As a leading supplier for more than 70 years, and with 4500 references we continuously provide optimized shell and tube heat exchangers for your specific requirements. Our wide range of advanced graphite materials combined with a superior constructive design ensure a most efficient and reliable operation.

Your benefits include significantly reduced operational costs and minimized risks when processing critical corrosive media. With a worldwide engineering team, eight dedicated production sites and a network of service hubs we are a reliable partner close to our valued customers.

**Customer benefits**

- **Extreme corrosion resistance:** full material impregnation with first class phenolic resins and a wide range of graphite qualities (fine and ultra-fine graphite etc.)
- **Robustness:** robust design and monolithic tubesheets up to 1600 mm in diameter to enable high plant availability. Significant reduced risk of damages/unplanned production stops.
- **Safety:** up to 10 – 20 times less tube breakages at critical operation conditions when using our carbon fiber reinforcement technology.
- **Compactness:** ultra efficient graphite tube qualities with heat conductivities up to 1130/170 W/mK (certified by TÜV). Reduced fouling by lower wall temperatures.
- **Flexibility:** large range of design and material options (e.g. falling film, multi-pass, gas/liquid separation etc.)
- **Maintenance friendly:** easy to clean and quick repair procedures for minimized shut down times.
- **Service excellence:** fast and competent services along with the complete lifecycle offered by our global service network.

By the way: DIABON phenolic resin impregnated graphite is certified by FDA (Food and Drug Administration)

**Example applications**

- **Corrosive media:** e.g. hydrochloric acid, sulphuric acid, phosphoric acid, hydrofluoric acid, halogenated hydrocarbons etc.
- **Functions:** heating, cooling, condensation, evaporation, absorption, heat recovery by interchanger

**Product information**

- Highest heat conductivities on the market at up to 1130/170 W/mK allow for up to 40% more compact heat exchangers compared to other manufacturers and can reduce the tendency of fouling significantly.
- CARBOGUARD® carbon fiber reinforcement has proved a safe operation at critical operation conditions, e.g. tube leakage protection up to 2 – 5 bar of differential pressure even with cracked tubes, increased bursting pressure by 30 – 40%, and shatter guard.
- Unmatched technological leadership, e.g. abrasion resistant by CrO₂ coated weir sleeves, resin film free tubes (inside, for very clean requirements), water cooled headers etc.
- We ensure full quality control starting from the raw materials to the final product with a global uniform quality control system which includes [but is not limited to] extensive testing of all parts (e.g. 20 bar air test; mechanical and tightness tests etc.)
Data of DIABON® graphite shell and tube heat exchanger

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<td>carbon steel, stainless steel; lined steel (rubber, PTFE, glass) etc.</td>
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Special designs, exceeding the typical data above are possible but must be assessed individually. Do not hesitate to contact us for any special heat transfer request.

↑ DIABON graphite shell and tube heat exchanger

↑ Examples of top header options
↑ Examples of bottom header options

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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.