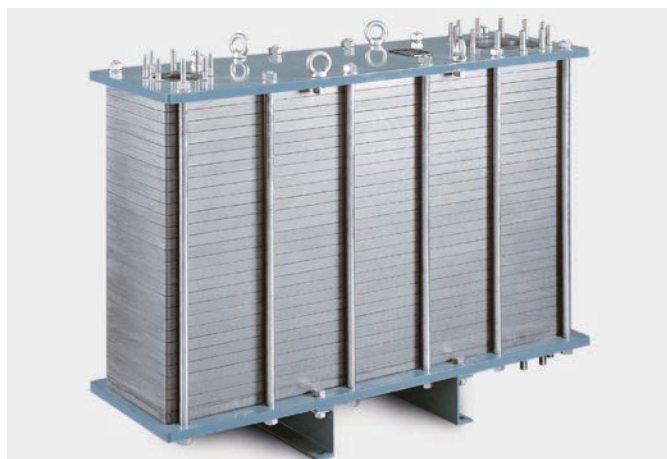


DIABON[®] graphite groove heat exchanger

For heating or cooling of corrosive media, DIABON groove heat exchangers are an economic and reliable choice. Groove heat exchangers are a perfect solution if a gasket free heat exchanger made of DIABON graphite is required. Machined graphite plates are directly connected together by SGL Carbon's cementing technology. No gaskets are present between the plates. Additional this design with a turbulent flow arrangement is very efficient, thus requiring very small installation space and is therefore a compact alternative to e. g. annular groove heat exchangers.

Customer benefits

- **Gasket free design:** no risk of gasket failure and no maintenance for e. g. gasket replacement etc.
- **Full corrosion resistance:** both media (cold and hot) can be corrosive. Only material in contact with process and service media is graphite.
- **DIABON graphite quality:** SGL Carbon is fully backward integrated in graphite production and uses only DIABON quality for groove heat exchangers. DIABON is FDA approved for food and drug applications.
- **Compact design:** low space requirement by turbulent and resin film free flow channels.
- **Compatible design:** exchangeable with korobon heat exchangers type KD and type K.



↑ DIABON graphite groove heat exchanger

Example applications

- Heat exchange for corrosive media e. g. hydrochloric acid, sulphuric acid, phosphoric acid, hydrofluoric acid, etc.
- Function: Heating, cooling, condensation or heat recovery by interchanger

Product information

- Proven and standardized plate type
- Heat exchanger dimensions [L x W x H] from 1510 x 444 x 264 mm up to 1510 x 444 x 1254 mm
- plates: SGL Carbon graphite DIABON
- No gaskets between plates
- flow rates from <math>< 10 \text{ m}^3/\text{h}</math> up to - heat exchange areas up to - Design pressure & temperature up to - Design code: PED/AD2000
- 100 % counter-current flow possible, temperature crossing allowed

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

Data of DIABON® graphite groove heat exchanger

Technical specifications	Units	Type GHX-X-1.1	Type GHX-X-2.1	Type GHX-X-3.1	Type GHX-X-3.1-C
Typical application		Cooler/Heater (liquid liquid)	Cooler/Heater (liquid liquid)	Cooler/Heater (liquid liquid)	Condenser
Dimension W x L	mm	470 x 1510	470 x 1510	470 x 1510	470 x 1510
Dimension H	mm	264 – 1224	384 – 1104	504 – 1224	834
Connections DIN/ANSI	Chamber 1	DN80	DN150	DN150	DN150
	Chamber 2	DN80	DN80	DN80	DN80
Max. working pressure PED	barg	- 1/6	- 1/6	- 1/6	- 1/6
Max. test pressure	barg	7.8	7.8	7.8	7.8
DIABON plate material		DIABON Graphite	DIABON Graphite	DIABON Graphite	DIABON Graphite
Max. exchange area	m²	19.3	17.1	19.3	12.1
No. of passes	Chamber 1				
	Chamber 2	12/12	6/12	4/12	8/12
Min./Max. design temperature	°C	- 10/180	- 10/180	- 10/180	- 10/180
Weight	kg	502 – 1100	575 – 1010	650 – 1100	850

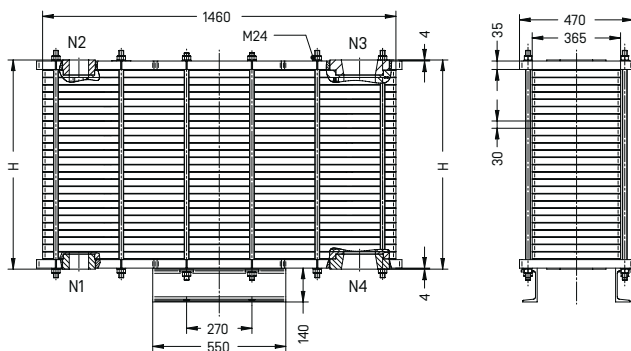
One priming coat with two component, polyamide-adduct cured epoxy paint, 100 µm

One intermediate coat ditto, 100 µm

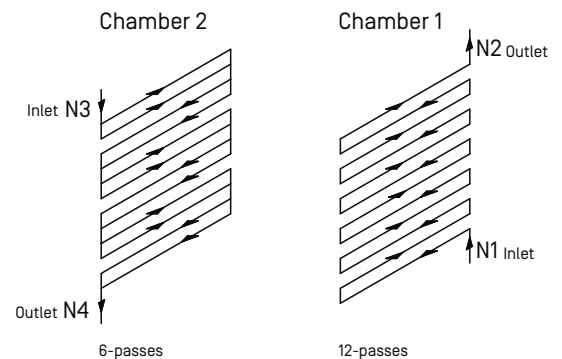
One top coat with two component, polyurethane coating,

Standard painting 60 µm – final color RAL 5002 medium blue

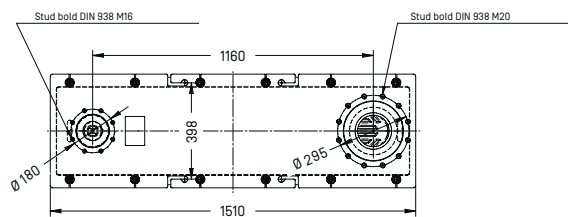
Available pressure codes PED 2014/68/EU, AD2000-Merkblatt



↑ Dimension sketch side view



↑ Example flow pattern (GHX-X-24-2.1)



↑ Dimension sketch top view



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