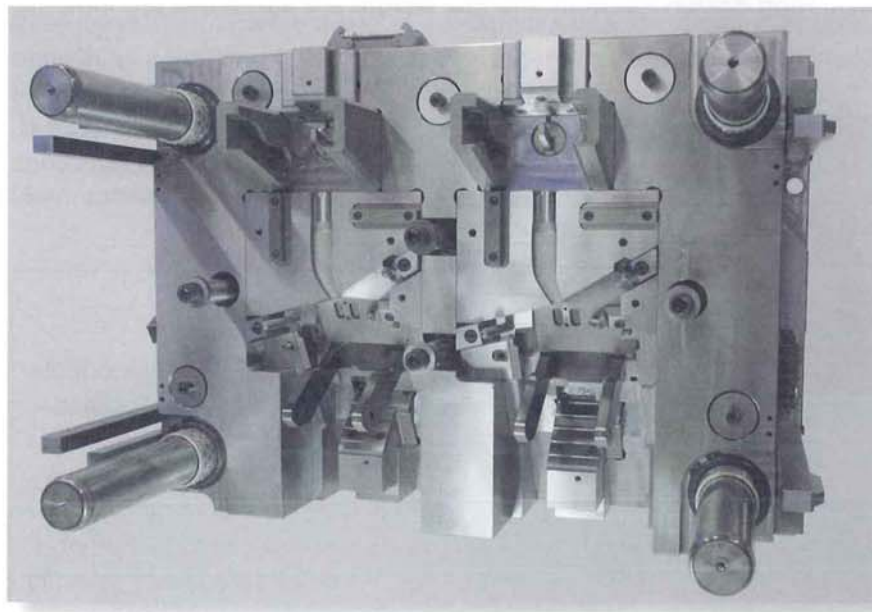


Highly complex, mechanical slider mold for lever

If consumers have highest expectations in a premium-category car, the precision requirements already start at the mold shop. Therefore Braunform developed a highly complex, mechanical slider mold for lever for a well-known automobile supplier.



1/ The injection mold with three-plate gating is operating with many mechanical sliders in various angles

The 1- and 2-cavity injection molds for lever are subject to highest demands on quality with tolerances of $\pm 2 \mu$. The accuracy and the exact arrangement are of high importance: The lever has to fit in the architecture of the vehicle and one has to be able to use it as a multi-functional instrument for gear shift or volume control.

The injection mold with three-plate gating is operating with many mechanical sliders in various angles in order to release the complex contour with wholes and many undercuts during the opening process of the mold.

By eliminating hydraulic movements an easier handling of the setup process is possible. This corresponds to the customer's requirement that the mold must

be applicable world-wide also including machines that are not equipped hydraulically. The material for the article must be particularly resistant and durable. In this case, the customer decided to use a polyamide with 65 percent glass fiber content. This needs to be processed with a mold wall temperature of over 100° Celsius. Therefore, other

technical challenges are the temperature regulation in the mold ensuring a consistent temperature sequence as well as the positioning of the injection point to orient the glass fiber orientation. Special chrome containing and specially coated steels are used to counteract the wear of the inserts by the high glass fiber content.

On the basis of crash tests, the car manufacturer tests the lever's durability in normal use as well as the predetermined breaking point for accident prevention. Due to extremely tight tolerances, the required lock function is guaranteed.

In addition to the various functions also the appearance, such as the fine eroded structure in the grip area and the offset-free transitions in the separation region, points out the high quality of the plastic article.

Due to the satisfaction of the customer in the meantime 16 injection molds have been realized since the project launch in 2005. The largest of these molds weighs 2.8 tons.



2/ The lever must be extremely durable and have tight tolerances
(Pictures: Braunform GmbH, Balingen, Germany)