CERAMIC SOLUTIONS
GLASS-TO-METAL AND
CERAMIC-TO-METAL
ASSEMBLIES
With over 200 years of history, SOLCERA has been supporting the development of advanced ceramics in France.

Owned during a long period of time by major industrial groups, it is now an independent company with its 2 facilities in Evreux and Moissy-Cramayel.

Our strategy relies on an extensive know-how in designing and manufacturing technical ceramics, as well as glass-to-metal and ceramic-to-metal assemblies. Our products and solutions are based on advanced technologies, making use of a wide range of oxide and non-oxide ceramics developed in-house.

Our facilities are both vertically integrated, giving us complete control over the entire manufacturing process: powder preparation, shaping, heat treatment, machining, finishing, assembling and inspection. The production of prototypes as well as small and medium-size series is carried out by our specialists, whose broad expertise and know-how have built our company's reputation for excellence.

Our process and materials competencies, combined with the exceptional characteristics of high-performance ceramics, give us a strong presence across a number of cutting-edge industries such as aeronautics, aerospace, agriculture, national defense, nuclear power, luxury goods and research.

Remaining attentive to the needs of our customers and focusing on co-development, we design and manufacture products that meet the most demanding environments: corrosive or abrasive applications, high temperature, electrical insulation, high pressure, cryogenics, vacuum and ultra-vacuum resistance.

We provide technical support right from the system design stage and we are proactive in finding solutions for developing prototypes able to validate working hypotheses.

Our long-term partnerships with major public and private sector players, the internal transmission of knowledge and our R&D team dedicated to innovation are all key elements that ensure the growth of our company and the longevity of its know-how.
Ceramic Solutions

Our vertically integrated Eurocer site, the company’s headquarters, houses all the industrial and human resources necessary to design and develop high-performance ceramic components as well as an R&D department focused on the development of innovative materials and processes.

Research and Development Design

R&D
• Materials
• Processes

Design, Development
• Design of technical solutions
• Co-development
• Prototyping and validation

Advanced technologies serving the needs of our customers

Ceramic manufacturing process

- Raw material preparation
- Isostatic pressing
- Machining
- Finishing
- Finishing
- Final preparation

Ceramic-to-metal brazing

Brazing is the process of joining two parts together permanently by melting a filler metal between them. This technology ensures a leak-proof seal and vacuum resistance, ends of particular interest compared to other joining methods such as welding, gluing or screwing.

Ceramic-to-metal or glass-to-metal assembly?

Examples of products:

- Ultra-high and high-voltage feedthroughs (ceramic-to-metal or glass-to-metal assemblies)
- Multi-pin and coaxial connectors (ceramic-to-metal or glass-to-metal assemblies)
- Machined ceramics
- Windows
- Gauges
- Elements for leak detection
- RX tubes
- Flash lamps

Glass-to-metal sealing

Assembly process resulting from glass fusion onto metal at high temperature. The glass-to-metal technology has the advantage of allowing for complex shaping.

Technical specifications

- Ceramic
- Glass

<table>
<thead>
<tr>
<th>Specification</th>
<th>Ceramic</th>
<th>Glass</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-pressure applications</td>
<td>good</td>
<td>excellent</td>
</tr>
<tr>
<td>Metallic resistance compatibility</td>
<td>soft</td>
<td>hard</td>
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</tbody>
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SOLCERA provides quality products and services while operating in a manner that responsibly protects the environment and safety of its customers, employees, suppliers and service providers:

- Quality assurance
- Respect for the environment
- Priority on health and safety

You have a development project, wish to establish a partnership, are looking for technical expertise:

**France**

With the support of

![Logo: CERAMIC SOLUTIONS](image)

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**Brazil**

![Logo: SOLCERA DO BRASIL](image)

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