Low-e in Oversize Format: New Insulating Glass Line shortens Time of Production

sedak Automates Production of Insulating Glass Units

More efficient production processes and constantly high quality standards: with a new insulating glass line, sedak based in Gersthofen, Germany further expands its leading position in the industry of oversize glass units. Machinery especially fabricated for the corporation, enables sedak now to industrially produce insulating glass units up to 15m. “The manufacturing time has been reduced and insulating glass units are therefore even more economical,” says sedak CEO Bernhard Veh.

For a long time sedak has established itself as a technological pioneer for glass in oversize formats up to 3.2m x 15m. The manufacturer produces oversize insulating, and safety glass with almost any kind of treatment for the global market: processed, tempered, laminated, printed, coated, and processed further into insulating glass. Large insulating glass units have been fabricated manually in a time-consuming process – until now. The new insulating glass line automates the production process completely. That leads to high quality standards and a fabrication that can be reproduced. “The biggest advance is the radical reduction of the production time. Insulating glass used to be fabricated manually by several qualified employees over various days. Now, the total production needs less than
an hour,” explains General Manager Ulrich Theisen. Since producing insulating glass has thus become more cost-effective, sedak units are even more competitive. “Due to efficiently created designs and short construction times, oversize glass units have been profitable before. This cost-effectiveness has been increased now,” says Ulrich Theisen.

**Perfect Esthetics – Quickly Produced in Constantly the Same Quality**

The fully automated production line is unique in the world. With a length up to 145m and a load capacity of 450kg per linear meter, the insulating glass line is the largest around the globe. Another aspect besides efficiency and quality should not be disregarded: perfect esthetics are now reproducible easily. Positioning the spacers accurate to a millimeter, especially on ceramic-ink printed insulating glass units, allows flawless transitions. Glass units stepped on all four sides are a special feature. On the bottom edge, steps of 700mm are possible. Therefore sedak can realize homogeneous facades with precise, especially narrow joints. Structures simply disappear behind the glass. „Transparent, esthetic facades have become a trend in architecture during the last few years. Now, they can be manufactured more quickly, economically and reliably,” Bernhard Veh sums up. In connection with the ceramic-ink digital printing technology for oversize glass units, a technology which is still new, sedak offers a worldwide unique range of glass products.
Big Panes Need Big Machinery

To be able to produce the world’s biggest glass units, also the machinery must be big. Particularly the weight of insulating glass consisting of several panes impresses. A complex, over-size unit weighs up to 7t. Therefore, the fully automated machine at sedak can handle loads of 450kg/m. The production line has a total length of 145m.

45 lines / ca. 2.300 characters

Technical Data sedak insulating glass line

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>full length production line</td>
<td>145 m</td>
<td>475 ft 9 in</td>
</tr>
<tr>
<td>weight/meter</td>
<td>450 kg</td>
<td>992 lbs</td>
</tr>
<tr>
<td>step processing</td>
<td>steps on all 4 sides</td>
<td></td>
</tr>
<tr>
<td>steps on the bottom edge</td>
<td>60 - 700 mm</td>
<td>2 in – 2 ft 7 in</td>
</tr>
<tr>
<td>max. adjustable spacer setback</td>
<td>30 mm</td>
<td>1/10 in – 1 in</td>
</tr>
<tr>
<td>gas types</td>
<td>argon, krypton or mixed gas</td>
<td></td>
</tr>
<tr>
<td>min. glass size</td>
<td>300 mm x 680 mm</td>
<td>12 in x 2 ft 3 in</td>
</tr>
<tr>
<td>max. glass size</td>
<td>3,300 mm x 15,000 mm</td>
<td>10 ft 10 in x 49 ft 2 in</td>
</tr>
<tr>
<td>min. glass thickness</td>
<td>3 mm</td>
<td>1/10 in</td>
</tr>
<tr>
<td>max. thickness laminate</td>
<td>52 mm</td>
<td>2 in</td>
</tr>
<tr>
<td>min. thickness unit</td>
<td>20 mm</td>
<td>8/10 in</td>
</tr>
<tr>
<td>max. thickness unit</td>
<td>102 mm</td>
<td>4 in</td>
</tr>
</tbody>
</table>
Printed Glass in Oversize Formats

sedak does not only fabricate oversize insulating glass quickly and in an especially high quality but also offers a further unique treatment for large glass: printed, translucent units up to 3.2m x 15m. The glass panes can be printed fully covered with the roller coater technique or with the digital flat-bed printer which enables complex, multiple-color designs, and high resolution photos being printed. Due to the digital printing technology, the colors are applied in a thinner layer than it is possible using a screen or rotary printer. That allows translucent printing and designing smooth transitions. The printing inks are composed of fine ceramic particles that permanently bond to the surface during the burning process in the oven. The color coat stays scratch resistant. Afterwards, the glass panes can be laminated, cold bent, or processed to insulating glass units. Possible designs are photos, imitations of material structures, or the repeated pattern of ornaments. The ceramic-ink digital printing thus offers a cost-effective way to an individually designed façade or wall.
Picture captions

[15_03_Isolierglaslinie]

*With its unique insulating glass line (length: 145m), sedak fabricates glass units up to 3.2m x 15m.*

sedak GmbH & Co. KG

[15_03_Fertigungsanlage]

*With high tech to perfect esthetics: The fully automated production process also includes the positioning of the spacer accurate to a millimeter and the sealing, all of that quickly and precisely.*

sedak GmbH & Co. KG
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