

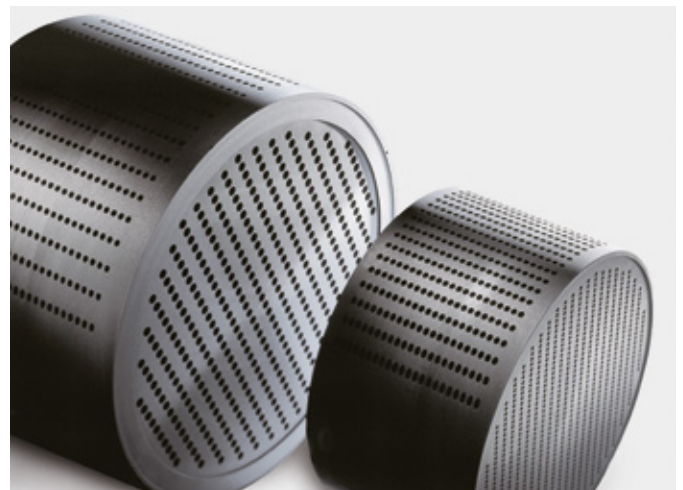
## DIABON® graphite block heat exchanger

DIABON graphite block heat exchangers are one of the most robust and flexible types for heat exchange of corrosive media available on market. SGL Carbon's advanced constructive design in combination with superior graphite qualities ensures an efficient and reliable operation for our customers even at toughest applications.

SGL Carbon's outstanding reputation as the global leading supplier is based on more than 10000 references for graphite block heat exchangers – the largest reference base in industry for block types. Deep understandings of our customer's applications in combination with optimized designs are the benefits for our customers based on our large source of experience.

### Customer benefits

- **Long lifetime:** e.g. superior corrosion resistance by full range of graphite and impregnation qualities available [Ultra fine & fine grain graphite, PTFE or phenolic resin impregnation, etc.]
- **High plant availability:** sturdy design, superior graphite and soft gaskets between blocks result in significant reduced risk of block damages/unplanned production stops
- **Compactness:** ultra efficient block drillings and resin film free holes available
- **Low maintenance costs:** ease of handling for fast and cost effective maintenance
- **Flexibility:** large range of design options available to allow optimized heat exchanger for a wide range of applications
- **Service excellence:** fast and competent services for repairs and spare parts



↑ DIABON blocks

### Example applications

- Heat exchange of corrosive applications e.g. hydrochloric acid, sulphuric acid, phosphoric acid, hydrofluoric acid, pickling liquors etc.
- Functions: Heating, cooling, condensation, evaporation, absorption, heat recovery by interchanger

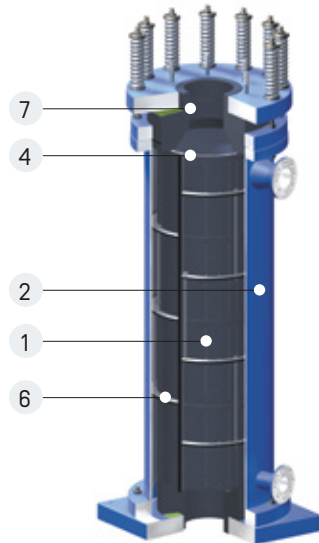
### Product information

- 3 base types: CK/NCK [cylindrical], NEC [cubical], KU [monolithic]
- Heat Exchange area: from 0.5 m<sup>2</sup> up to 850 m<sup>2</sup>
- Base design: a stack of graphite blocks or one monolithic block mounted into steel shell/steel plates
- blocks up to 1500 mm diameter from one piece of graphite
- No. 1 supplier worldwide with >10000 references
- Full range of graphite qualities: fine grain, ultra fine grain, phenolic resin/PTFE impregnation
- Design options for falling film, multi-pass, both sides' corrosives, temperature crossing etc.

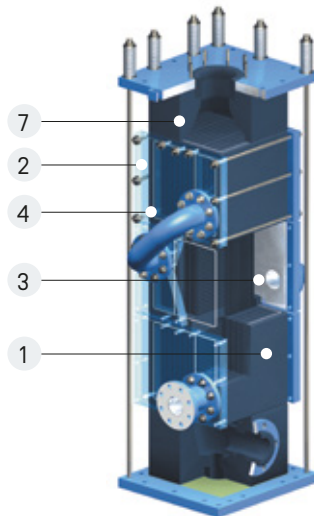
By the way: DIABON phenolic resin impregnated graphite is certified by FDA (Food and Drug Administration)

## Data of DIABON® graphite block heat exchanger

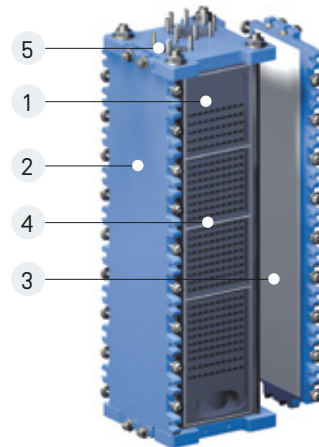
Technical specifications	Units	Type CK/NCK	Type NEC	Type KU
Block shape		cylindrical	cubical	monolithic
Main application		universal	pharmaceutical/fine chemicals	interchanger (two corrosives)
Specific advantages		Sturdy design, compactness, easy handling	Both sides corrosive, no risk of cross-contamination, more than one service media, modular expansion	Both sides corrosive, no gaskets, monolithic block, small temperature gradients, ultra efficient
Block gaskets		soft PTFE	soft PTFE	
Standard drilling diameter		8/16 mm	10 mm	8/16 mm
Drilling patterns		single or double	single	single
Max. design temperature	°C	220	220	220
Standard design/test pressure [higher pressure on request]	barg	6/7.8	6/7.8	9/11.7
Max. heat exchange area	m <sup>2</sup>	850	150	46
Standard connections		DIN/ANSI	DIN/ANSI	DIN/ANSI
Standard painting		sandblasting according to SA 2½, DIN 55928 one base coat with 1-component epoxy-zinc primer; dry film thickness 40 µm		
Available pressure codes		PED 2014/68/EU, AD2000-Merkblatt, GB Code, ASME acc. Sec. VIII Div. 1 (U-stamp) etc.		



↑ Cylindrical (universal)



↑ Cubical (e.g. pharmaceutical)



↑ Monolithic (e.g. interchanger)

- 1 DIABON graphite block
- 2 Steel shell/plate
- 3 PTFE protection lining
- 4 PTFE gasket
- 5 Connections bolts
- 6 Baffles
- 7 DIABON headers



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### TIS BHX.02

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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.