glassglobal Glass Market Report and Study

plants.glassglobal.com

June 2019
We about us: glassglobal Group / the global glass competence

**glassglobal Consulting**
Our internationally renowned team of glass experts helps you analyzing and benchmarking glass production, glass markets and competition. We also help diversifying production, improving efficiencies and competitiveness.

**glassglobal Engineering**
Our engineering team researches and develops innovative and unique systems like the ggENoX and ggDAS to reduce energy costs, critical pollutants (with NOx in particular) and/or to enhance glass quality with a focus on primary measures.

**glassglobal Community**
www.glassglobal.com is the leading portal for the international glass industry. Over 360,000 visitors/month use the portal as an expert marketing channel, browse the portal to get updated information, execute researches or successfully trade equipment or glass.

**glassglobal Trading**
The trade platform is an international business area, dedicated to the trading of glass production and processing equipment and glass of any kind, supported by our expert team of glass engineers to find suitable customers and suppliers.

**glassglobal IT-Services**
Professional realization of all elements in websites from presentations to calculations, from design to CRM. Our expert team supports industry-related design, keyword programming, search engine optimization and target oriented customer approach.

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June 2019
Hollow, Flat and Tableware Glass Production Companies Database

- More than 1,300 Groups and Companies
- More than 1,350 Locations
- More than 2,500 Furnaces
- More than 2,500 Products

Hollow Glass
Flat Glass
Tableware Glass
Hollow and Flat Glass Production Countries Database

More than 90 Countries

More than 200 million tons Per Country and Region

Production

Recycling

Consumption

Principle Savings
plants.glassglobal.com

Your gateway to the international glass producing industry

Data from glass producers worldwide:

- Production capacities in regions and countries
- Furnaces, furnace types, years of construction
- Glass types and sub-types, products
- Financials from global players
- Production data
- Demoscopic data
- Import and export data
- Forecast about future glass consumption in all regions

What's in it for you?

glassglobal Plants provides you with the access to these data. Find potential customers according to your personal selection within a minute, find companies to approach, display them on a map and contact them directly.

Responsive programming for the display on PC’s, tablets and mobile phones

Free Guided Tour

Ask for your free guided tour and send your message to sales@glassglobal.com
Welcome to glassglobal Plants

glassglobal Plants is your gateway to the international glass producing industry.

We have collected data from glass producers worldwide including production capacities, the number of furnaces, furnace types, products, furnace suppliers and years of construction.

Moreover, we have compiled financials from global players, production data, demography data for countries as well as import and export data, and we have elaborated a forecast for future glass consumption in all global regions.

What's in it for you?
glassglobal Plants provides you with the access to these data. Find potential customers according to your personal selection within a minute, find companies to approach, display them on a map and contact them directly.

Ask for your free test access using the button below and enjoy the ease of use of glassglobal Plants.

Login for Members

<table>
<thead>
<tr>
<th>Username</th>
<th>Password</th>
</tr>
</thead>
</table>

- Login | Free Sample Tour / Registration

Plants and Figures

- Number of Companies and Groups: 1,303
- Locations: 1,384
- Number of Furnaces: 2,560
- Number of Countries: 96
- Total Capacity: Tons per day: 595,558 tpd
- Total Capacity: Tons per year: 217,742,952 tpa

Glass Types

<table>
<thead>
<tr>
<th>Glass Type</th>
<th>Capacity tpd</th>
<th>Capacity tpa</th>
<th>Furnaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat</td>
<td>304.583</td>
<td>103,872.058</td>
<td>553</td>
</tr>
<tr>
<td>Container</td>
<td>201.055</td>
<td>91,810.270</td>
<td>1,173</td>
</tr>
<tr>
<td>Tableware</td>
<td>22.181</td>
<td>8,008.193</td>
<td>421</td>
</tr>
</tbody>
</table>

Testimonials from our Customers

It is a great study. Congratulations to glassglobal.
Dear Mr. Knut Alt,

Welcome to glassglobal Plants.

If you need any assistance, or for your suggestions to improve our service, please send your message. Or give us a call at +49 (0)211 260733-0.

In order to get a quick access to your requested information respectively to your target group of glass manufacturers, please select what you would like to do:

- Locate glass manufacturers and projects
- Find glass manufacturers and their furnace data
- See financials from glass manufacturers
- See import and export data by countries
- See demoscopic data selected by category
- See demoscopic data selected by country
- See the company profiles from our partners
- Read the texts in the study
- Read news from hollow glass manufacturers
- Read news about glass projects

Direct links to preferred options, projects from glass producers, news from the glasstec exhibition and the glass industry.
Zoom the map to find production locations. The picture with clusters will change to single blue dots like the one in Asia. Click a dot and see the company profile with address, contacts, furnaces data, products and history.
Zoom the map to find production locations. The picture with clusters will change to single blue dots like the one in Asia. Click a dot and see the company profile with address, contacts, furnaces data, products and history.
Example: regenerative end port furnaces, container glass (pharma & cosmetic) in Germany. Heinz group, no tons per day (TPD) selected.
Example: regenerative side port and end port furnaces and electric furnaces, container glass in 2 European countries, Belgium and Austria. Result visible as bar chart.
Browse the chapter “Data-Tables” to read about financials of selected glass producers, production data in selected countries, import and export data as well as demoscopic data, country profiles and downloads.
Browse the chapter “Data-Tables / Financials” to read about revenues, profit etc. from selected producers, for the past ten years.
Browse the chapter “Data-Tables / Country Production” to read about production data from selected countries, starting in the year 2000.

<table>
<thead>
<tr>
<th>Country</th>
<th>Chart</th>
<th>Source</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td></td>
<td>FEVE</td>
<td>867.574</td>
<td>919.470</td>
<td>948.909</td>
<td>984.814</td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td>FEVE</td>
<td>1.967.224</td>
<td>2.027.892</td>
<td>2.089.129</td>
<td>2.096.466</td>
</tr>
<tr>
<td>Turkey</td>
<td></td>
<td>FEVE</td>
<td>407.000</td>
<td>435.324</td>
<td>468.519</td>
<td>490.000</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>FEVE</td>
<td>1.720.466</td>
<td>1.711.741</td>
<td>1.932.430</td>
<td>1.898.745</td>
</tr>
</tbody>
</table>
Browse the chapter “Data-Tables / Demoscopic” to read data about selected countries.
Example Austria: Population, Employment, Unemployment Rate
Browse the chapter “Data-Tables / Demoscopic” to read data about selected countries.
Example: Germany, France and Belgium, GDP
Browse the chapter “Study” to read about glass basics, glass manufacturing process, production plants, company portraits, trends, outlook, production cost, recycling and much more.
Browse the chapter “News” to read about glass producers and their news or plans for the future. Book the RSS Feed.
Browse the chapter “Partner” to read about companies that supported us during the compilation of this market overview. No direct competitors are allowed to be shown here.
Custom Fields in plants.glassglobal.com

The online glass market study and database on plants.glassglobal.com provides the names of glass producers, their locations, furnaces, capacities, products, contacts, partially year of construction of the furnace and colours of their products.

From now on, it is also possible to add the tool with custom fields for your own comments and input. The custom fields are accessible in the profiles of selected glass producers, which you can find e.g. through the chapter “Furnaces” or by clicking a factory symbol in the map.

Up to 5 custom fields can be individually defined, thereof one multi-selection field and one field for continuous text.
Custom Fields in the Chapter “Furnaces”

View of the technical data in the chapter “Furnaces”, as known to users of the tool. New:

• The button “Customer” (here in red = deactivated = no comments shown).
• Additional filters (examples).
Custom Fields in the Chapter “Furnaces”

New view of the customer data in the chapter “Furnaces”. Here:

- The button “Customer” is clicked and activated = comments shown.
- The button “Technical” is deactivated = no furnace data shown.
- Both buttons can be activated at the same time as well. In case your screen is not wide enough to display all content, scrolling is possible.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Company</th>
<th>Country</th>
<th>Region</th>
<th>City</th>
<th>Customer</th>
<th>ABC-Analysis</th>
<th>Responsible</th>
<th>Competitors</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HEINZ-GLAS Group Holding</td>
<td>Germany</td>
<td>Europe</td>
<td>Tettaw-Kleintettaw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HEINZ-GLAS Group Holding</td>
<td>Germany</td>
<td>Europe</td>
<td>Tettaw-Kleintettaw</td>
<td></td>
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<td>Europe</td>
<td>Tettaw-Kleintettaw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Access to the Custom Fields

Click the button “Profile” to access the input fields.

<table>
<thead>
<tr>
<th>Furnace Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
</tr>
<tr>
<td>Profile</td>
</tr>
<tr>
<td>Profile</td>
</tr>
<tr>
<td>Profile</td>
</tr>
</tbody>
</table>

Address

<table>
<thead>
<tr>
<th>Address</th>
<th>HEINZ-GLAS Group Holding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glasshüttenplatz 1-7</td>
<td></td>
</tr>
<tr>
<td>95355 Tettau-Kleinostau</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Germany</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phone</th>
<th>0049 5209 77 0</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fax</th>
<th>0049 5209 77 333</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Email</th>
<th>gas in contact...</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Internet</th>
<th><a href="http://www.heinz-glas.com">www.heinz-glas.com</a></th>
</tr>
</thead>
</table>

Custom Fields

<table>
<thead>
<tr>
<th>Customer</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC-Analysis</td>
<td>please select</td>
</tr>
<tr>
<td>Responsible</td>
<td>please select</td>
</tr>
</tbody>
</table>

Competitors

| none |

Remarks
Input of your Data in the Custom Fields

Typical Selection Fields, Examples:
• Select a responsible person from your company to take care of the selected glass plant.
• Categorise a selected glass plant according to their importance for you.
• Select if the glass plant is already a customer yes or no.
Input of your Data in the Custom Fields

Field for Continuous Text:
One field for continuous text is possible, to write down your remarks with up to 255 characters. This text is only visible for users of your company.

Multi-Selection Field:
One multi-selection field is possible, e.g. for more than one competitor, being current suppliers to the selected glass plant.
Input of your Data in the Custom Fields

Enter and save your information.

Custom Fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Yes</td>
</tr>
<tr>
<td>ABC-Analysis</td>
<td>B</td>
</tr>
<tr>
<td>Responsible</td>
<td>Angela</td>
</tr>
<tr>
<td>Competitors</td>
<td>C</td>
</tr>
</tbody>
</table>

Remarks: Example text, only visible for people from your company with access to this tool.

Furnace Data

<table>
<thead>
<tr>
<th>Profile</th>
<th>Company</th>
<th>Country</th>
<th>Region</th>
<th>City</th>
<th>Customer</th>
<th>ABC-Analysis</th>
<th>Responsible</th>
<th>Competitors</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEINZ-GLAS Group</td>
<td>Holding</td>
<td>Germany</td>
<td>Europe</td>
<td>Tettau-Kleintalau</td>
<td>Yes</td>
<td>B</td>
<td>Angela</td>
<td>C</td>
<td>Example text, only visible for people from your company with access to this tool</td>
</tr>
</tbody>
</table>
Selection of Glass Plants with Custom Fields

Use the “Filter” in the chapter “Furnaces” to select companies as before, and use optionally the additional search items.

Multiple selections are possible.
Selection of Glass Plants with Custom Fields

By using the search engine in the chapter “Furnaces”, the tool also shows companies with the respective search item in the continuous text in “Remarks”.

Total Records: 3, Number of Companies: 1, Total tonnes per day: 155, Total tonnes per year: 56,575
Facts, Figures, Terms and Conditions

• Up to 5 custom fields can be defined individually.
• Thereof, one multi-selection field and one field for continuous text are possible.
• The option to display technical data and / or custom fields in “Furnaces”.
• The selection to see the custom fields only, or to see and edit them for one or any user of your company.
• All data in the custom fields are only visible for users of your company, with their individual login data.
• For the programming and individualisation of the custom fields, we need approx. 1 week.
• The user provides glassglobal with content, e.g. names of responsible persons, competitors and the like.
• The number of entries in the selection fields is limited to 10 per field.
• The custom fields are activated during the entire runtime of your access to plants.glassglobal.com.