

DIABON® graphite plate heat exchanger

In case of heat exchange of corrosive media, DIABON plate heat exchangers are first choice.

Plate heat exchangers are the most modern and efficient heat exchange technology on the market. They replace more and more traditional types like block, annular groove or shell & tube heat exchangers.

In cooperation between Alfa Laval and SGL Carbon plate heat exchangers made out of DIABON graphite are established. More than 3000 references worldwide and continuous innovations like the world largest graphite plate heat exchanger type P90 are our proof of outstanding customer benefits.

Customer benefits

- Most efficient and economic heat exchanger technology: lower invest cost compare to other heat exchanger types highest heat recovery for interchanger (narrow temperature gradients possible)
- High flexibility: modular expansion possible
- Compact design: up to 75% less space requirement [advantage at e.g. capacity expansion/retrofit]
- High plant availability: up to 50% less production stops for maintenance, repair and service
- Extreme short delivery time: standard delivery time: 8 weeks (about half of the delivery time of other types)

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



↑ DIABON graphite plate heat exchangers P90 and P40

Product information

- 4 standardized types: P05, P25, P40, P90
- dimensions (W x H x L) from (P05) 230 x 620 x 850 mm up to (P90) 675 x 2245 x 1892 mm
- > 3000 references worldwide
- plates: DIABON NS1, NS2 and F100 gaskets: SIGRAFLEX[®]/POLYFLURON[®] PTFE
- Heat exchange area: 0.1 up to 60 m²; corresponds to > 150 m² block heat exchanger
- flow rates from $0.1 \text{ m}^3/\text{h}$ up to > 250 m $^3/\text{h}$
- 100% counter-current, temperature crossing allowed

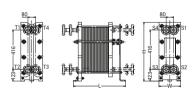
By the way: DIABON phenolic resin impregnated graphite is certified by FDA (Food and Drug Administration)

Data of DIABON® graphite plate heat exchanger

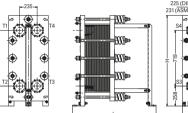
| Technical specifications | Units | Type P05 | | Type P25 | | Type P40 | | Туре Р90 |
|--------------------------------|-------|-----------------------|---------|-------------------------|-----------|-------------------------|-----------|-------------------------|
| Dimensions W x H x L | mm | 230 x 620 x 350 - 850 | | 512 x 1170 x 912 - 1762 | | 570 x 1473 x 912 - 1762 | | 675 x 2245 x 942 - 1892 |
| Connections DIN/ANSI | | DN25/1" | | DN100/DN80/4"/3" | | DN100/4" | | DN150/6" |
| Plate gasket | | PTFE/SIGRAFLEX | | PTFE/SIGRAFLEX | | PTFE | | PTFE |
| Max. working pressure ASME/PED | barg | 7/8 | | 7/8 | | 7/8 | | 7/8 |
| Max. test pressure | barg | 10.4 | | 10.4 | | 10.4 | | 10.4 |
| Lining of frames | | PTFE | | PTFE | | PTFE | | PTFE |
| DIABON plate material | | F100 | DIA-NS2 | F100 | DIA-NS1/2 | F100 | DIA-NS1/2 | DIA-NS1/2 |
| Max. number of plates | | 80 | 64 | 160 | 100 | 130 | 96 | 96 |
| Max. exchange area | m² | 4.0 | 2.56 | 40 | 18 | 52 | 29 | 60 |
| Exchange area per plate | m² | 0.05 | 0.04 | 0.25 | 0.18 | 0.40 | 0.30 | 0.63 |
| Max. design temperature | °C | 140 | 200 | 140 | 200 | 140 | 200 | 200 |
| Weight | kg | 100-190 | 100-200 | 610-1080 | 620-1070 | 910-1730 | 920-1600 | 1540 - 6400 |

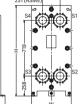
One priming coat with two component, polyamide-adduct cured epoxy paint, 100 μm One intermediate coat ditto, 100 μm

Standard painting Available pressure codes One top coat with two component, polyurethane coating, 60 µm – final color RAL 5002 medium blue PED 2014/68/EU, AD2000-Merkblatt, ASME acc. Sec. VIII Div. 1 [U-stamp]

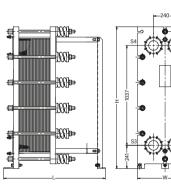


↑ Type P05



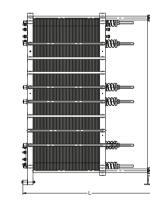


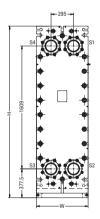
↑ Type P40



↑ Type P25

↑ Туре Р90







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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.