This product sheet explains the requirements and rules for designing a SageGlass IGU and placing the pigtail. Consult SageGlass for any special requests. When designing an IGU, first take note of the information provided in this guide. Then determine what the appropriate information is for your design:

• IGU Design
• Basic Dimension Needs
• Tolerance Allowed
• Rules and Constraints

**IGU RULES**

• Any angle must be ≥ 30° and ≤ 150°; if < 30°, replace with a side ≥ 120 mm (4.7”)
• If the installed width is greater than 2286 mm (90”), the roller wave will be vertical as installed
• Edge finish can be standard seamed, polish, flat ground, or arrised (heavy seamed)

**RECTANGLE RULES:**

• Maximum Length: 3048 mm (120”); other dimension must be ≤ 1828.8 mm (72”)
• Minimum Length: 350 mm (13.8”)
• Triple IGUs - Both sides must be ≥ 840 mm (33.1”)

**NON-RECTANGLE SHAPES RULES:**

• Shape must be larger than a bounding box of 350 mm (13.8”) x 350 mm (13.8”)
• Shape must be smaller than a bounding box of 2975 mm (117.1”) x 1675 mm (65.9”)
• Minimum length of any side ≥ 120 mm (4.7”)

**PRODUCT SPECIFIC RULES:**

**HARMONY™**

• Rectangles only
• Minimum Height: 1200 mm (47”)
• Maximum Length: 1828.8 mm (72”)

**LIGHTZONE®**

• Rectangles only
• Minimum Zone Area: 0.19 m² (2 ft²)

**TOLERANCES**

The standard IGU length and width tolerance is ± 2 mm (0.08”). The tolerance increases to ± 3 mm (0.12”) if a side is ≥ 1981 mm (78”), if a lite or laminate thickness is ≥ 8 mm (0.31”), or if it is a triple IGU.

The thickness tolerance is ± 1 mm (0.04”) for double IGU and ± 2 mm (0.08”) for triple IGU.

**SHAPES**

SageGlass IGUs are available in a wide variety of shapes to enhance your building designs. Determine which category your desired shape falls into by matching it to one of the diagrams in the tables below. Provide SageGlass with the requested dimensions. The measurements needed for each shape are indicated (e.g., L, L1, H, or H1). Reference the *Shapes: Dimensions & Pigtail Placement Section*.
**IGU CROSS-SECTION: DOUBLE PANE**

- 2.2mm (.08") Electrochromic Lite (annealed)
- Support Lite (heat strengthened*)
- Black Obscuration Band

**INTERIOR**

- SageGlass Coating
- Interlayer
- Desiccant
- Primary Seal
- Black Silicone

**EXTERIOR**

- Sealed Gas-filled Space
- Surface 1
- Surface 2
- Surface 3
- Surface 4
- Surface 5
- Surface 6

**IGU EXTERIOR: DOUBLE & TRIPLE PANE**

- * Dimension increases if spacer inset increases
- Black Obscuration Band
- * 26 mm (1") ± 1.5
- * 8.5 mm (.33") ± 1.5
- * 39.5 mm (1.5") ± 1.0 mm
- 22 mm (0.86") x 22 mm (0.86")

* or tempered where required by code
PIGTAILS

The possible pigtail locations depend on the IGU shape and size. See the diagrams below for all possible pigtail locations for each basic IGU shape.

RULES & CONSTRAINTS:
- Pigtail cannot be on install base.
- Pigtail cannot be on production base.
- If IGU side with pigtail is between 200 mm (7.9") and 500 mm (19.7"), then the pigtail must be centered on that side.
- Length of side with pigtail must be at least 200 mm (7.9").
# SHAPES: DIMENSIONS & PIGTAIL PLACEMENT

**NOTE:** View is from the exterior. • - Allowed Pigtail Locations

## RECTANGLE

<table>
<thead>
<tr>
<th>SHAPE</th>
<th>PIGTAIL LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERTICAL RECTANGLE</td>
<td><img src="#" alt="Vertical Rectangle Pigtail Locations" /></td>
</tr>
<tr>
<td>HORIZONTAL RECTANGLE</td>
<td><img src="#" alt="Horizontal Rectangle Pigtail Locations" /></td>
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</tbody>
</table>

## TRAPEZOID

<table>
<thead>
<tr>
<th>SHAPE</th>
<th>PIGTAIL LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEFT BOX TRAPEZOID</td>
<td><img src="#" alt="Left Box Trapezoid Pigtail Locations" /></td>
</tr>
<tr>
<td>RIGHT BOX TRAPEZOID</td>
<td><img src="#" alt="Right Box Trapezoid Pigtail Locations" /></td>
</tr>
<tr>
<td>TRAPEZOID</td>
<td><img src="#" alt="Trapezoid Pigtail Locations" /></td>
</tr>
</tbody>
</table>

## TRIANGLE

<table>
<thead>
<tr>
<th>SHAPE</th>
<th>PIGTAIL LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="#" alt="Triangle Pigtail Locations" /></td>
<td>PRODUCTION BASE</td>
</tr>
</tbody>
</table>

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SAGEGLASS IGU
PARALLELOGRAM

**SHAPE**

<table>
<thead>
<tr>
<th>LEFT PARALLELOGRAM</th>
<th>RIGHT PARALLELOGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Parallelogram" /></td>
<td><img src="image2.png" alt="Parallelogram" /></td>
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</tbody>
</table>

**PIGTAIL LOCATION**

<table>
<thead>
<tr>
<th>PRODUCTION BASE</th>
<th>L**&lt;L**</th>
<th>H**&lt;L**</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Parallelogram" /></td>
<td><img src="image4.png" alt="Parallelogram" /></td>
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</tr>
</tbody>
</table>

**QUADRILATERAL**

**SHAPE**

<table>
<thead>
<tr>
<th>GENERAL QUADRILATERAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Quadrilateral" /></td>
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</table>

**PIGTAIL LOCATION**

<table>
<thead>
<tr>
<th>PRODUCTION BASE</th>
<th>L**&lt;L**</th>
<th>H**&lt;L**</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6.png" alt="Quadrilateral" /></td>
<td><img src="image7.png" alt="Quadrilateral" /></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Production base is the longest side. Pigtail cannot be on the production base.

**PENTAGON**

**SHAPE**

<table>
<thead>
<tr>
<th>LEFT PENTAGON</th>
<th>RIGHT PENTAGON</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image8.png" alt="Pentagon" /></td>
<td><img src="image9.png" alt="Pentagon" /></td>
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</table>

**PIGTAIL LOCATION**

<table>
<thead>
<tr>
<th>PRODUCTION BASE</th>
<th>L**&lt;L**</th>
<th>H**&lt;L**</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image10.png" alt="Pentagon" /></td>
<td><img src="image11.png" alt="Pentagon" /></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Must include three 90° corners.
**STEPS**

- Step(s) only allowed on rectangles
- Step(s) only allowed on support lite
- Step must be $\geq 3$ mm (0.118”) and $\leq 140$ mm (5.51”)
- Up to two sides of the rectangle may have a step
- Both long sides of the rectangle cannot have steps
- Pigtail not allowed on step side

**CLIPPED CORNERS**

Certain corners cannot be manufactured, and the points need to be “clipped” and replaced with a straight side. The guidelines for clipped corners are shown below.

**NOTE:** Dimensions to pre-clipped corners must be provided.

<table>
<thead>
<tr>
<th>SHAPE</th>
<th>RULES &amp; CONSTRAINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BOX TRAPEZOID</strong></td>
<td></td>
</tr>
</tbody>
</table>
  - Angles 30 – 35° will be clipped to a length (d) of 19.1 mm (0.75”)  
  - Angles 35 – 65° will be clipped to a length (d) of 9.5 mm (0.37”) |
| **TRAPEZOID** |  
  - Angles 30 – 35° will be clipped to a length (d) of 19.1 mm (0.75”)  
  - Angles 35 – 65° will be clipped to a length (d) of 9.5 mm (0.37”) |
| **TRIANGLE** |  
  - Angles 30 – 35° will be clipped to a length (d) of 19.1 mm (0.75”)  
  - Angles 35 – 65° will be clipped to a length (d) of 9.5 mm (0.37”) |
SageGlass® is the pioneer of the world’s smartest dynamic glass. Electronically tintable SageGlass tints or clears automatically to optimize daylight levels while preventing heat and glare without the need for blinds or shades. SageGlass delivers superior comfort, enhances occupant well-being and saves energy. As part of Saint-Gobain, SageGlass is backed by more than 350 years of building science expertise that only the world leader in sustainable environments can provide.

For additional product and instructional information, visit: sageglass.com/resources