Graphite Block Heat Exchanger
Series GE/GZ

Graphite Block Heat Exchanger
- Heat exchanger in impregnated graphite for broad application range
- Resistant against virtually all leaches, acids, solvents and halogens
- Application as cooler, heater, evaporator (thermosyphon or falling film), condenser and absorber
- Single and double row drilled product holes (series GE and GZ) provide best fit to different media combinations
- Various installation modes possible (vertical, horizontal, inclined)

Design
- Cylindrical standardised graphite blocks with ID 9 mm and ID 16 mm holes
- Other diameters upon request (e.g. 25 or 30 mm, comparable to graphite tubes)
- Modular design
- Standardised PTFE gaskets between blocks
- Thermal length compensation by gliding sealing system and helical springs
- Multi pass setup (optional)
- Axial below on shell side (optional)
- Detachable header for easy mechanical cleaning (optional)

- Heat transfer area: up to 200 m²
- Block diameter: up to 900 mm

Applications (examples)
- Heating processes in steel pickling applications
- Cooling of galvanic bathes in metall processing
- Condensing and cooling of hydrochloric acid in adiabatic absorption processes
- Falling film evaporation of organic solvents and (in-)organic acids
- Thermosyphon evaporation of column sump

Features and Benefits
- Highest corrosion resistance
- Single and double row holes on product side
- Best fit to application
- Low pressure drop
- Robust design
- Modular setup
- Easy assembly
- High operational safety
- Easy mechanical cleaning
- Low cost alternative to shell & tube exchangers at small and medium sized transfer areas
- Low maintenance and spare part cost

Design Parameters
-1 bar to +6 (+16) bar max. operational pressure
-30 (-60)°C to +180 (+200)°C max. operational temperature
Employed Material and Material Options

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>phenolic formaldehyde resin based impregnated graphite</td>
</tr>
<tr>
<td></td>
<td>GAB GPX1 / GPX1T resp. GAB GPX2 with low resin content (optional)</td>
</tr>
<tr>
<td>Gaskets</td>
<td>PTFE (Standard)</td>
</tr>
<tr>
<td>Steel parts</td>
<td>shell, flanges and pressure plates: carbon steel</td>
</tr>
<tr>
<td></td>
<td>rods, nuts, springs: stainless steel</td>
</tr>
</tbody>
</table>

Design and Inspection
- Block heat exchangers are designed, manufactured, tested and inspected according AD 2000-Regelwerk (in coherence with the European Pressure Equipment Directive PED)
- Other design and manufacturing codes upon request

Specification and quotation
For a detailed offer we ask you to provide the following data:
- Quantity and physical properties of the process and service medium
- Inlet and required outlet temperatures
- Operational pressure and allowed pressure drops
- Further details of the process (optionally)
- Please make use of our questionnaire WS 1550.

Advantages block heat exchangers
- Robust design
- Modular setup
- Easy assembly
- High operational safety
- Easy mechanical cleaning

Technically perfekt
- Application preferably in single-purpose and mono plants
- Best thermal performance at compact dimensions
- Long lifetime

Economically outstanding
- Low cost alternative to shell & tube exchangers at small and medium sized transfer areas
- Low maintenance and spare part cost
- Best price level
- Short lead times

Additional Information
- Data sheet BL-3 includes information on terminology and main dimensions.
- Further amending and complementary information (brochures, corrosion resistance charts, product information, data sheets,…) you may also download at www.gab-neumann.de.