



# Laboratory of Glass Producing Machines

## Principal goals and activities

- Research and development of equipment for specific manufacturing conditions, development of machines, tools and equipment for the glass industry.
- Development of new technologies and equipment for glass processing.
- Optimization of glass material forming, design and cooling of forming tools.
- Design of careful handling of fragile, hot objects that are of complex and unstable shape.
- Providing of expert education in the accredited courses, lifelong education and special training for companies and institutions.

## General focus of laboratory

The laboratory is designed to provide support to research activities and training, especially in the field of heat transfer during glass forming. The laboratory uses leading-edge equipment for measurement of temperature via contacting and optical methods, for preparation and approval of thermo couplings.

- Optimization of forming technologies and tools using experimental data and a numerical model.
- Development of technology and equipment, application of ultrasound waves in glass processing.
- Measurement for development of new devices.

## Specific instruments and outcomes

- Development of technology for environmentally-friendly processing of flat glass to suit requirements presented by a partnering organization from the industry.
- FLIR SC 660 thermal imaging camera, temperature analysis equipment, measurement centres.
- Investigation of contact tasks in product handling.
- Investigation of processes with extreme static and dynamic load.

## Offer of technology and expertise

- Research and development of new technology and equipment for the glass industry.
- Optimization of forming technology and cooling of forming tools.
- Development, design, production and testing of single-purpose devices.
- Measurement and assessment of temperature fields.
- Contactless measurement of deformation using laser sensors.
- Experimental data processing, including a frequency analysis.
- Preparation of a virtual model for a set or a problematic design node.
- Optimization of parameters in handling equipment.

