SICABON® silicon carbide plate heat exchanger

With more than 3000 installed DIABON® plate heat exchangers, SGL Carbon has now expanded its range of equipment solutions even further by introducing the SICABON plate heat exchanger.

SICABON silicon carbide (SiC) is a ceramic material offering the widest range of corrosion and abrasion resistance. This, combined with its high thermal conductivity, makes SICABON an ideal material for heat exchange applications in the harshest and most challenging process conditions. Exceptionally designed to maintain the highest process purity, SICABON offers a clear advantage for electronic and food grade applications.

These unique SICABON plate heat exchangers not only provide our customers the most modern and efficient heat exchange technology currently available on the market, but also offer a technical concept of the highest degree in modularity and flexibility.

By combining SGL Carbon’s SICABON material and its proven plate heat exchanger technology, our customers will receive a benchmark setting equipment solution. Particularly important when process requirements challenge other materials like exotic metals or graphite beyond their limits, e.g. in multi-purpose or pharmaceutical applications.

Customer benefits

- **Extensive corrosion resistance**
  Nearly unlimited corrosion resistance at product and service side due to the use of SICABON material even at elevated temperatures up to 200 °C.

- **Unmatched process flexibility**
  With a wide range of chemical resistance, SICABON is the most suitable material for multi-purpose applications.

- **High purity applications**
  No interaction of SICABON with process products and no release of particles into the product.

- **Fast availability**
  Individual parts of the complete heat exchanger are available on stock enabling quick turnaround ideal for emergency cases.

- **Robust design**
  Construction and mechanical properties of SICABON material allow cyclic operation with rapid ramp-up times and abrasive media.

- **High modular flexibility**
  Plate package modular expandable up to 2.6 m² heat exchange area.

Example applications

- Heat exchange for highly corrosive media, e.g. HF, HBr, concentrated H2SO4 or for multi-purpose usage
- Electronic or food grade applications
- Useable in abrasive media
- Function: heating, cooling, condensation or heat recovery by interchanger
Data of SICABON® silicon carbide plate heat exchanger

<table>
<thead>
<tr>
<th>Technical specifications</th>
<th>Units</th>
<th>Type P05</th>
</tr>
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<tbody>
<tr>
<td>Dimensions W x H x L</td>
<td>mm</td>
<td>230 x 620 x 350 – 850</td>
</tr>
<tr>
<td>Connections DIN/ANSI</td>
<td></td>
<td>DN25/1&quot;</td>
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<tr>
<td>Plate gasket</td>
<td>PTFE</td>
<td></td>
</tr>
<tr>
<td>Max. working pressure ASME/PED</td>
<td>barg</td>
<td>7/8</td>
</tr>
<tr>
<td>Max. test pressure</td>
<td>barg</td>
<td>12</td>
</tr>
<tr>
<td>Lining of frames</td>
<td>PTFE</td>
<td></td>
</tr>
<tr>
<td>Plate material</td>
<td>SICABON</td>
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<tr>
<td>Max. number of plates</td>
<td></td>
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<tr>
<td>Max. exchange area</td>
<td>m²</td>
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<tr>
<td>Exchange area per plate</td>
<td>m²</td>
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<tr>
<td>Max. design temperature</td>
<td>°C</td>
<td>200</td>
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<tr>
<td>Weight</td>
<td>kg</td>
<td>100 – 250</td>
</tr>
</tbody>
</table>

Standard painting

One priming coat with two components, polyamide-adduct cured epoxy paint, 100 µm,
One intermediate coat ditto, 100 µm
One topcoat with two components, polyurethane coating, 60 µm – final color RAL 5002
medium blue

Available pressure codes

PED 2014/68/EU, D2000-Merkblatt, ASME conform

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↑ Type P05

TIS SIC-PHX.00

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The data contained herein represent the current state of our product knowledge
and are intended to provide general information on our products and their
application spectra. In view of the variety and large number of application
possibilities, these data should be regarded merely as general information that
gives no guarantee of any specific properties and/or suitability of those
products for any particular application. Consequently, when ordering a product,
please contact us for specific information on the properties required for the
application concerned. On request, our technical service will supply a profile of
characteristics for your specific application requirements without delay.