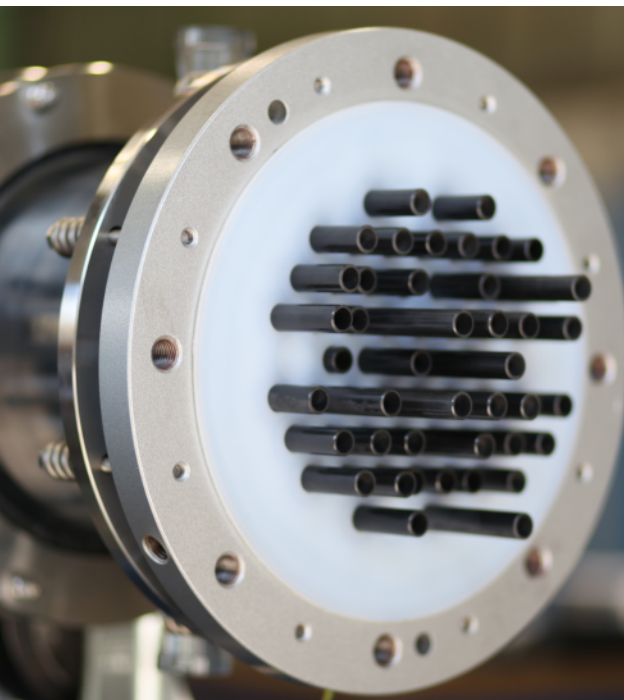
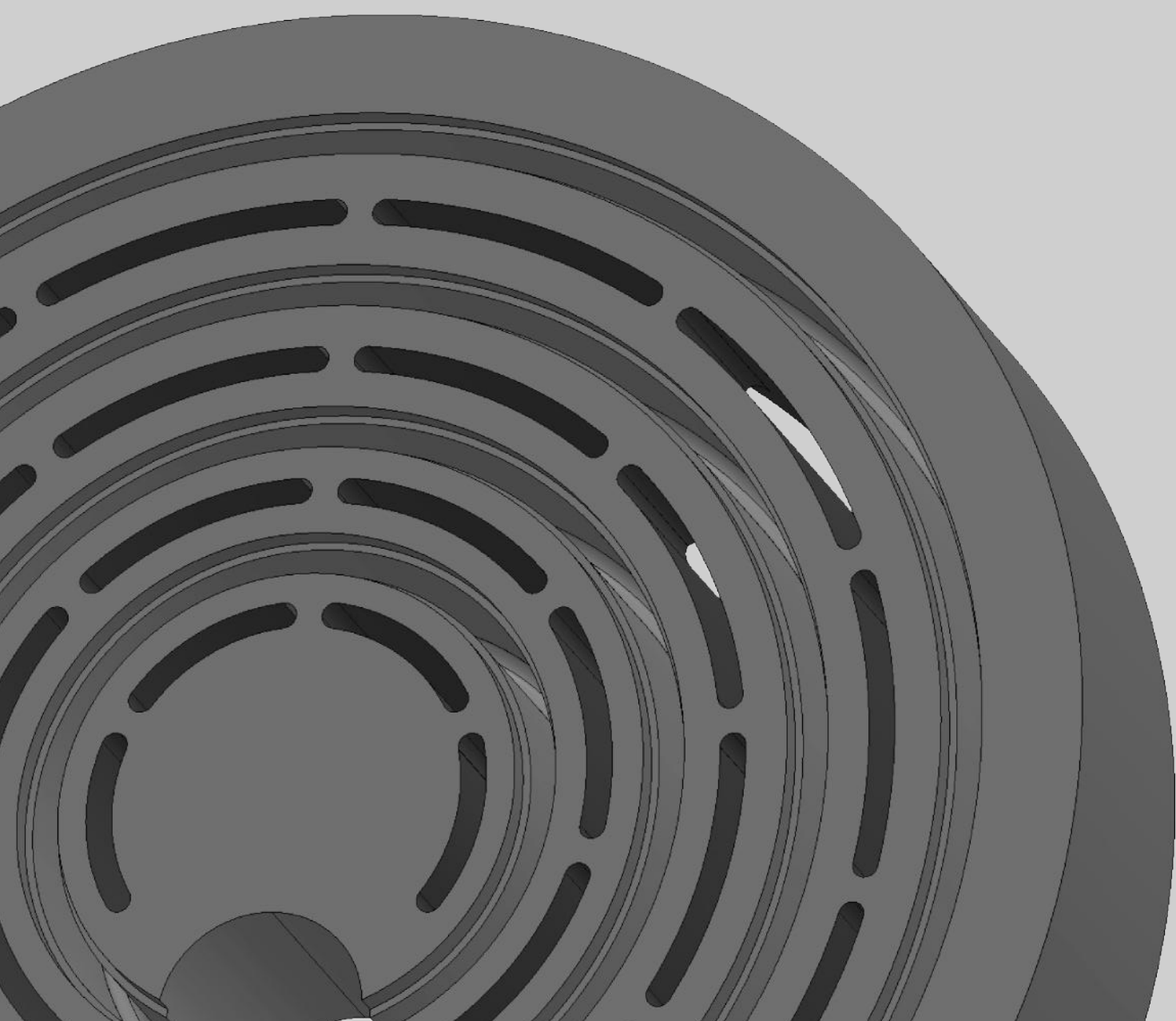


Impervious Graphite and Silicon Carbide Heat Exchangers, Process Equipment, and Complete Systems



**Experts in Corrosion-Resistant
Process Equipment**



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GAB Neumann



For more than 50 years, GAB Neumann has been designing and manufacturing impervious graphite and silicon carbide heat exchangers, process equipment, spare parts, components, and complete systems for ultra-corrosive applications in the chemical, pharmaceutical, steel pickling, and environmental industries.

Providing the highest quality while maintaining a strong customer focus are the foundations of our organization. This is demonstrated daily by the longevity of more than 22,000 units which have been delivered to our loyal, worldwide customer base. Our staff is the key. They are highly skilled, experienced, and dedicated.

Our team and our representatives worldwide develop adapted solutions with our customers to best meet their specific requirements, optimize the performance of their units, and reduce their total cost of ownership.

Our application engineers assist during the thermal and dimensional sizing of the equipment using customized software (e.g. finite element analysis). It is then translated into an automated manufacturing process in order to ensure continuity throughout the entire chain.

In addition to our products, we offer all the associated services including the chemical cleaning of individual process equipment or complete plants independently of the construction material and original manufacturer. We also offer on-site assembly, building, and supervision services.



Highlights

- More than 50 years of experience and more than 22,000 units delivered worldwide
- Quality is our priority
- Customer focus
- Satisfied customers worldwide
- ISO 9001 : 2015 Certified
- Designed according to European Pressure Directive (PED), ASME, or any other recognized standards



Safety, Reliability, and Performance

All of GAB Neumann’s process equipment is designed to perform on the long-term. No compromise is ever made on safety and quality. Our raw materials come exclusively from qualified western sources. Our manufacturing processes are well-established and remain under tight control. Our semi-finished parts are tested prior to assembly. Our process equipment is systematically hydrotested before shipment.

GAB Neumann’s process equipment consistently ensures the highest safety and reliability at competitive prices and low operational and maintenance costs.



Key Applications and References

GAB Neumann’s impervious graphite and silicon carbide process equipment operates in the fine chemical, chemical, pharmaceutical, and environmental industries.

It is used daily in numerous ultra-corrosive processes including the manufacturing of active pharmaceutical ingredients (API), herbicides, pesticides, aromas, fragrances, food additives, silicones, pigments, advances polymers, copper, steel and other metals, polycarbonate, vinyl chloride monomer, isocyanates, epichlorohydrin, electronic grade chemicals, phosphoric acid, and many other products.



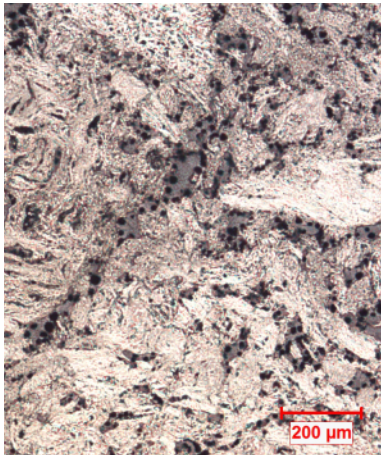
Superior Design and Manufacturing

- High overall heat transfer coefficient
- Compactness
- cGMP compliant and qualified for the production of active pharmaceutical ingredients
- Short delivery time
- Economical
- Long lifetime
- Low total cost of ownership

Customers (excerpt)

Ajinomoto, BASF, Bayer, Clariant, Dow, Corning, DSM, Evonik, Johnson Matthey, Formosa, Lanxess, Lonza, Merk, Momentive, Plinke KBR Engineering, Roche, Sanofi-Aventis, Syngenta, Wacker

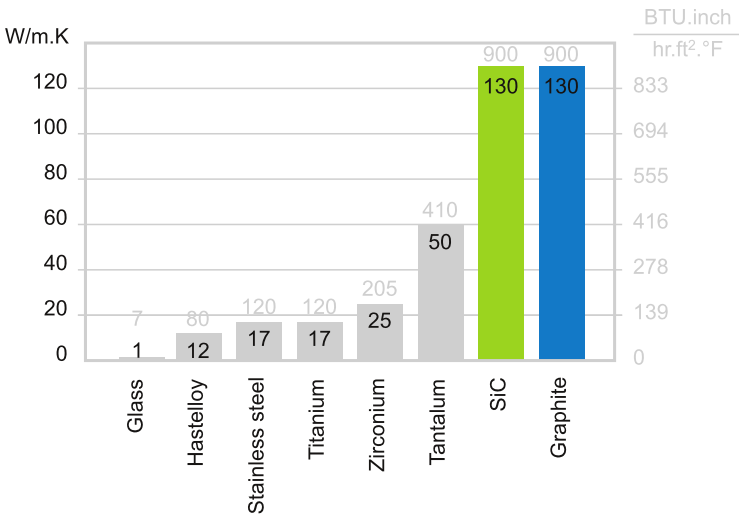
Impervious Graphite



Our impervious graphite is a composite material that contains between 80 and 85% of synthetic graphite and between 15 and 20% of phenolic resin, which is used to fill in the open pores of synthetic graphite to render it totally impervious. It also increases the mechanical strength of the material.

The resulting material demonstrates outstanding corrosion resistance and high thermal conductivity. It resists to nearly all common acids, solvents, chlorides and other halogenated compounds.

The graph here below shows the thermal conductivities of various "corrosion-resistant" construction materials used in the chemical process industry.



Impervious graphite rarely fouls, which makes it an ideal material for manufacturing reflux condensers for use in the fine chemical and pharmaceutical industries.

Our impervious graphite can withstand wall temperatures between -60°C and 200°C (-76°F and +392°F). This allows them to perform extreme duties such as quenching flue gases with incoming temperatures up to 1300°C (2372°F), as long as the wall is properly cooled.

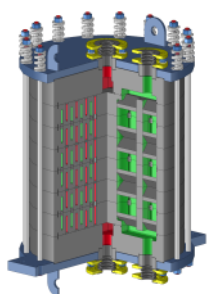
We offer three different grades of impervious graphite. Each of them is especially adapted to specific requirements. They offer different levels of mechanical strengths, resin content, maximum allowable temperature and chemical resistance.



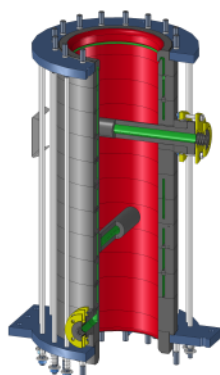
Impervious Graphite

- An homogenous graphite structure with a suitable grain size distribution, an adapted phenolic resin, and perfectly established impregnation and curing processes are the keys to ensure a premium quality impervious graphite for process equipment applications.
- Outstanding corrosion resistance to common acid, solvents and halogenated compounds
- High thermal conductivity
- Non-adhesive materials
- Wall temperature range between -60°C and +200°C (-76°F and +392°F)
- Different grades adapted to specific requirements.

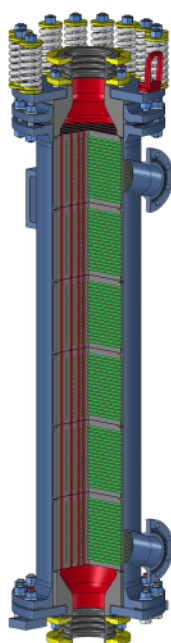
Range of Graphite Process Equipment



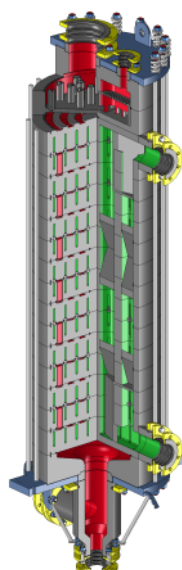
Annular Groove Interchangers, RA/WA series



Quenches



Block Heat Exchangers, GE/GZ series



Annular Groove Absorbers, A series



Columns



Impervious Graphite Process Equipment

- Outstanding corrosion resistance against all common acids
- Annular Groove and block heat exchangers, columns, quenches, and much more.
- High thermal conductivity
- Good resistance against thermal shocks
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Low total cost of ownership

GAB Neumann offers a complete range of graphite process equipment, namely heat exchangers, absorbers, columns, quenches, sulfuric acid dilution coolers, vacuum groups, parts, and components. We also design and assemble complete hydrochloric acid recovery as well as dry hydrochloric acid generation units.

GAB Neumann's product portfolio includes the annular groove heat exchanger. Its unique design combines sturdiness, high performance, low fouling, and compactness. The risk of leaks or cross-contamination is minimized by nearly eliminating gasketed joints.

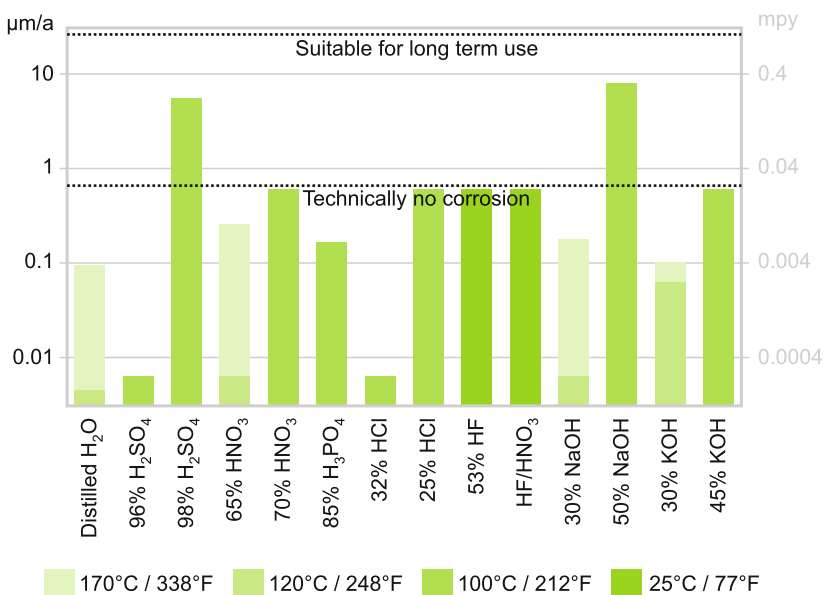
Pressureless Sintered Silicon Carbide (SiC)

To guaranty optimal corrosion resistance and performance we only use pressureless sintered silicon carbide (α -SiC or SSiC) in our process equipment.

After mixing very fine silicon carbide powder with non-oxide sintering additives silicon carbide, parts are formed using extrusion (tubes) or cold isostatic pressing (plates and blocks). The parts can then be machined if required before being sintered at a temperature between 2000°C to 2300°C (3632°F to 4172°F) under vacuum.

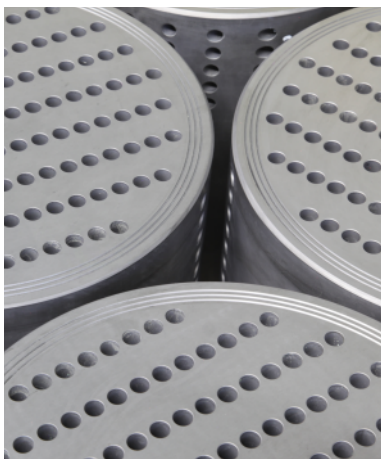
After sintering, alpha silicon carbide products show nearly universal corrosion resistance to acids, high thermal conductivity, extreme hardness, and excellent surface finishing thanks to its very fine grain structure and high density.

The graph below shows the chemical resistance of pressureless sintered silicon carbide (α -SiC) CORRESIC® Material.



Silicon Carbide

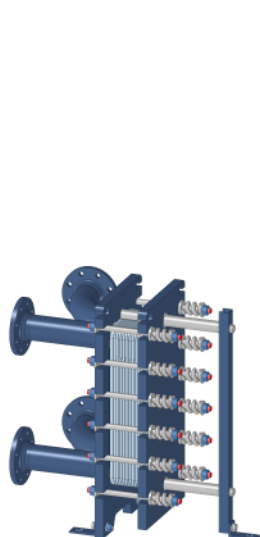
- Universal corrosion resistance of α -SiC
- Extreme hardness leading to optimal resistance against abrasion
- Extreme purity, which makes α -SiC a suitable material for electronic applications
- Good resistance against thermal shocks
- Design temperature between -60°C and +220°C (-76°F to 428°F)



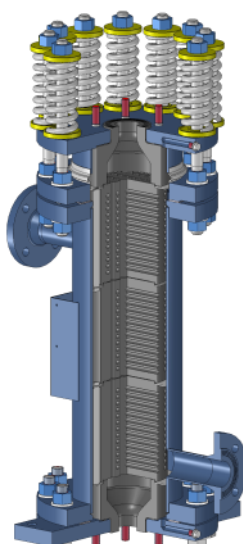
Because they are manufactured at an elevated temperature, α -SiC products are very pure. After initial cleaning they can be used in ultra-pure processes (for manufacturing electronic grade chemicals, for example).

Pressureless sintered silicon carbide has good resistance against thermal shocks, with a short-term temperature gradient that can exceed 200K.

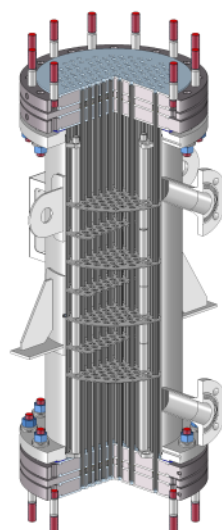
Complete Range of Silicon Carbide Heat Exchangers



Silicon carbide
plate heat
exchanger, SP
series



Silicon carbide
block heat
exchanger, SE
series



Silicon carbide
shell & tube heat
exchangers, SR
series

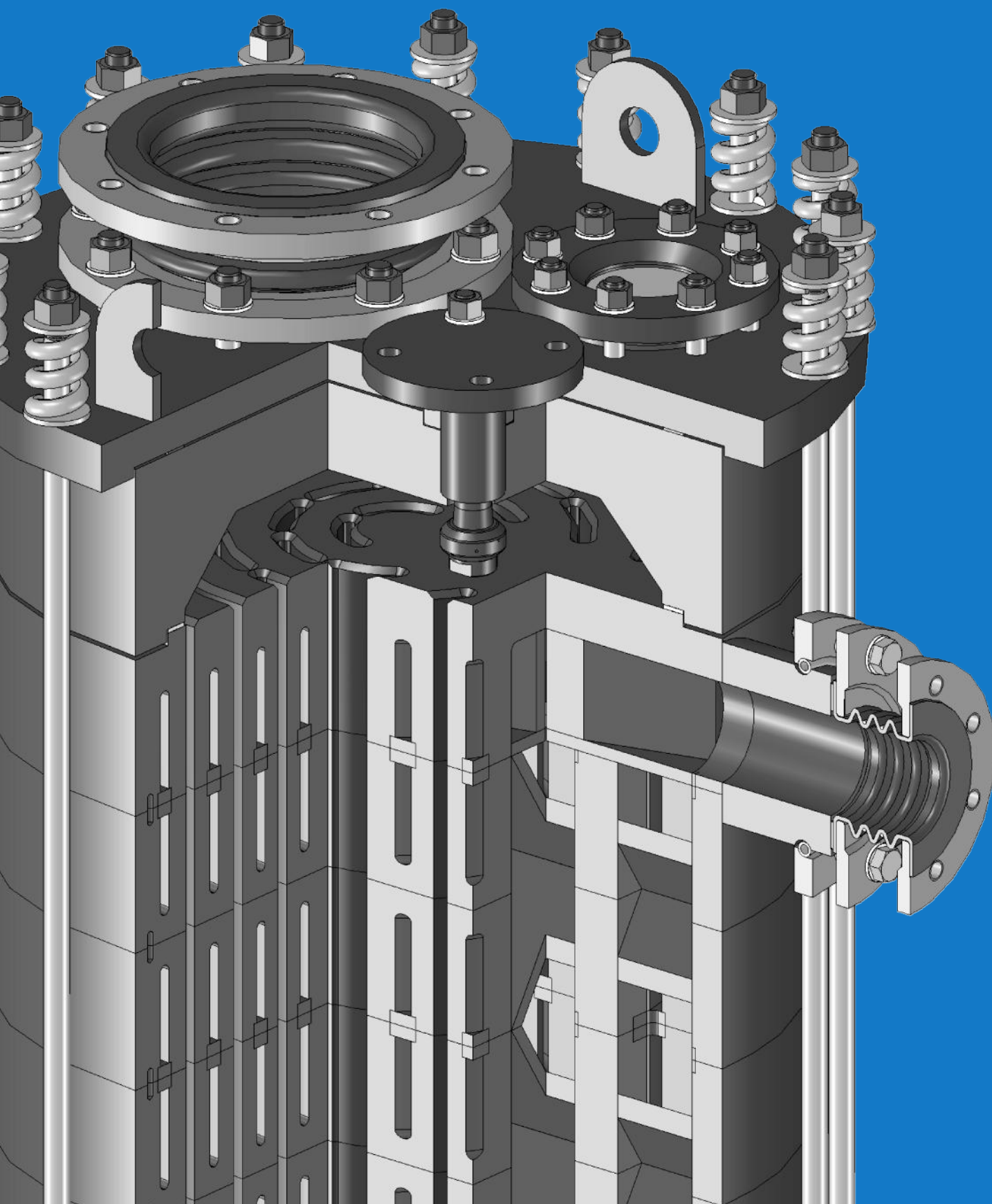
GAB Neumann offers the largest, safest, and most advanced range of silicon carbide heat exchangers in the industry. Our silicon carbide plate heat exchangers can be used as heaters and coolers. Our silicon carbide block and as shell & tube heat exchangers can be used as condensers, coolers, heaters, evaporators, and absorbers.



Silicon Carbide Heat Exchangers

- Outstanding corrosion resistance against all common acids, oxidizing media, and bases
- Plate, block, and shell & tube heat exchangers
- High thermal conductivity
- Good resistance against thermal shocks
- Design temperature between -60°C and +220°C (-76°F to 428°F)
- Low total cost of ownership
- Heat transfer area up to 42.2 m² (452 ft²)

Impervious Graphite Process Equipment



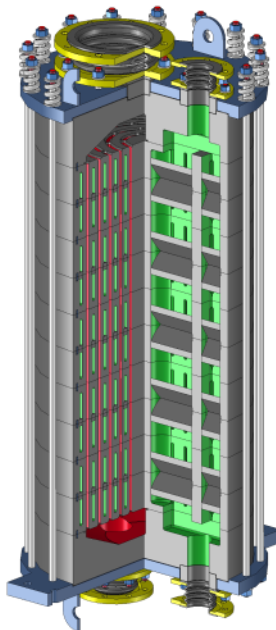
Annular Groove Condenser, NB / HB series

Features

- Condensation of ultra-corrosive vapors
- Corrosion resistance on both process and on services sides.
- Carbon fiber reinforcement (optional)
- Demountable headers for easy access to the process side (optional)
- Heat transfer area up to 55 m² (592 ft²)
- Design pressure between -1 barg (full vacuum) and +10 barg (145 psig)
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Vertical or horizontal placement

Applications (examples)

- Condensation of chlorinated solvents or acidic chemicals in the pharmaceutical, agrochemical, or dyestuff industries.
- Condensation of vapors in inorganic processes (e.g. hydrochloric acid vapors)



Highlights

- Adjustable cross sections on both sides
- No gasket and therefore no risk of leakage
- Thick graphite walls ensure mechanical strength and prevent failure due to swelling stresses

Benefits

- High operational safety
- High overall heat transfer coefficient
- Low fouling tendency
- Compactness

cGMP-Condenser, NB-GMP / HB-GMP series

Features

- Specific design and manufacturing processes for cGMP applications (e.g. in the pharmaceutical or fine chemicals industries)
- Suitable for applications where FDA or other special food processing requirements need to be met
- Fully drainable design with no gaps or dead zones
- Heat transfer area up to 55 m² (592 ft²)
- Design pressure between -1 barg (full vacuum) and +10 barg (145 psig)
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Vertical or horizontal placement

Applications (examples)

- Overhead condensation of highly-corrosive chemicals in multi-purpose plants in the pharmaceutical and fine chemical industries
- Condensation in Active Pharmaceutical Ingredient (API) plants.
- Production of food ingredients (e.g. flavors and fragrances)

Highlights

- Demountable headers with easy access for cleaning or inspection
- Cleaning in place
- Sight glass

Benefits

- Fully drainable design
- Specific impregnation, manufacturing, and cleaning processes

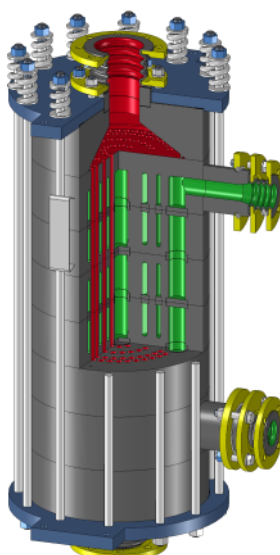
Annular Groove Partial Condenser, GN / GH series

Features

- Condensation of ultra-corrosive vapors
- Corrosion resistance on both sides
- Carbon fiber reinforcement (optional)
- Demountable headers for easy access to the process side (optional)
- Incorporation of a demister (optional)
- Heat transfer area up to 100 m² (1076 ft²)
- Design pressure between -1 barg (full vacuum) and +10 barg (145 psig)
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Vertical or horizontal placement

Applications (excerpt)

- Condensation of chlorinated solvents or acidic chemicals e.g. in compliance with VOC regulations
- Condensation and separation of ultra-corrosive vapors e.g. after steam ejectors



Highlights

- Large cross-section and heat transfer surface on process side
- cGMP design (optional)
- Fully drainable design

Benefits

- Ultra-efficient condensation and gas / liquid separation
- Compactness
- No risk of batch to batch cross-contamination

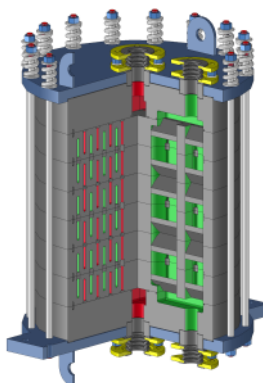
Annular Groove Heat Exchanger, RA / WA series

Features

- Heating or cooling of ultra-corrosive media
- Heat interchange between two ultra-corrosive media.
- Vertical or horizontal placement
- Wavy groove design for enhanced turbulence (optional)
- Carbon fiber reinforcement (optional)
- Heat transfer area up to 55 m² (592 ft²)
- Design pressure between -1 barg (full vacuum) and +10 barg (145 psig)
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Vertical or horizontal placement

Applications (excerpt)

- Heating or cooling for hydrochloric acid, sulfuric acid, or chlorinated solvents
- Heat recovery between two corrosive media



Highlights

- Adjustable cross sections on both sides
- No gasket and therefore no risk of leakage
- High self-cleaning effect

Benefits

- Ultra-efficient heat transfer
- Compactness
- Great operational safety and reliability
- No risk of cross-contamination

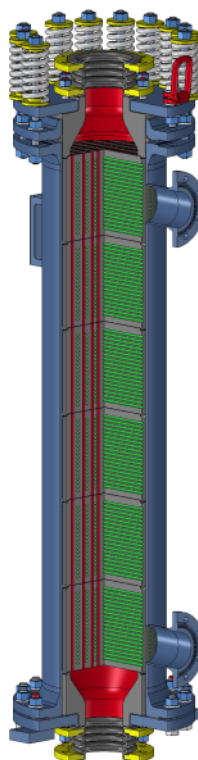
Block Heat Exchanger, GE / GZ series

Features

- Versatile design adapted to the cooling, heating, condensation and evaporation of ultra-corrosive media
- Heat transfer area up to 200 m² (2152 ft²)
- Design pressure between -1 barg (full vacuum) and +10 barg (145 psig)
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Vertical or horizontal placement

Applications (examples)

- Heat and cooling of ultra-corrosive media in heavy chemistry applications
- Heating of carbon steel pickling baths
- Cooling of galvanizing baths in steel finishing processes
- Evaporation of chlorinated organic solvents
- Absorption of hydrochloric acid-containing gases



Highlights

- Single or double-row drilling on process side
- Sturdy construction
- Modular design

Benefits

- Versatile design
- Large heat transfer areas
- Operational safety
- Mechanical cleanability

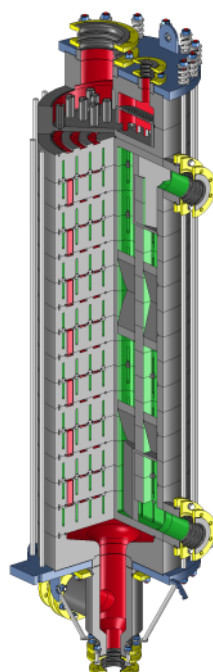
Annular Groove Absorber, A series

Features

- Absorption of ultra-corrosive gases
- Absorption of up to 2000 kg/h of pure HCl gas
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Design pressure between -1 barg (full vacuum) and +10 barg (145 psig)
- Vertical placement only

Applications (examples)

- Absorption of hydrochloric, hydrofluoric or hydrobromic acids
- Recovery of hydrochloric acid
- Generation of dry hydrochloric acid



Highlights

- Cross section adapts to the progressively decreasing gas flow
- High performance
- Compact design
- Sturdy design

Benefits

- Ultra-efficient mass transfer
- Great operational safety and reliability

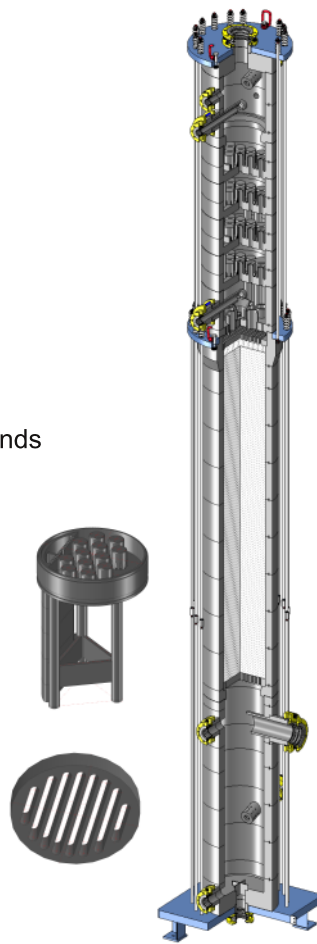
Column and Column Internals

Features

- Column and vessels
- Supporting grids
- Liquid distributors
- Down-comers
- Bubble-cap trays
- Structured or random packing sections
- Demisting beds
- Diameter up to 3 meters
- Minimum design pressure: -1 barg (full vacuum). Maximum design pressure depends on diameter
- Design temperature: -60°C to +200°C (-76°F to 392°F)
- Vertical placement only

Applications (examples)

- Absorption
- Distillation
- Stripping
- Scrubbing



Highlights

- Monolithic (small and medium diameters) or segmented (large diameter) columns
- Monolithic or segmented internals
- Mechanical Design Analysis Using the Finite Element Method
- Full vacuum

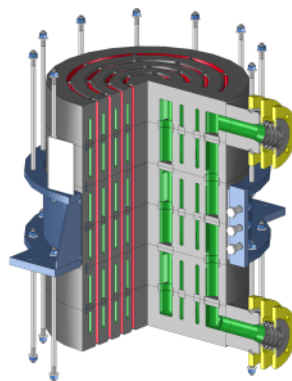
Annular Groove Column Heat Exchangers, G1 series

Features

- Especially designed for vertical installation directly between columns sections
- cGMP design (optional)
- Minimum design pressure: -1 barg (full vacuum). Maximum design pressure depending on diameter
- Design temperature: -60°C to +200°C (-76°F to 392°F)
- Vertical placement only

Applications (examples)

- Reflux condensation of head vapors
- Partial condensation
- Sump heating



Highlights

- Inline installation
- Compactness

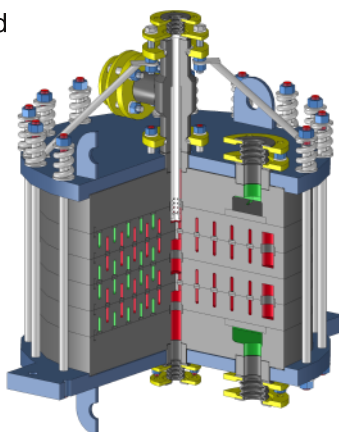
Benefits

- Small footprint
- No piping
- Cleanability on process side

Sulfuric Acid Dilution Cooler, RA-K series

Features

- Dilution and cooling of sulfuric acid
- Separate inlets for concentrated sulfuric acid and dilution water
- Acid injection through PTFE Sparger
- Carbon fiber reinforcement (optional)
- Heat transfer area up to 55 m² (592 ft²)
- Design pressure between -1 barg (full vacuum) and +10 barg (145 psig)
- Design temperature between -60°C and 200°C (-76°F and +392°F)
- Vertical or horizontal placement



Applications (examples)

- Dilution of concentrated sulfuric acid
- Production of battery acid



Highlights

- Dilution and cooling combined in one single piece of equipment
- Dilution inside of the heat exchanger
- Compactness

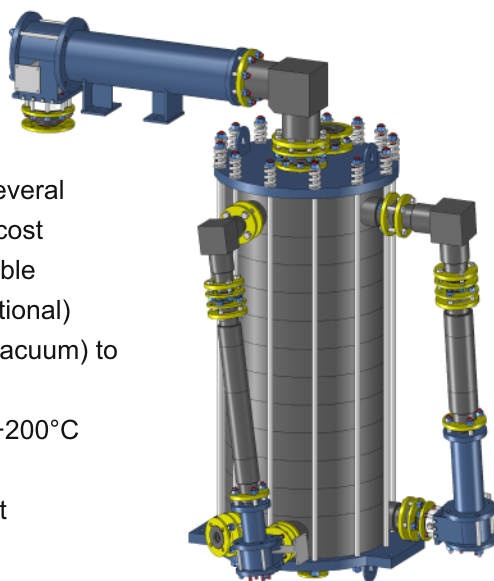
Benefits

- Long equipment lifetime thanks to progressive mixing and efficient cooling
- Small footprint
- No piping

Vacuum Generation Group

Features

- Steam jet ejectors
- Single and multi-stage steam jet vacuum generation groups
- Condensers can be split into several condensation areas to reduce cost
- Deep vacuum (< 1 mbar) possible
- Carbon fiber reinforcement (optional)
- Design pressure: -1 barg (full vacuum) to +10 barg (145 psig)
- Design temperature: -60°C to +200°C (-76°F to 392°F)
- Vertical or horizontal placement



Applications (examples)

- Vacuum generation for ultra-corrosive applications
- Vacuum generation for chemical, pharmaceutical or fine chemical applications

Highlights

- Steady, reliable, and cost-effective vacuum generation
- Outstanding corrosion resistance
- Sturdy, compact, and modular design
- Compactness

Benefits

- High operational reliability (no moving parts)
- Small footprint

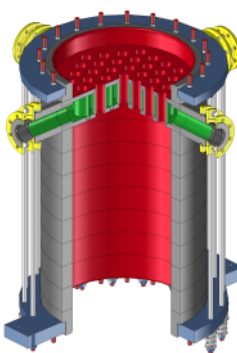
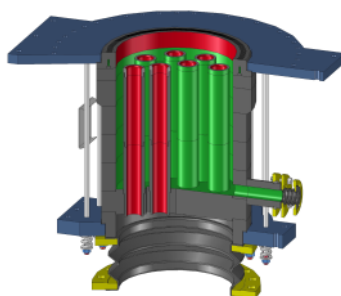
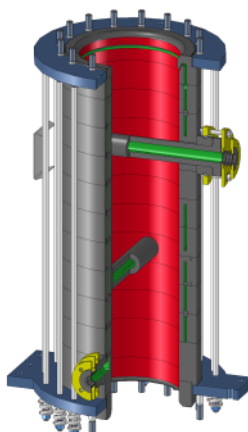
Quench

Features

- Complete product portfolio with spray, pipe, or Venturi quench.
- Gas flow up to 35000 Nm³/hr (1235000 ft³/hr)
- Incoming gas temperature up to 1300°C (2372°F)
- Ultra-efficient wall cooling
- Suitable for halogen- or NO_x-containing gases
- Minimum design pressure: -1 barg (full vacuum)
- Maximum design pressure depends on the vessel diameter
- Design temperature: -60°C to +200°C (-76°F to 392°F)
- Vertical placement only

Applications (examples)

- Quenching of HCl, HBr, or Cl₂ containing gases
- Quenching of PTFE particles containing CFC's production vents
- Pollution control



Highlights

- Outstanding corrosion resistance
- Instantaneous cooling
- Huge liquid-gas interfacial area
- Design perfectly adapted to the process conditions
- Very efficient wall cooling

Benefits

- Treatment of oxidizing gases
- Low maintenance and operational costs
- Spray quenches' straightforward design ensures reliability, flexibility (high turn-down ratio), and long-term performance. The risk of clogging is almost non-existent.
- Pipe quenches have large tube diameters in order to limit the risk of clogging
- Venturi quenches can be operated with high dust loads

Hydrochloric Acid Recovery and Dry Hydrochloric Acid Generation Units

GAB Neumann's impervious graphite hydrochloric acid recovery and dry hydrochloric acid generation units include an impervious graphite fractioning column with a packing section, a impervious graphite bottom reboiler, and at least one impervious graphite head condenser. Depending on the expected moisture content in the hydrochloric acid an additional impervious graphite vent condenser cooled by chilled water and another impervious graphite vent condenser cooled by brine may be added. To start, an impervious graphite annular groove falling film absorber can be used to absorb the hydrochloric acid from a gaseous stream.

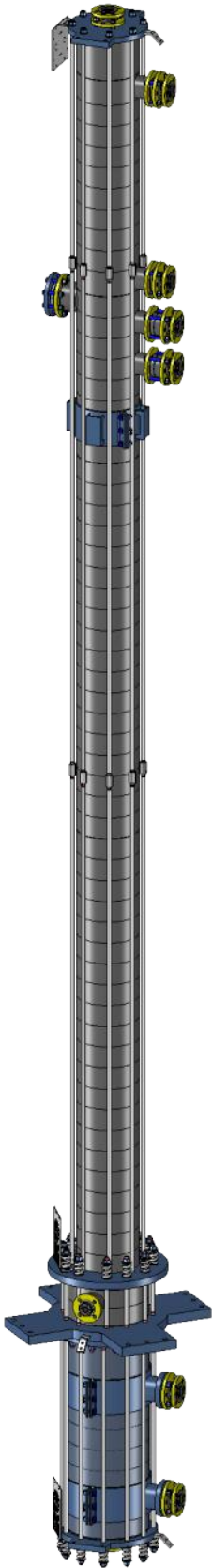


Features

- Hydrochloric acid recovery
- Anhydrous hydrochloric acid generation
- Falling film absorber
- Fractioning column
- Bottom reboiler
- Head condenser
- Additional condensers if required to decrease the water content
- Pure HCl with less than 20 ppm water

Main applications

- Hydrochloric acid recovery
- Generation of anhydrous hydrochloric acid



Highlights

- Detail engineering with control and regulation
- On-site assembly, building, and start-up
- Carbon fiber reinforcement (optional)

Key Benefits

- Customer-specific design
- Recovery and beneficiation of hydrochloric acid
- Generation of anhydrous hydrochloric acid
- Outstanding corrosion resistance
- Superior heat transfer and mass transfer performances
- Superior process equipment (absorber, fractioning column, reboiler, and condensers) efficiency
- Reboiler and condenser integrated in the column
- High operational safety
- Sturdy and modular design
- Short lead time
- Long lifetime

Spare Parts & Components

GAB Neumann manufactures spare parts for any kind of impervious graphite and silicon carbide process equipment including that supplied by other original equipment manufacturers. We can precisely measure and reverse-engineer any parts so that they fit precisely in the original equipment footprint, accomplish exactly the same function, and complete the very same duty. Thanks to our versatile production capabilities and our network of industrial partners we can accurately and rapidly manufacture almost any kind of spare part for impervious graphite and silicon carbide process equipment.

We ensure the maintenance and repair of any type of graphite or silicon carbide process equipment. First of all, we inspect the equipment (search for leaks, endoscopic inspection, visual inspection, pressure testing, etc...) before implementing the necessary measures. This might consist of replacing some graphite or silicon carbide parts, expansion bellows, gaskets, tube sheets or some steel or stainless-steel parts such as bolts, nuts, tie rods, shell, pressure plates, etc. We never let our customers down. Our fitters, technicians and engineers always look for appropriate solutions to keep our customers operating at the maximum possible capacity.

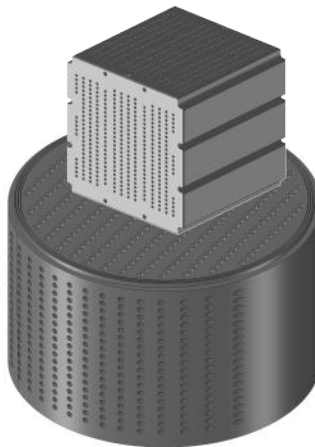
We provide technical assistance, planning, and coordination whenever we repair impervious graphite and silicon carbide (SiC) process equipment.

Features

- Cubic and cylindrical blocks with single or double row drilling
- Cubic and cylindrical headers
- Column sections
- Column internals
- Nozzles
- Steam jet ejectors
- Thermowells
- Custom-made parts

Applications

- Spare parts for impervious graphite process equipment
- Spare parts for silicon carbide process equipment



Highlights

- Reverse engineering of existing parts originally produced by other original equipment manufacturers
- On-site disassembly or reassembly
- Wide range of applications
- Mechanical strength calculations (though finite element method)
- Carbon fiber reinforcement

Key Benefits

- Outstanding corrosion resistance
- Superior heat transfer and/or mass transfer performances
- Short lead time



Silicon Carbide Heat Exchangers

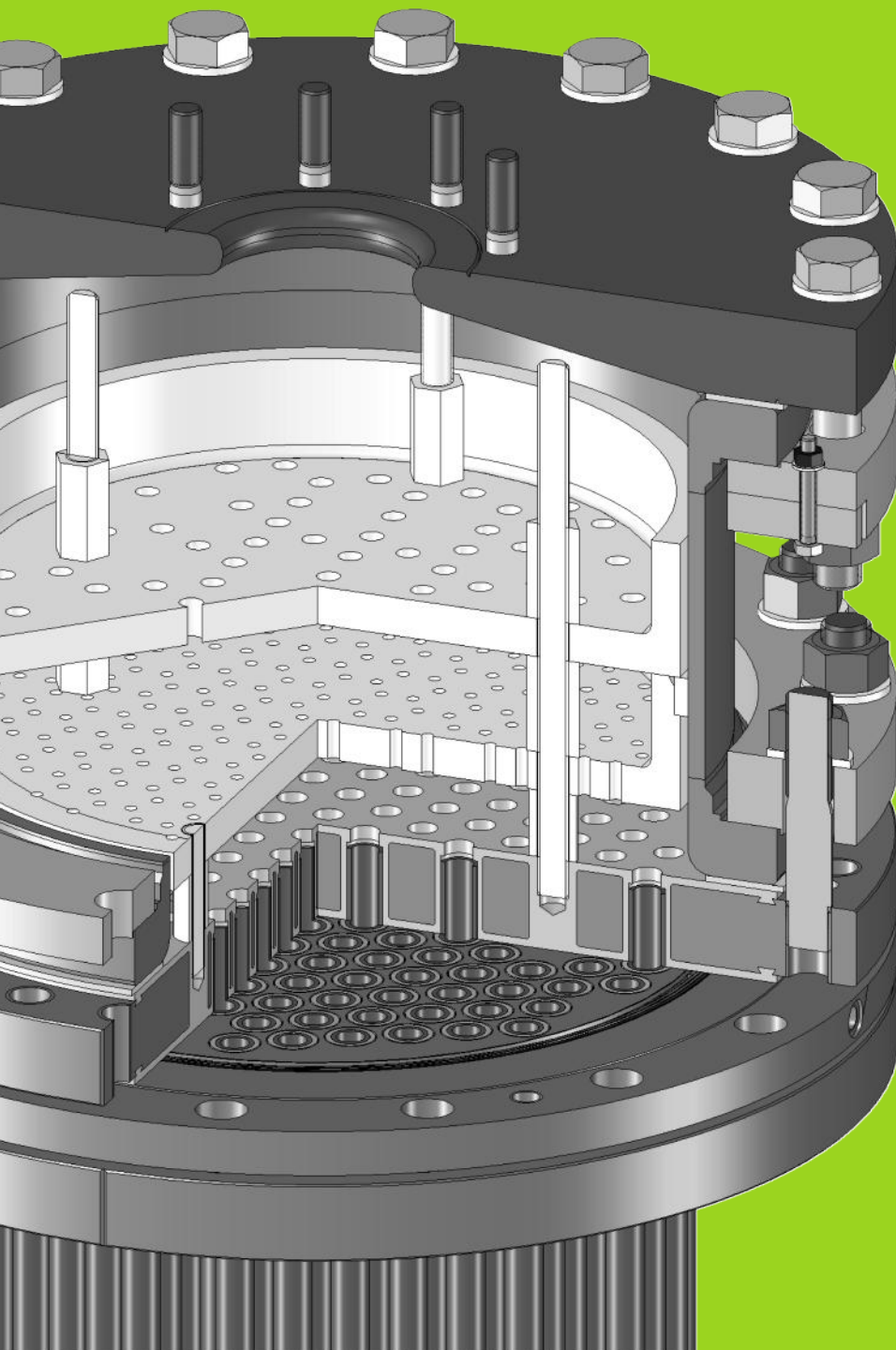
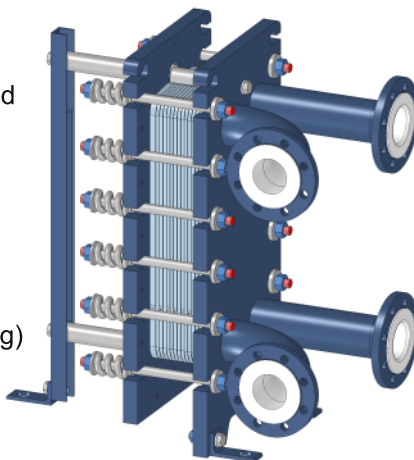


Plate Heat Exchanger, SP series

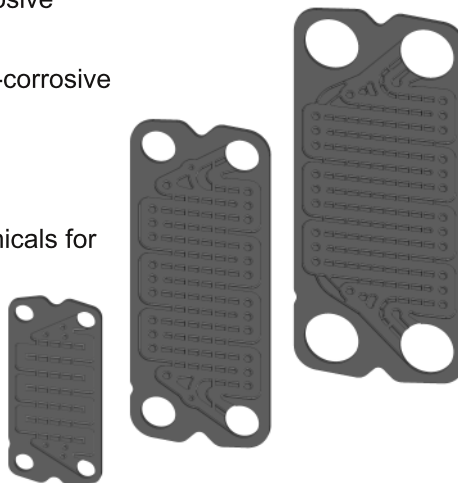
Features

- CORRESIC® pressureless sintered silicon carbide plates
- Universal corrosion resistance (acids, bases, and oxidizing media)
- High thermal conductivity
- Sturdy modular design
- 3 different plates sizes 260, 500, and 585 mm (10, 20, 23")
- PTFE gaskets between the plates
- Suitable for heat recovery
- Heat transfer up to 7.1 m² (75 ft²)
- Operating pressure between -1 bar and +16 bar (Full vacuum to 240 psig)
- Operating temperature between -30°C to +200°C (-22°F to 392°F)



Applications (examples)

- Heating and cooling of ultra-corrosive chemicals
- Heat recovery between two ultra-corrosive chemicals
- Acid concentration processes
- Hydrofluoric acid processing
- Manufacturing of ultra-pure chemicals for electronics applications



Highlights

- Outstanding corrosion resistance of α -SiC
- Extremely high overall heat transfer coefficient
- PTFE-lined steel end plates
- Resistance to abrasion
- Good resistance to thermal shocks
- Compactness

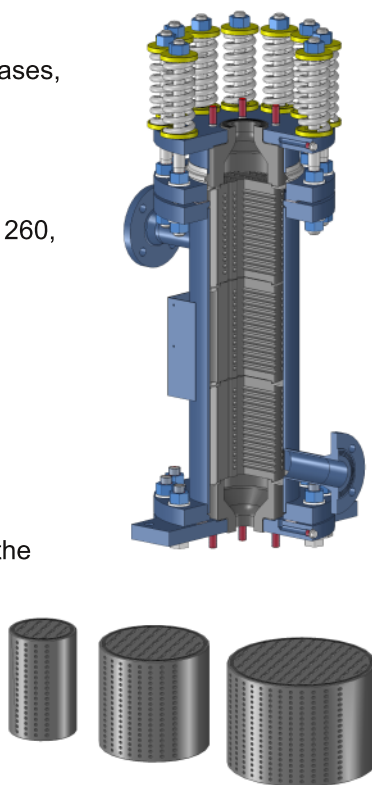
Benefits

- High operational reliability

Block Heat Exchanger, SE series

Features

- CORRESIC® pressureless sintered silicon carbide blocks and headers
- Universal corrosion resistance (acids, bases, and oxidizing media)
- High thermal conductivity
- Sturdy modular design
- 3 different block diameters namely 160, 260, and 350 mm (6, 10, 14")
- Multipass design
- 9 or 16 mm (0.35 or 0.63") drillings on process side
- 8 mm (0.31") drilling on service side
- 2 to 12 blocks per heat exchanger
- PTFE gaskets between the blocks
- PTFE gaskets between the blocks and the headers
- Low total cost of ownership
- Suitable for heating with steam
- Heat transfer up to 22.1 m² (237 ft²)
- Operating pressure between -1 bar and +16 bar (Full vacuum to 240 psig)
- Operating temperature between -60°C and +220°C (-76°F to 428°F)
- Horizontal or vertical placement



Highlights

- Outstanding corrosion resistance of α -SiC
- α -SiC, PTFE-lined steel, or in glass-lined steel headers
- Resistance to abrasion
- Good resistance to thermal shocks

Benefits

- Steam operation possible on service side
- High operational reliability

Applications (examples)

- Heating, cooling, evaporation, or condensation of ultra-corrosive chemicals
- Heating or evaporation with steam on service side
- Stainless steel pickling applications
- Acid concentration processes
- Hydrofluoric acid processing
- Manufacturing of ultra-pure chemicals for electronics applications

Shell & Tube Exchanger, SR series

Features

- CORRESIC® pressureless sintered silicon carbide tubes
- Universal corrosion resistance (acids, bases, and oxidizing media)
- High thermal conductivity
- Modular design
- 2 different tube diameters 14 and 19 mm (0.55" and 3/4")
- Tube length between 1 and 4.5 m (3.3 and 14.8')
- 8 to 222 tubes per heat exchanger
- Unique patented triple tube sheets double sealing system with FFKM gaskets on corrosive side(s) and FKM gaskets on non-corrosive side
- Various construction materials possible for the shell and the headers, namely glass-lined steel, PTFE-lined steel, glass, stainless steel, and carbon steel
- Leak detection system
- Low total cost of ownership
- Heat transfer area up to 42.2 m² (452 ft²)
- Operating pressure between -1 bar and +10 bar (Full vacuum to 145 psig)
- Operating temperature between -30°C and +220°C (-22°F to +428°F)
- Horizontal or vertical placement

Applications (examples)

- Heating, cooling, or condensation of ultra-corrosive chemicals
- Condensation of process vapors
- Condensate cooling
- Acid concentration processes
- Hydrofluoric acid processing
- Ultra-pure chemical manufacturing for electronics applications

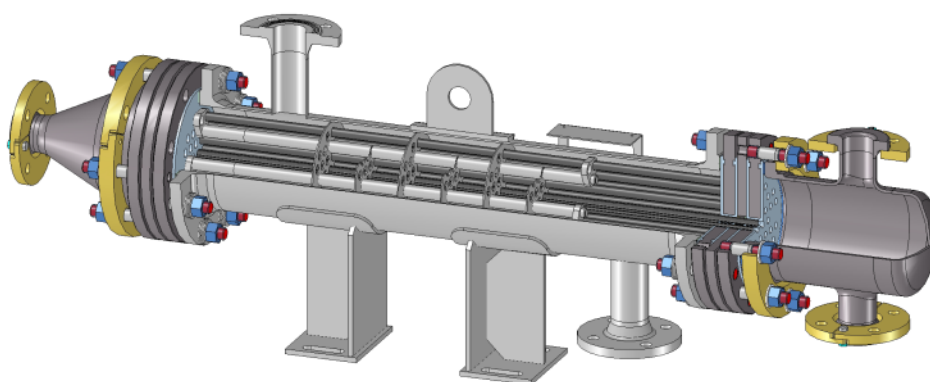


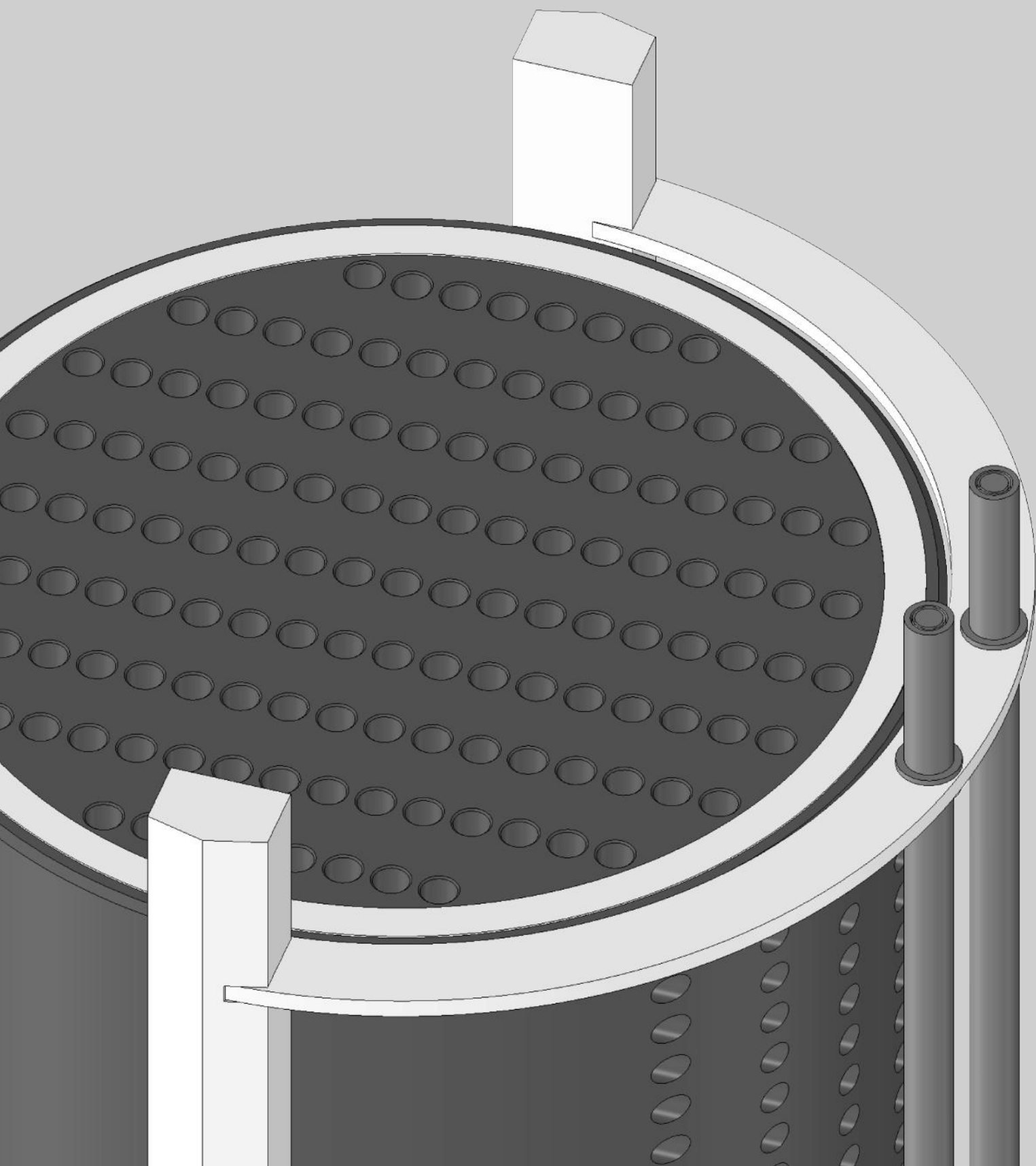
Highlights

- Outstanding corrosion resistance of α -SiC
- Unique patented triple tube sheet double sealing system
- Safest and most reliable sealing system in the industry
- Leak detection system (optional)
- Good resistance to thermal shocks

Benefits

- High operational safety and reliability
- No risk of cross-contamination







Impervious Graphite and Silicon Carbide
Heat Exchangers, Process Equipment,
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