Key data

- Molded part: Front end module
- Application: Car body
- Part weight: 2500 g
- Material: PP LGF30
- Mold type: Single-cavity mold
- No. of cavities: 1

Customer’s requirements

This application involved the production of plastic front end module of long glass fibre-reinforced PP for use in car bodies. The cavity was to be filled sequentially.

Solution

In the implementation of this application, an externally heated 11-port runner system with long, narrow screw fit valve gate manifold nozzles was employed. Manifold form and nozzle lengths were specially adapted to the part contour and the required injection points. The cavity was gated both directly with hot runner to the molding surface and via cold sub-runners. Both were equipped with valve gate nozzles. The hot runner system was correspondingly optimized and equipped for the processing of long glass fibre-reinforced material.

Benefits

- Gentle processing and minimized glass fibre shortening thanks to optimized and runner and correspond equipment of the hot runner system
- Optimisation of the mold cavity filling by temporally offset opening and closing of the needles
- Optimum positioning of the gates for filling thanks to runner form and nozzle lengths adapted to the molding contour
- Production with minimized sprue waste

Schematic product overview

1. Manifold nozzle, screw fit
   Series 22 E02, Type V V
2. Manifold
   Series VF
3. Actuator, hydraulic, bolted
   Series HYC 4018M 01

Illustrations simplified, schematically drawn and not to scale. For a specific application, please consult Synventive.