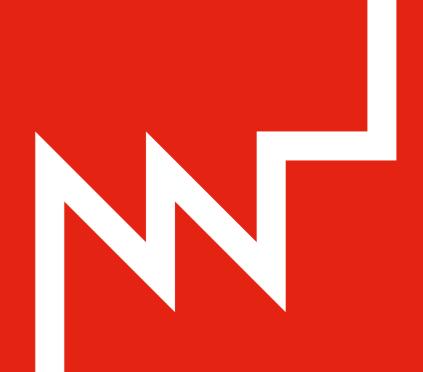


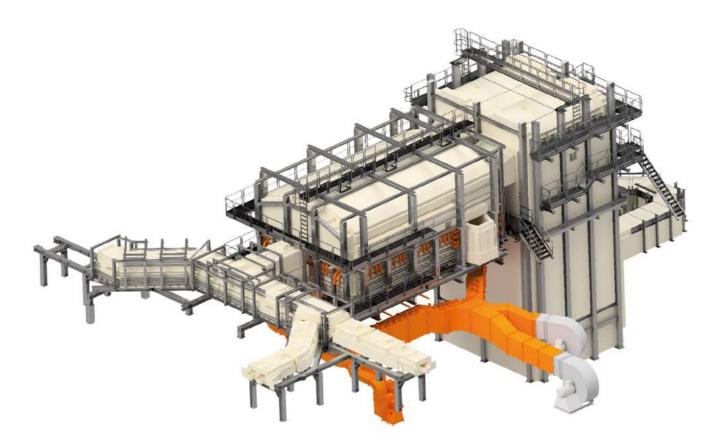
PROGRESS THROUGH TECHNOLOGY FURNACES AND FOREHEARTHS

we combine 30+ years of experience in glass production with the most advanced technology in designing, engineering, fabricating and erecting batch houses and glass furnaces for our clients. We provide complete glass production solutions for manufacturers of tableware and container glass, as well as float glass, sodium silicate and fibre glass.

"Progress through technology" means that One of our core values is integrity – our employees are trained to always do the right thing for the clients - even if it means reducing our profit. We also attach huge value to human safety when working in extreme conditions and we're proud of our safety record. Last but not least, FORGLASS is a socially responsible company, engaged in several charitable activities, the most important of which is Life Plan, a developmental program for teenage children.

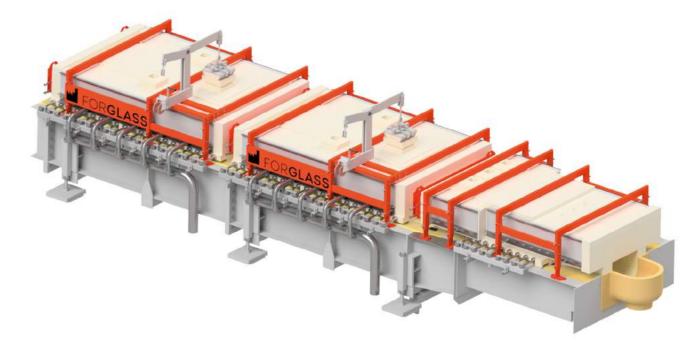


# DESIGN OF FURNACES AND FOREHEARTHS



EACH FURNACE DESIGNED BY FORGLASS IS THE CUSTOMIZED RESULT OF MERGING THE TECHNOLOGICAL SOLUTIONS OF FORGLASS ENGINEERS WITH THE NEEDS DEFINED BY THE CLIENT.

 FORGLASS will help you achieve energy performance indexes of your furnace on par with the best of your sector of glass industry.  FORGLASS will help you meet sectoral emission limits (BAT AEL) defined in the IPPC Guide for Best Available Techniques (BAT), Reference Document for the Manufacture of Glass and those required by the local authorities.



- Working with FORGLASS, you will save on the amount of investment and operational costs, regardless of whether you want to build a new furnace or modernise an existing one.
- Implementing design solutions of distributors and forehearths created by FORGLASS, you ensure automatic quick change and then maintaining the set parameters, all controlled through user-friendly interface.



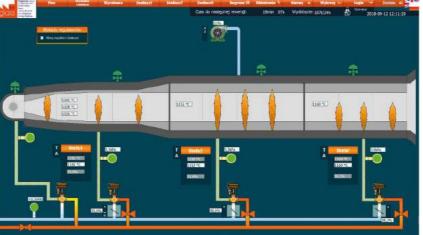
#### CONTROL AND SCADA SYSTEM

Our aim is to provide friendly and professional service, working closely with you on your specific project. This could be an existing system requiring modification and support, or it could be a new project, where we would work from your specification and be involved in the design. We also execute modernisation projects of existing furnaces and peripheral equipment, aimed at correcting their functioning, the ergonomics and creating other functional advantages. Our engineers ensure conformity with all applicable regulations and norms.



#### We offer:

- automation of controls for Furnaces and Forehearths
- hardware and software modification
- PLC programming
- process visualization
- process diagnostics
- service and maintenance



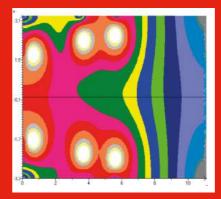
To assure the best possible service to our Clients, we execute a well-established plan:

- 1. Analyse the issue, survey the site and take inventory of all relevant equipment
- 2. Establish project objectives and options
- 3. Approve the best solution
- 4. Proceed with development of the design
- 5. Implement the solution
- Perform technological start-up and testing
- 7. Train the service crew
- 8. Provide warranty and post-warranty service



## ELECTRIC BOOSTING

Our company offers comprehensive solutions for electric boosting, together with the necessary tools to control power regulation. FORGLASS designs each electric boosting system individually, adapting it to the needs and expectations of the Client.



simulation of power density distribution in a glass furnace.

We have software tools to design and optimise electrode configuration and connection:

- Calculation of Electrode Currents
- Power Density Calculation
- Power Density Distribution Graphics

Computer modelling of electric boosting ensures optimal placement of electrodes and proper power delivery to the system.



Benefits resulting from the use of electric boosting, designed and engineered by FORGLASS:

- Improvement of melting performance
- Reduced emissions
- Maintaining constant furnace temperature

#### We provide:

- Medium voltage transformer
- Control cabinet with thyristor units
- Electrode transformers
- Electrodes with holders and accessories
- Control and SCADA system
- Cables and cable trays

## DELIVERY, ERECTION, START-UP

As a provider of turn-key solutions for the glass industry, we fabricate all major components in-house and we support our Clients from start to finish, even during actual production.





During assembly work, we take special care to:

- develop proper planning
- comply with Occupational Health and Safety standards
- communicate effectively
- ensure highest quality

We complete projects safely, expeditiously and economically. Entrusting us with a task guarantees problem-free and timely implementation.

## YOUR FURNACE MUST GIVE YOU ADVANTAGE





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