

CASE STUDY

FAST HELP UNDER GREAT PRESSURE

**JÄGER GROUP SAVES
IMPORTANT ORDER WITH
COMPLEX BATTERY PACK**

CHALLENGE



Precisely fitting components with minimum tolerances!

Reliable protection of sensitive battery cells!



Time pressure because the customer's product presentation is already scheduled!



SOLUTION

Quick arrangements between customer and Jäger-development-team.



Extensive material-knowledge for perfectly matched components in use.

On-schedule delivery through a comprehensive network of suppliers.



RESULT



Cost saving as the product presentation can take place.

Innovative product design matches the components perfectly to the application.



Reliable delivery capability for series production.





HIGH PERFORMANCE UNDER TIME PRESSURE

A battery pack is required that has what it takes: A large number of different components for the housing and interior have to be manufactured in series with an extremely precise fit. The components must be so precisely matched to each other that the cells inside are reliably protected. In addition, time is pressing for this project, as the presentation for the new electric scooter is already scheduled!

13 tools for parts production are now to be produced, and this within only 50 days! In addition, the battery pack must first be completely designed, whereby attention must be paid to the greatly varying requirements for the individual components.



CHALLENGE

EXTENSIVE REQUIREMENTS FOR A COMPLEX SYSTEM

The experts at Jäger rely on their knowledge of materials to master this challenge. They decide to process four different materials by injection molding to meet the requirements:

- A special ABS for the interior: In the battery, many small cells are securely connected to each other. The material must therefore be extremely accurate and dimensionally stable.
- A glass fiber reinforced PP for the battery's housing components, which provides extremely high impact resistance.
- TPE provides the basis for the foot of the battery on the housing, a rather soft plastic and therefore non-slip and a good vibration buffer.
- PC is used for the display window through which the battery's charge level can be read.

The high time pressure for the battery pack production is intensified by the increase in the order: Jäger Gummi und Kunststoff GmbH is now also to inject the parts in series and deliver 2,000 sets in advance by air freight. The Jäger team provides the perfect mixture for this: a site manager who is fully committed to the project, a professional in project management and a product developer with a reliable network, supported by a very structured office staff.



SOLUTION

PRECISION FIT IN EVERY DETAIL

While the final test bench tuning is underway and the marketing concept is being deepened, designers and component developers coordinate the individual parts: no easy task - the parts must match the material and the process. And vice versa. The strategy is clear: everything comes from one source. This also applies to the choice of project managers. The tasks within the JÄGER Group are clearly defined and assigned up to the last work and project steps. Clear responsibilities ensure fast, stringent processes.

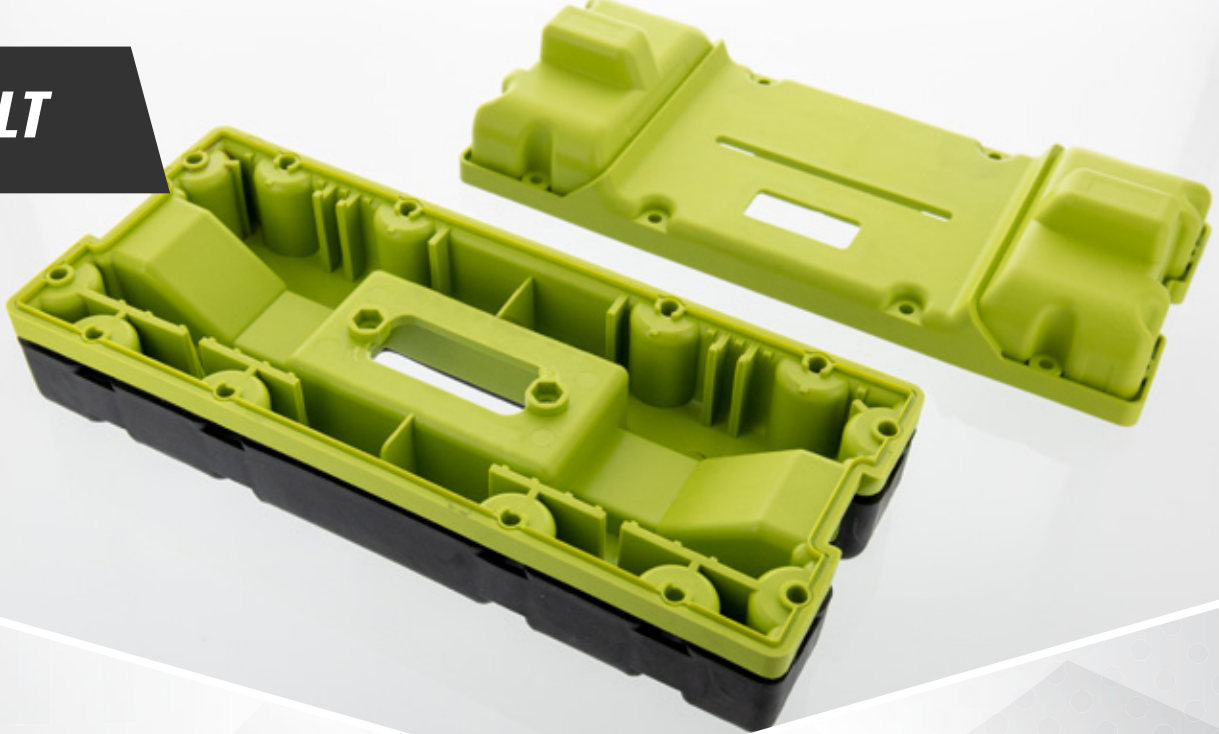
The client's technicians determine in project meetings for each item exactly where the production challenge lies, how the specified tolerances are to be evaluated and fulfilled. Where is there no alternative to dimensional stability, where can tolerances be extended?

The material variant of the special glass-fibre reinforced PP requested by the customer throws production back again and again in

the first attempts: This demanding material has an enormously high stability, but not everyone is able to process it. In this case, too, the housing parts for the batteries initially warp continuously. The solution is to be found in the quick and quite unusual, because very direct, exchange of knowledge between all those involved in the mold: the engineers relocate the injection points where the material is injected into the mold.

While still on the machine, the colleagues work out all the necessary improvements and avoid time-consuming correction cycles. The engineers implement the changes, sometimes overnight. After just 24 hours, the optimized molds are installed on the injection molding machine again. The project manager of the JÄGER Group personally monitors the production status and the sampling.

RESULT



AN EFFICIENT NETWORK

The choice of materials for the complex battery components, the total costs of the order and the production sites of the JÄGER Group, all these components must be taken into account by those involved in the plan. It quickly becomes clear: A manufacturing company cannot cope with the large number of tools alone. But the JÄGER network is bearing up. Several well-known toolmakers are available at short notice. One knows each other personally, and that pays off. Agreements down to the last detail are made on the spot. The client benefits here from a proven, exclusive network whose access is only possible via the JÄGER Group.

While the design engineers set the shape of the parts in motion, the project managers create the necessary logistics concept for just-in-sequence delivery to the assembly line of the scooter manufacturer in Germany. A reusable packaging adapted to the respec-

tive article rounds off this project.

The time has come. The JÄGER Group provides all components and series sets on schedule in the requested quality and quantity. It remains to be desired: Have a good trip at all times!

Your contact person is Oliver Geißler from the Frankfurt location.



Contact:

Jäger Gummi und Kunststoff GmbH
Wilhelm-Röntgen-Straße 28
63477 Maintal-Dörnigheim
Tel. +49-6181 940-30
E-Mail: frankfurt@jaeger-gk.de