

## Competitive advantage through intelligent solutions

### SAHLBERG as a value-added partner for series parts and assemblies

The apparatus, equipment, machinery and vehicles in our daily lives consist of many parts and components - series parts. Our quality standards, legal requirements and customer demands for products to be as maintenance-free and defect-free as possible set very high standards for series parts. They must accurately and consistently meet the specified technical requirements and be installed as smoothly as possible, or even automatically, in the production process. This must be done appropriately and on time and must frequently be available just-in-time – all this at competitive prices.

Today, no manufacturer produces all the individual parts themselves. Each company optimizes its vertical manufacturing and focuses its efforts on functional and quality-critical parts or certain manufacturing processes. All other parts are bought in.



Suppliers are expected not just to provide contract manufacturing of specific parts, but increasingly development services as well. In this way, external competence partners are thus integrated in the value chain and their know-how used in order to optimally focus their own development capacity. The result of these changes is more powerful and flexible, but also more complex, value chains. SAHLBERG is one such competence partner. The company's know-how lies in the field of polymeric materials and may be divided into three competency areas: materials, processes and functions. The area of materials concerns the knowledge of the properties and applications of elastomers and plastics in solid and foamed form. The area of processes concerns the production and processing methods for polymeric materials, such as the manufacturing process for moulded rubber parts, as well as the further processing of flat materials by punching, water jet cutting, plotting and laser cutting, and finally the manufacturing process for plastics. The area of functions concerns SAHLBERG's skills, especially in sealing, isolation and vibration isolation, i.e. through elastic support. Rounding out these areas is a far-reaching bonding know-how and the associated possibilities for efficient assembly.

The basis for this know-how is more than 100 years of experience with materials and, from the beginning of the 1960's, our own development department, a variety of in-house capabilities in materials testing, in-house production and, finally, a balanced network of specialized and controlled production partners in and outside the EU. SAHLBERG engineers and application technicians have access to this range of services and make it available to customers. It has been shown time and again that the direct combination of materials, processing and functional know-how offers added value to customers' development departments because SAHLBERG works as a partner to create real solutions and not only designs or supplies parts. In detail, this involves participation in the selection of suitable (raw) materials, construction designed to meet requirements and production capabilities, tooling, sampling and quality assurance. Another important advantage is created for customers through the network of qualified partners. This creates high flexibility as the optimum mix of production facilities, quality and cost structure can be used anywhere in the world. Though usually not visible, such series parts from SAHLBERG are therefore now used in excavators, trucks, cars and buses, in locomotives, printing and manufacturing machines, bottling plants, ventilation equipment and much more.



Some examples:

An automotive supplier had developed an electrical connector for use in dry areas; the tools had been made. Later, there came a request for protection from moisture and rain water for an additional vehicle series. As it is a large series, the seal to be developed was to be able to be installed easily and quickly. This was not a major problem in this case, but the connector itself could not be altered structurally and offered only minimal space for holding and installation.

Two questions had to be resolved: what design should the component have in order to provide maximum protection and how should the seals be installed on the plugs? SAHLBERG's development department constructed two moulded elastomer parts of silicone with corresponding contours which took into account all the tolerances between the connector and the assembly housing and met the seal requirements in accordance with IP 67. In addition, a solution for the production process was developed; a device which can be used to help shape the parts quickly and accurately was applied to the connector. The solution impressed the customer and SAHLBERG now delivers the moulded parts in series.

Another example is in medical technology. SAHLBERG provides a membrane for the production of compressed air to a manufacturer of inhalers for asthma sufferers.

However, we do not only supply a complicated stamping part with thin filaments and particularly high demands on tolerances, cutting edge quality, cleanliness and flatness. In addition to the material specification and the selection of a particularly material-saving and precise punching procedure, special packaging was also designed by SAHLBERG to keep the product free of deformation and to facilitate its removal during the production process. Similarly, a manufacturer of surgical lights required another medical solution. The customer specified a high-performance plastic for the production of lamp handles meeting high requirements. As the quantities were becoming increasingly large, SAHLBERG suggested that the handle should be produced as an injection moulded part. In cooperation with the client, the contour of the handle was revised and optimized for injection moulding.

Since then, SAHLBERG has no longer provided the semi-finished product, but a pre-assembled handle comprising two different injection moulded parts and a metal pin in series production. This solution offers a significant cost advantage for the customer compared to the mechanically produced variant.

The expansion of SAHLBERG's service portfolio includes complete assemblies with an example in the field of construction machinery. In this case, the company had been providing a stripper kit for a long time. This involves an especially wear-resistant polyurethane plate that is shaped by water jet cutting into a form ready for assembly. Due to high demand, the customer incurred capacity constraints and space problems; SAHLBERG was therefore asked to supply the complete assembly, including the metal parts, terminal blocks, fittings and fasteners. Today, SAHLBERG carries out metal parts procurement, completes the assembly and then ships them sorted and packed in compliance with the just-in-time production planning. In addition, the complete supply of spare parts for the assembly was handed over to SAHLBERG. SAHLBERG used its own capacity and cost advantages for the benefit of the customer.

These examples make it clear why SAHLBERG is seen as a value-added partner for its customers. Whether it concerns advisory, design, testing, manufacturing, quality assurance or logistic services, whether individual services or complex bundles of services, the focus is always on the optimization of the overall value chain. SAHLBERG offers itself as an external competence partner that sees its task as the development of increased competitive advantage for its customers.

