

Case Study

Motor-gear-unit housing of Pocan B 3233 HR for automated parking brake systems (APB)

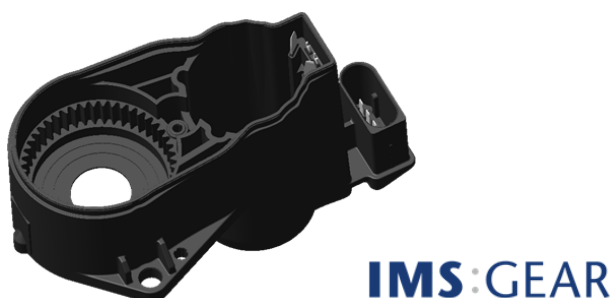


Fig. 1 Motor-gear-unit housing for actuator
Photo with kind permission of IMS Gear

IMS Gear began operating 150 years ago as a precision engineering supplier. Even then the company produced the special tools for the gearing of clock components itself. It has retained this core competence until today, providing the basis for innovative transmission solutions.¹

One of these solutions is reflected in the structure of an automated parking brake (APB).

Compared to conventional cable-based parking brake systems, APBs offer:

- Improved safety and comfort
- Easy assembly and maintenance

The APB is integrated into the disc brake caliper and therefore subject to high stress regarding mechanical load, temperature and moisture.

Because of the combination of temperature and moisture, and the stringent specifications regarding dimensional stability, IMS Gear opted to use Pocan B 3233 HR as the material for the housing. It is a PBT with 30 % glass fiber reinforcement and additional hydrolysis stabilization.

Tier-1 supplier: [Chassis Brakes International](#)

Grade: Pocan® B 3233 HR

Manufacturer: IMS Gear, Germany

This Pocan grade is also characterized by:

- High stiffness
- Good strength
- Heat resistance up to 220 °C
- Abrasion resistance
- Dimensional stability

As part of the overall process, the company is also able to successfully integrate the ring wheel for the planetary gear, insert the plug sockets and overmold the various inserts (e.g. the integration of plugs).

The motor-gear-unit housing and cover are joined together by laser welding.

¹ Source: IMS Gear GmbH, Homepage Company's History



The ability to save weight in vehicles by using plastics such as Durethan®, Pocan® and Tepex® makes an important contribution to fuel-savings and the associated reduction in CO₂ emissions.

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