

EMPAK GLASS SOLUTIONS

SERVICES & TRAINING

FEA · STRESS ANALYSIS · EMPAKTOR

PRODUCT DEVELOPMENT.

> "Most businesses today must commit to fast response and good quality (OTIF). To bridge the gap between concept and production, technology is perhaps the most powerful tool."

Empakglass's mould design department uses the latest FEA technology to help fillers, distributors and glass plants develop the most optimised container, in terms of design and physical characteristics, for a given filling line speed and end-customer requirements.

By applying this technology and know-how at a very early stage, Empakglass avoids the traditional trial-and-error approach. The studies highlight all the critical design features that can compromise container performance.

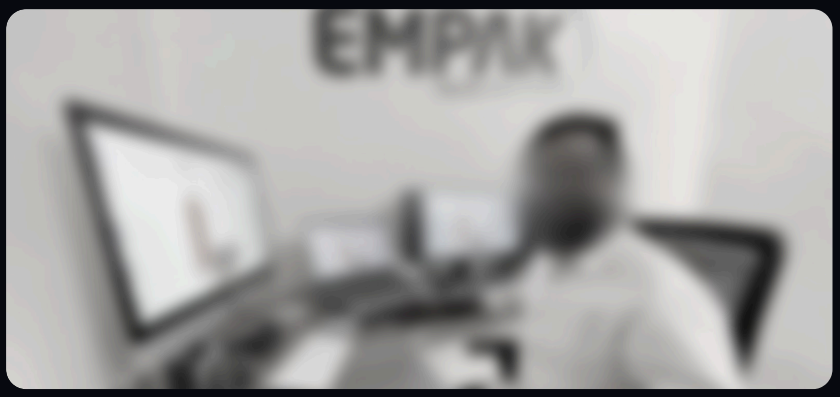
The results can also feed the risk analysis studies that fillers normally perform before launching a new product on the market.

STRESS ANALYSIS & CONCEPT.

STRESS ANALYSIS

By calculating the stress levels of a container under vertical load, internal pressure and filling line impact, we determine its resistance and suggest design changes to optimise its performance.

- **"To what extent is my container resistant?"** Stress levels under vertical load, internal pressure and line impact.
- **"Why is my container breaking?"** We assess the causes of load failures and guide the actions needed for a good quality standard.
- **"Is my lightweight container resistant enough for these loads?"** The latest FEA technology helps you reach a safe lightweight container.





BRIDGING THE GAP BETWEEN CONCEPT AND PRODUCTION

1. Bridge the gap between marketing and final design solutions.
2. Shorten the time between concept and first production run.
3. Collaborate with mould manufacturers to speed up the development of new products.

3D RENDERING FOR YOUR BRAND

1. Support marketing with realistic images using 3D rendering technology.
2. Develop professional-looking catalogues and websites.

EMPAKTOR & TRAINING.

SOFTWARE DEVELOPMENT: THE EMPAKTOR SUITE

1. The EmpakTOR Suite is engineering software that lets designers analyse the forming of glass containers and understand their mechanical behaviour under static and dynamic loads.
2. The user simulates the production processes on a computer, instead of going back to shop-floor trial and error.
3. It has proven extremely effective on a wide range of round container shapes.
4. It covers all production processes and uses the exact customer glass composition.
5. It is currently available only for consulting, training and contract simulation on a project basis.

TRAINING

At Empakglass we believe knowledge only has value if it is used and shared. On this principle we developed the most complete mould design / product development training available to the industry, covering:

1. Introduction and goals of this seminar
2. Mould design department tasks
3. How glass influences the mould design
4. IS timing
5. BB production process
6. WMPB production process
7. NNPB production process
8. Weight control
9. Container development
10. Exploring design with the filling line layout
11. Lightweighting as a case of container iterations
12. General rules for equipment development
13. **BB parison design rules** (with several real case examples)
14. **WMPB design rules** (with several real case examples)
15. **NNPB design rules** (with several real case examples)
16. **Mould equipment components**; 16.1 Mould design limits and restrictions (looking into the MD Manual); 16.2 Using the Mould Design Manual for a particular IS machine
17. **Blank side and blow side cooling**
18. **Material specifications** and their influence on performance
19. **Edge metallisation**

TALK TO OUR TEAM

Lisbon · Gabrovo · Plovdiv · Hyderabad

management@empakglass.com
+351 218 079 529
www.empakglass.com