



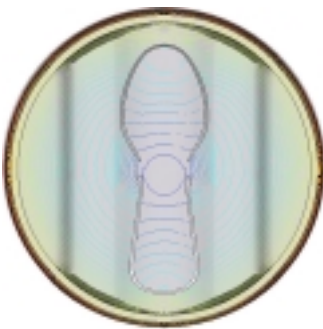
'Medbox' for gas cylinders

Assigned by Hoek Loos Medical, BPO developed a new crate for gas cylinders. A striking feature of the design is that the crate is assembled from two identical parts. As a result of this innovative product assembly a high quality crate is produced and the unit cost is controlled.

Hoek Loos Medical produces medical gases. Four cylinders of two litres are delivered to the client in this new crate. Compared with the earlier situation the Medbox is highly improved. During filling and inspection the cylinders are no longer lifted out the crates through which time is saved. The efficiency of transport and storage is improved by more than 40% because the crate is smaller. Furthermore, the crate has a more medical image.



BPO was responsible for the total product development. During the design process strength and ease of production is checked continuously with advanced computer simulations. After hot plate welding of the two identical parts, the crate is remarkably stiff. Hoek Loos has applied for patents on several characteristics of the design.



Lid with integrated spoon

BPO developed together with the Swedish company Jotipac AB a lid for single dessert with an integrated spoon. When opening the packaging the consumer presses out the spoon to eat his or her dessert.

BPO advised Jotipac AB during the design process. The spoon and the lid are connected with break off tabs. The in mold label covers the two parts. The label sticks, but comes off when the spoon is extracted. Whilst injection molding the thin breaking ribs disturb the regular filling of the mould and cause wrinkling of the label. BPO solved this problem by a subtle variation of wall thickness. These variations result in a simultaneous filling of the rim and a label without crinkles.



The design met the requirements at the first test-molding. JOTIPAC AB has applied for a patent to lids based on this design. At this moment the dessert is only available in Norway and Sweden.

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Tips & Tricks

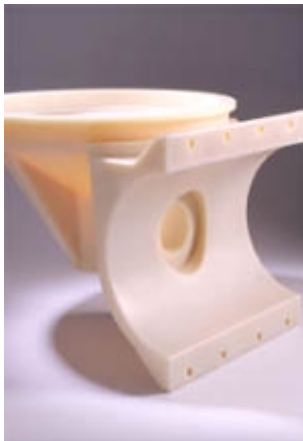
Water injection molding offers a lot of possibilities for making hollow products. Many of our clients asked for more information as a reaction to our lecture at the fair in Veldhoven, 'Kunststoffen 2001'.

The pictures of this lecture are now present on our website (www.bpo.nl, lectures). If you have more specific questions, do not hesitate to call us.

Links

At www.web2cad.com producers of standard parts and semi-finished products you find their catalogues and also 2D and 3D CAD files of their products. The CAD files are downloadable for use in your designs.

www.engineering.com offers a lot of information and links for engineers.



Engineering Award

On the 22nd of January the European Engineering awards were announced. Two of the eighteen awarded products were developed with help of BPO: an expansion tank for DAF Trucks (Kendrion Van Niftrik) and Aquasource for water purification plants (Quadrant).

Quoted from the jury:

"This product is an example how to cooperate and make a product that beforehand was almost impossible to make. Kendrion Van Niftrik took up the challenge that resulted in an optimum product in which all parties gained success by unlimited perseverance."

"... a product with a lower unit cost of 50% that met higher requirements on weight, load, internal pressure, lifespan, (...) safer water for the consumer. (...) Furthermore, the parts needed to be earthquake resistant. By intensive cooperation (...) they succeeded in producing products that meet all requirements and the budget of the client.

BPO congratulates Kendrion Van Niftrik, DAF en Quadrant with their decoration and thanks them for the confidence in BPO.

People and addresses

Our team of engineers is expanded with Eric Biermann who is a design engineer. Lindsay de Koster completes our secretary's office and helps BPO to serve their customers in a better way.

Would you like to contact our employees personally? The personal email address of BPO employees is composed as follows: first-initial.surname@bpo.nl. Example: Oscar Brocades has email address o.brocades@bpo.nl

Application form

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BPO 15 years

BPO developed in the past 15 years more than 1500 solutions for more than 150 customers in 15 different countries★. Our team of 15 people has now more than 150 000 hours of experience in developing and optimising products with advanced CAE techniques.

