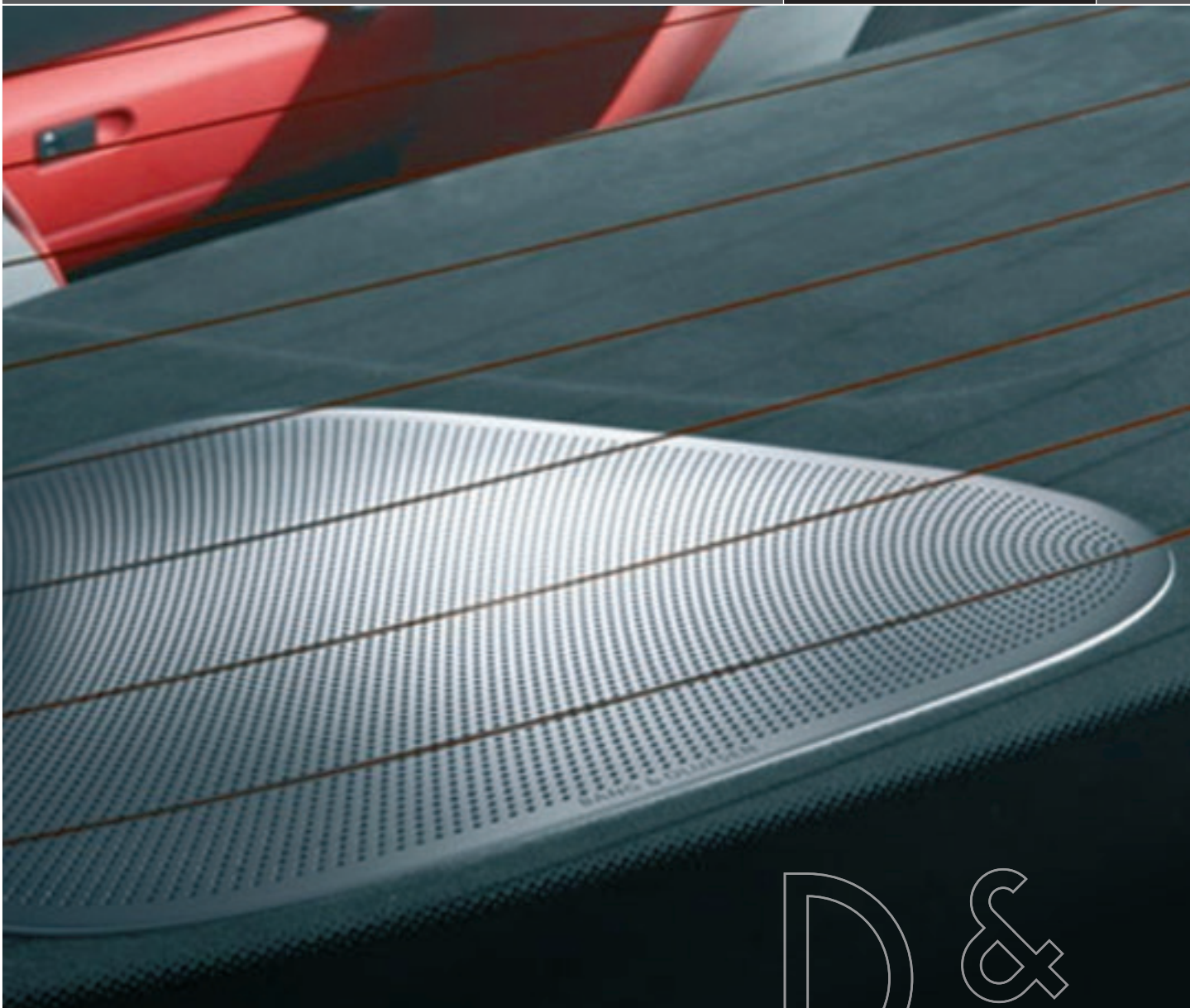


PRESSEfocus

PRESS RELEASE

1,000 Watt and 500 HP –
Perfectly Integrated By DZ12

NCFertigung
DES TECHNIKEN FÜR SPANNENDEN METALLBEARBEITUNG



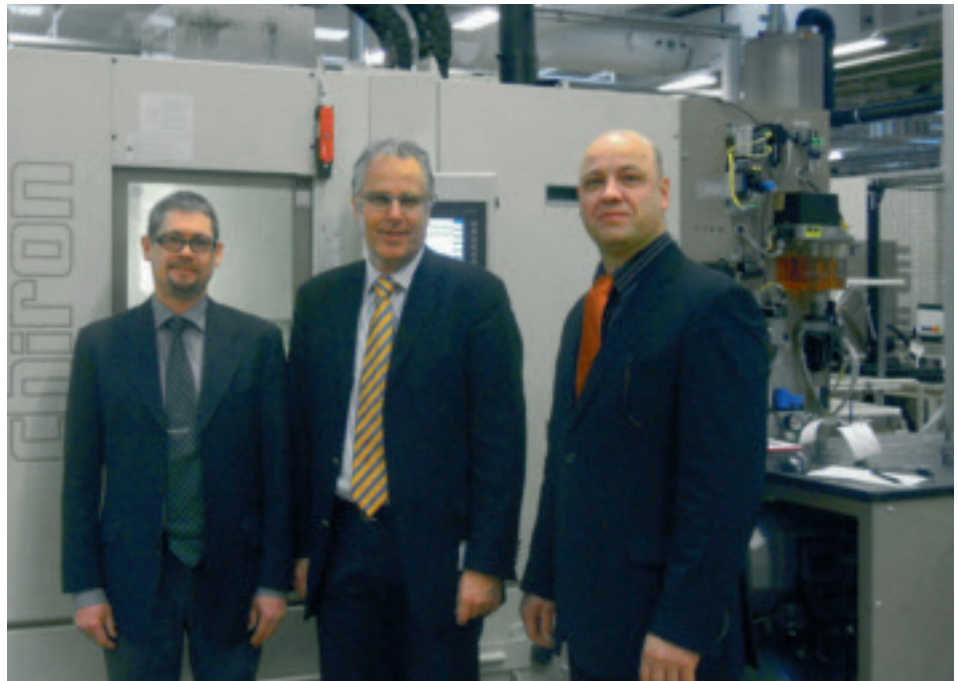
Premium brands get together

B & O

1,000 Watt and 500 HP – Perfectly Integrated By DZ12

[From Rainer Volker Gondek]

The stereo system builder Bang & Olufsen has depended on the speed and precision of the high-tech machines from Tuttlingen for more than 25 years. Unlike any other company, Bang & Olufsen knows what it takes to thrive in the highly competitive market for hi-fi and audio systems. The key to success lies in the exclusivity, uniqueness and value of the products. This means it is a good idea to choose the innovative and technologically winning solutions from CHIRON for your own manufacture.



From left to right: Jens Jorn Knudsen, Senior Product Manager, Holger Hehl, CHIRON Regional Sales Manager, Carsten Jensen, Purchasing Machines

Besides the “home entertainment” area, Bang & Olufsen is also a leading provider in the car hi-fi field. It is here in particular that one can see how perfectly and individually B & O can integrate its lifestyle products in vehicles such as Aston Martin, Mercedes, BMW or AUDI.

Increasing sales in the automobile industry – and in particular, for the luxury segment – make it necessary for Bang & Olufsen to also increase their productivity for car audio systems. Nothing is more important than individuality for a product when it is to be presented in an exclusive interior in a discreet and yet noble way. B & O sets very high standards here. Loudspeaker covers can be produced in a great variety of ways. Most of the time, they

are made of plastic or aluminum pressure casting process. This is not so for the noble Danes. Here is where the know-how from Tuttlingen comes into play.

At the beginning, a single-spindle MILL 2000 was used here in two-shift operation to make customized loudspeaker covers. That meant that per minute, about 180 boreholes were made in the sheet. At the end, almost 3,000 high-precision boreholes with a diameter of 2 mm decorated the final cover for a 500 hp road machine. Manufacturing time for this: 20 minutes per cover. Today, that goes four times faster at Bang & Olufsen. Since the beginning of 2011, this has been possible because the Danes began producing the



Two Mercedes SLS AMG automobiles in front of the modern headquarters of Bang & Olufsen in the Danish city of Struer

About Bang & Olufsen a/s

Bang & Olufsen is considered by hi-fi experts to be a premium brand for products featuring superior sound, design, quality and ease of operation. The company was founded in 1925 and has its headquarters in Struer (Denmark). It is active in the audio, television and home entertainment fields and is one of the world's best known brands for consumer electronics. Bang & Olufsen Automotive offers its part-

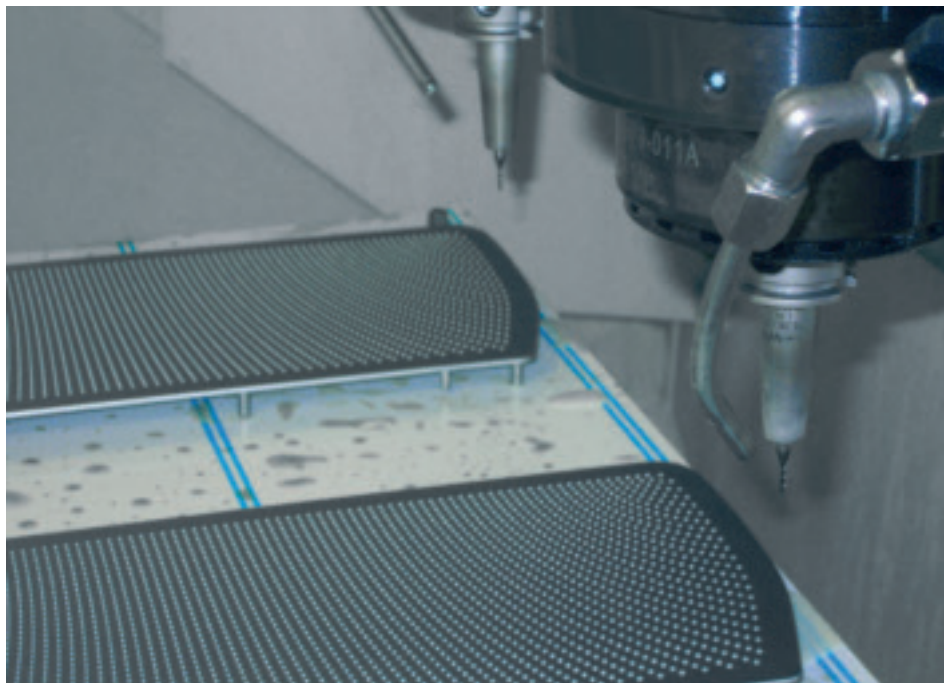
ners in the automobile industry audio systems with superb sound quality – an incomparable listening pleasure for drivers and passengers. The systems from Bang & Olufsen Automotive incorporate not only the company's traditional area of expertise in regards to manufacture and aluminum machining, but also combine the radical synthesis of emotional attraction and technological performance which has long been the trade mark of Bang & Olufsen.

exclusive metal sheets for a wide variety of vehicle specific versions and sizes on the series 12 double-spindle machines from CHIRON.

Jens Jørn Knudsen, Senior Product Engineer at B & O, was won over by the technologically sophisticated CHIRON solution. No other competitor was able to offer a suitable project.

The production time was halved by the double-spindle machining center. The fast workpiece changing makes it possible for a handling robot to load and unload while machining is being done. Spindle speeds of up to 36,000 rpm and high acceleration values ensure optimal process performance. In addition, floor space requirements have been halved and investment costs are kept low (good price/performance ratio). Another reason for the decision for "Seconds ahead" was, according to Knudsen, the fact that they have also already had years of good experience with other CHIRON solutions.

Especially when support for problems was needed, CHIRON was always effective and fast with expert technical onsite support. This advance in seconds as well as long and close cooperation led Bang & Olufsen to decide to order six more machining centers from CHIRON.



CHIRON DZ12K W High Speed plus: Siemens 840 D; Remote diagnostic tool and teleservice; CHIRON laser control for checking for tool breakage



CHIRON DZ12K W High Speed Plus

Travel [X - Y - Z]	550 – 400 – 360 mm
Acceleration [X - Y - Z]	up to 10 - 15 - 15 m / s ²
Rapid feed	75 m / min
Spindle clearance	250 mm
Spindle speed	36,000 rpm
Tool taper	HSK-A40
Tool change time	approx. 0.9 s
Tool places	2 x 12 in the pick up Chain magazine

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