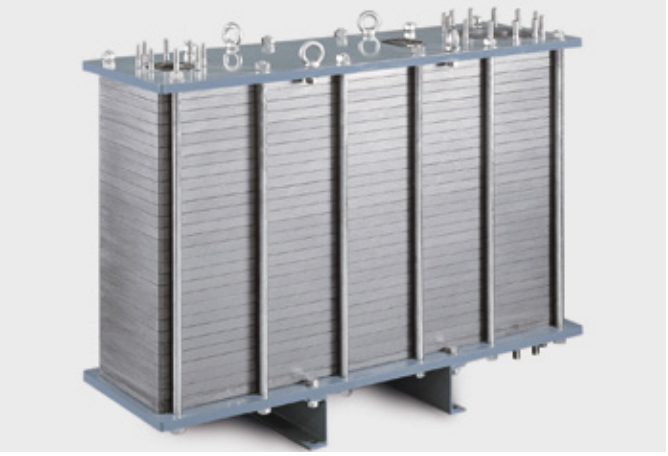
DIABON® graphite groove heat exchanger

Proven technology rethought

With an install base of more than 50000 units, groove heat exchangers are a proven technology that SGL Carbon has developed by combining our leading DIABON graphite material with state-of-the-art design options. The DIABON graphite groove heat exchanger offers an unique combination of advantages that no other type of heat exchanger can provide. Its machined graphite plates are directly connected by SGL Carbon's cementing technology with no gaskets present between the plates. A high efficiency enabled by turbulent flow combined with simplified mechanical features, e. g. discontinuation of spring packages, allow for a compact heat exchanger designed for small installation spaces.



↑ DIABON graphite groove heat exchanger

Customer benefits

- **Gasket free design:** No risk of leakage caused by gasket failure and minimum maintenance requirements
- **Conformity with TA-Luft amendment:** Gasket free design of this heat exchanger meets all regulations of the amended 2019 version of TA-Luft
- **FDA certification:** Media contact components are FDA certified and can be used in the food and drug applications or any other application requiring this standard
- **ATEX approved for zone 0:** Conformity with all criteria for usage in zone 0 acc. to 2014/34/EU (ATEX 114)
- **Short delivery time:** Type approval and full standardization enables fast delivery within 10–12 weeks or even faster in case of emergency
- **Easy in handling and maintenance:** Robust design and low equipment complexity, e.g. no compression springs, no gaskets, piping connection directly at the steel covers, simplify handling and reduce maintenance demand
- **Repair option:** Full package of on-site and off-site repair and refurbishment procedures are available in case of damage

Example applications

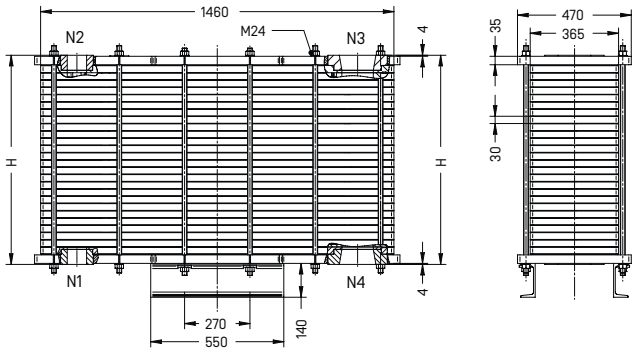
- Heat exchange for corrosive media e.g. hydrochloric acid, sulphuric acid, phosphoric acid, hydrofluoric acid, etc.
- Function: Heating, cooling, condensation or heat recovery by interchanger

Product information

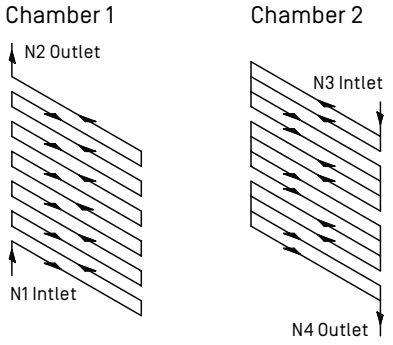
- Proven standardized plate type based on DIABON graphite
- Heat exchange areas up to 20 m^2
- Flow rates up to 150 m^3/h
- Design code: PED 2014/68/EU/AD2000
- Typical heat exchanger dimensions (L x W x H) 1510 x 470 x 264 mm up to 1510 x 470 x 1254 mm
- 100 % counter-current flow possible, temperature crossing allowed

Data of DIABON® graphite groove heat exchanger

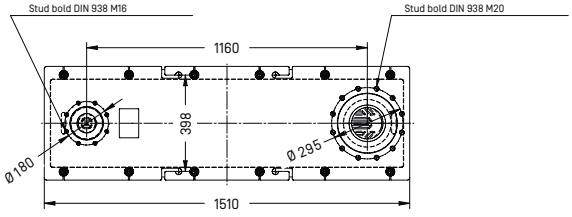
Technical specifications		Units	Type GHX-X-1.1	Type GHX-X-2.1	Type GHX-X-3.1	Type GHX-X-3.1-C
Typical application			Cooler/Heater (liquid liquid)	Cooler/Heater (liquid liquid)	Cooler/Heater (liquid liquid)	Condenser
Dimension W x L		mm	470 x 1510	470 x 1510	470 x 1510	470 x 1510
Dimension H		mm	264 – 1224	294 – 1254	324 – 1224	955
Connections DIN/ANSI	Chamber 1		DN80	DN80	DN80	DN80
	Chamber 2		DN80	DN150	DN150	DN150
Max. working pressure PED		barg	– 1/6	– 1/6	– 1/6	– 1/6
Max. test pressure		barg	9.1	9.1	9.1	9.1
DIABON plate material			DIABON Graphite	DIABON Graphite	DIABON Graphite	DIABON Graphite
Max. exchange area		m^2	19.3	17.1	19.3	12.1
Min./max. design temperature		°C	– 10/180	– 10/180	– 10/180	– 10/180
Weight		kg	502 – 1100	520 – 1106	538 – 1100	960
Standard painting			External coating of steel parts: Sandblasted SA 2,5 acc. to EN ISO 12944-4; Primer coat: 2 component zinc oxide paint; dry film thickness 40 µm; RAL 7001			
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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