For more than 20 years, the Robert Bosch plant in České Budějovice has been playing an important role in the international network of Bosch Group. With annual sales amounting to nine billion CZK, it is one of the biggest plants within the ‘Gasoline Systems’ division of Bosch. From here, Bosch coordinates its worldwide manufacturing processes and development projects for products such as tank and suction modules, accelerating pedals and other advanced technical components for the automotive industry. In addition, the plant houses one of the largest Bosch development and test centers for automotive technology outside Germany. The center was established in 2005, and it currently employs over 400 development engineers and technicians.

The performance of the plant can be put down to the innovative spirit and creativity of its employees as well as to the technologies applied by its departments. In tooling, for instance, the utilization of the ATOS 3D optical scanning and measuring system for injection molding of plastics and plastics products has been highly successful. The benefits of this technology include the fast generation of information,
The free GOM Inspect software allows the GD&T analysis of components (the fig. shows a pump holder), such as determining the position of holes. In addition, by comparing the scanned data with CAD data, Bosch uses the GOM Inspect software to determine tolerance deviations via false color plot.

Precision of details and parts and status recording. Information on the deformation of injection-molded parts enables a more precise adjustment of molding parameters, an adaptation of the plastic parts' design and a verification of the parts' functionality. Apart from the actual measurement, other important data are generated that refer to the ageing of parts and possible surface defects, which may indicate internal defects. The connection with the simulation software is equally essential, as it facilitates the correction of parts by reverse engineering.

In addition to the installation of ATOS Professional at the Robert Bosch plant in České Budějovice, the evaluation software GOM Inspect is installed and used on 60 computers. The prevalence of the software can be explained by the users' long-standing trust in this technology.

They are well aware of the fact that the software provides an extensive portfolio of information, from which they can select exactly the functionalities they require. Additionally, they benefit from advantages like productivity, storage, user-friendly interface and failure-free operations. Employees in the design, development and production departments can browse, measure and analyze scanned 3D models on their computers. As a consequence, capacities of the ATOS workplace are saved, with employees focusing more strongly on scanning and measuring processes.

At the Robert Bosch plant in České Budějovice, we know that – due to the continuous demand for robust, yet highly sophisticated product solutions – adequate support and control mechanisms are absolute necessities.