

# EXJECTION®

## Injection Moulding in a new Dimension

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[www.exjection.com](http://www.exjection.com)

EXJECTION®  
PARTNER



*Hybrid components are currently the talk of town throughout the technical world. As a very special class of multi material parts components hybrid parts combining solid wood and plastic can be considered. The combination of solid wood and plastics has a very special charm. No other light weight material than wood offers so much of stiffness at such a low cost level, while plastics offer unsurpassed freedom in terms of design. If combined the materials are a strong team. And with EXJECTION® the length does not matter!*

### Connected by EXJECTION®: Hybrid parts of solid wood + plastics

More and more technical solutions are realised by the application of hybrid components out of 2 or more different material classes. An enormous potential that has hardly been recognised so far can be found at a very special class of hybrid components, the solid wood + plastic composites.

Far into the 19<sup>th</sup> century wood was one of the most

### A Superior Combination

important and widely applied design materials. Today solid wood as an engineering material can usually be found where a combination of a high level of stiffness with a low weight at a low cost level is required or where high value wood surfaces are applied in order to achieve optical or haptical effects.

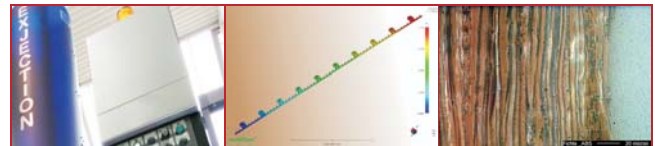


DECOR STRIP OAK  
with snap fit fasteners  
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Nevertheless the design of functional product features with wood can be considered as demanding. On the one hand the constraints are caused by the orthotropic material properties of wood, on the other hand the processing costs increase significantly at more complex geometries. This is the point where plastics and EXJECTION® come into play.

Overmolding with a thermoplastic material easily allows to functionalise wooden components. Easy to apply fastening elements which in contrast to nails or screws do not damage the wooden structure, integrated dowels facilitating close tolerances, bumpers directly moulded onto the wooden structure

protecting the wood from impacts or soft touch effects on wooden handles increasing the operator convenience to a new level of servicability. These are only a few examples for smart applications.



For the fabrication of solid wood + plastic component EXJECTION® almost suggests itself. Many of the wooden components are more or less shaped as beams, ledges or strips, which exactly are geometries EXJECTION® is targeting at.

The low processing pressures, the gentle filling of the cavity, the non stationary gating point, all these factors cause that the structure of the wooden component is not damaged and the advantageous properties of the wood are fully preserved. But the advantages are not only to be found in the performance of the parts. Only EXJECTION® allows the application of rather small machines with only 50 tons or 100 tons of clamp force. Thus the costs can be kept low and the economic efficiency increases.

### EXJECTION® 2009

#### Step into new Dimensions

2009 offers a number of occasions to get a deeper insight in the EXJECTION® technology. On January, 26<sup>th</sup>, 2009 the EXJECTION® team will present its innovative molding technology for the first time outside Europe on the MOLDING 2009 in New Orleans / USA. Another possibility to get in touch with EXJECTION® is at the international VDI conference SPRITZGIESSEN 2009 at Baden-Baden, Germany, one of Europe's most renowned conferences for injection molding. There the EXJECTION® developers from IB STEINER will present the newest outcomes and trends in the fields of process technology and mold technology as well as the first experiences gained in the series application of the EXJECTION® technology.

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