

## PRESS INFORMATION

Construction / Mounting technique / Sheet metal processing

### Tolerance compensation with “Joker Film”

High-precision laminated shim simplifies the assembly of components.



*The 0,025 mm foil with finger-lift technique can be pulled off easily with the peeling knife.*

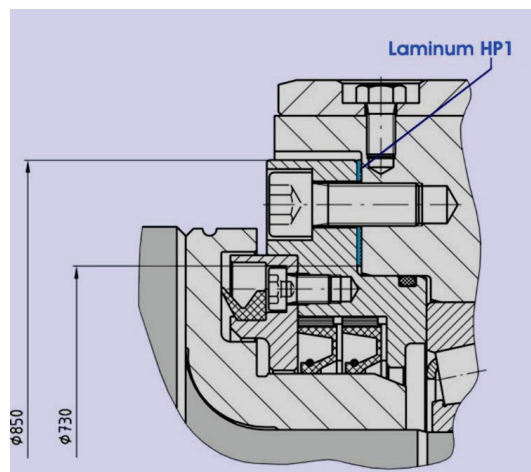
Tolerance compensation in the assembly of components can be optimized to 25 micrometres with the new, high-precision shim from Georg Martin that goes by the name of Laminum<sup>®</sup>HP1. You can realize some considerable cost reduction potential here at the same time, because the use of Laminum<sup>®</sup>HP1 makes mechanical compensation methods superfluous, thus simplifying the entire assembly process.

Dietzenbach, November 2010 – Where components are becoming ever more compact and smaller, as in transmission construction, demands on tolerance compensation are increasing. For this reason, supplier Georg Martin has developed a new type of shim called Laminum<sup>®</sup>HP1 which is tailor-made for simple, high-precision compensation and alignment in the assembly of components. The special feature of these stainless steel spacer shims is the combination of severable peelable sheet metal layers, each with a thickness of 0.05 millimetres and a final high-precision film with a thickness of a mere 0.025 millimetres. This “joker film” serves as a kind of final step in the manual fine adjustment process, where tolerances in the 2.5 hundredths range have to be compensated.

#### A Quicker Way to High Precision

The new Laminum<sup>®</sup>HP1 combined solution is a time and cost-optimized alternative to a spacer shim laminated entirely with 0.025 millimetre film layers. “We can offer our new shims at a lower price because the manufacturing costs are lower than with fully coated 0.025 millimetre shims. Laminum<sup>®</sup>HP1 also helps the user to achieve the desired objective more quickly because the ‘thicker’ 0.05 mm films can be peeled off much faster,” explains company director Christoph Martin.

Another advantage is that the practical utilization of the Laminum<sup>®</sup>HP1 in the assembly of components is simplified because the 25µ film (unlike the adjacent 50µ films) has a small, slightly raised finger lift which allows you to recognize the “joker film” immediately and pull it off manually with the peeling knife, similar to the lid of a yoghurt tub. Thanks to its simple handling, this new high-precision shim from Georg Martin also constitutes further progress over the still widespread practice of mechanical processing in



*Typical case for Laminum<sup>®</sup>HP1: Roller bearing*

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tolerance compensation. This is because compensation, alignment and fitting tasks can be performed immediately with the Laminum<sup>®</sup>HP1 without having to make use of grinding or cutting machines. What this means in real terms is that the new shim from Georg Martin supports the optimization of the materials flow in the assembly of components without impairing quality, which normally results in considerable cost reductions and time savings.

### **Thin and Solid Alternatives**

Thanks to its modern machinery and equipment, the supplier Georg Martin can manufacture all shims of the M-Tech<sup>®</sup>L family – which includes the new Laminum<sup>®</sup>HP1 – in all desired shapes and sizes in line with customers' drawings. As an alternative to M-Tech<sup>®</sup>L shims, the company also offers ultra-thin individual shims and solid metal compensation sheets which are available in polished or self-adhesive versions or as part of a range (M-Tech<sup>®</sup>S), as well as packaged shims which are separated in the same way as a tear-off calendar (M-Tech<sup>®</sup>P).