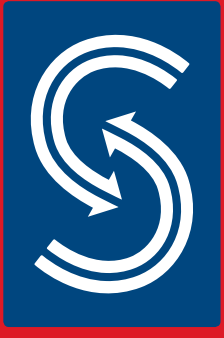


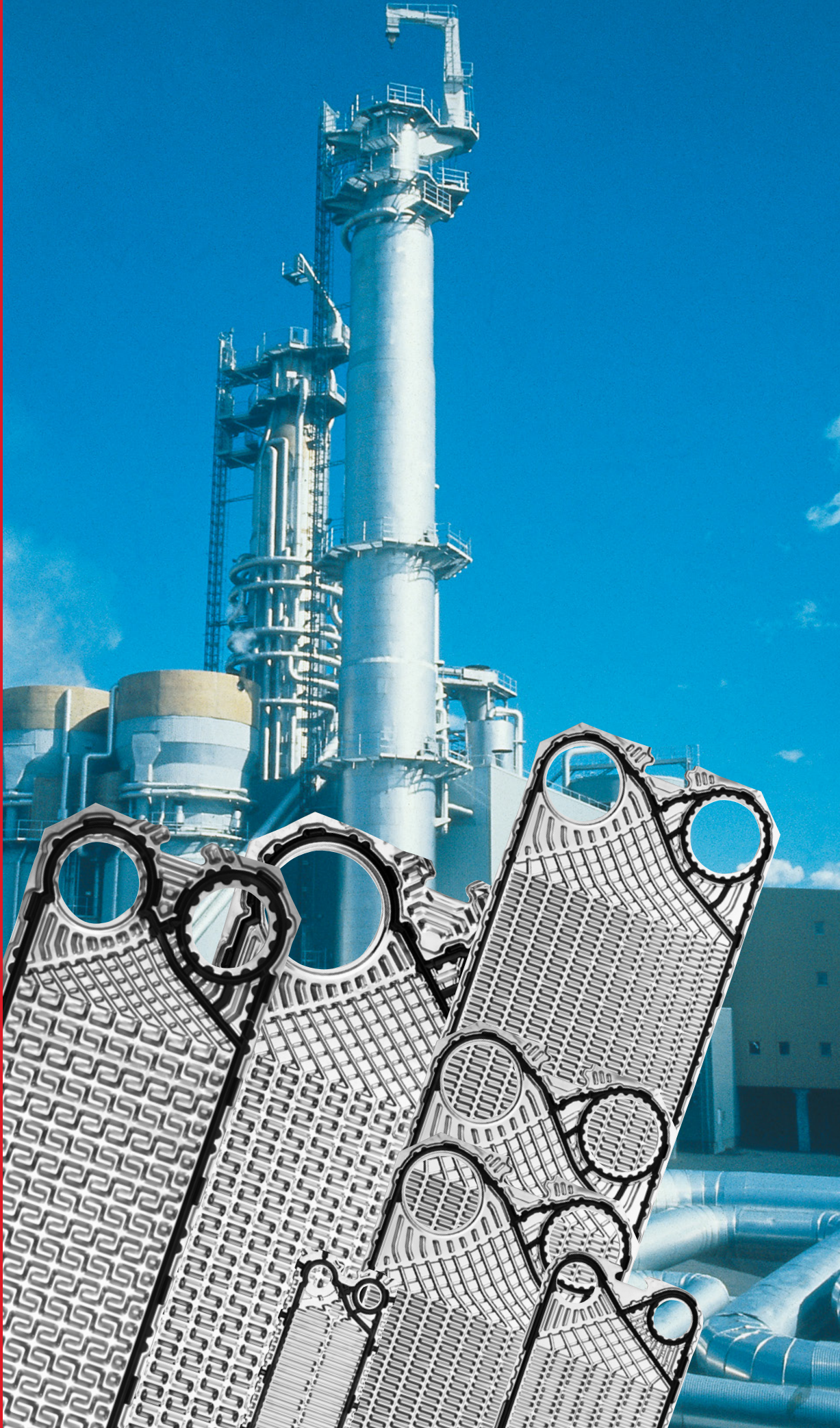
SONDEX

Free Flow Plate Heat Exchangers

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SONDEX®



Sondex Free Flow Plate Heat Exchangers

SONDEX A/S is a Danish company specialized in the development, design and production of plate heat exchangers and freshwater distillers. Since its foundation in 1984 SONDEX A/S has grown into a wide global network of branches, agencies and daughter companies and is now considered a world leader in plate heat exchangers. SONDEX A/S is solving complex heat transfer solutions in any heating/cooling area.

Besides the traditional plate heat exchangers, the product range includes Free Flow-, Semi-Welded -, Plate & Shell- and Brazed type heat exchangers, as well as single- and multi-step freshwater distillers, all of which are based on the latest flow and heat transfer technology. Our network of highly qualified Worldwide technicians, is always available with support and advice for all SONDEX products. Effective, up-to-date product development and accurate market analysis ensures that SONDEX A/S remains a market leader and maintains strong company growth.

By means of modern technology, SONDEX A/S has created a new and effective generation of Free Flow plate heat exchangers including one of the largest Free Flow plate heat exchangers in the world with 2,3 m² effective heat surface on each heat transfer plate.

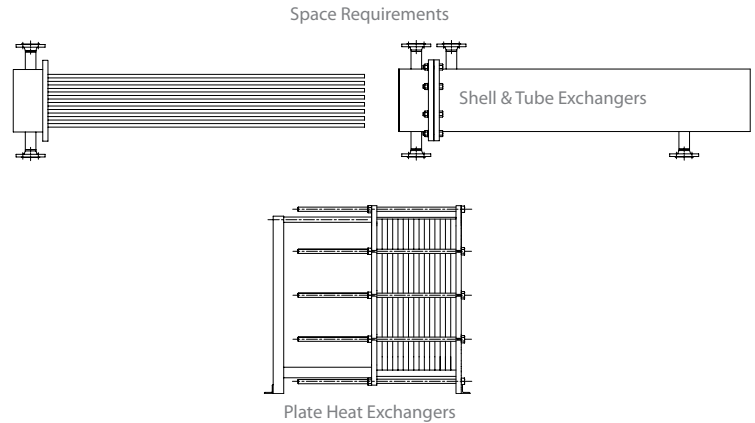
Application:

Our SONDEX Free Flow product range offers distinct advantages, especially when used for liquids containing solids, particles, fibres or high-viscous products:

- pulp/paper industry,
- wastewater treatment plants,
- sugar industry,
- juice production,
- grain based ethanol production,
- heat recovery systems

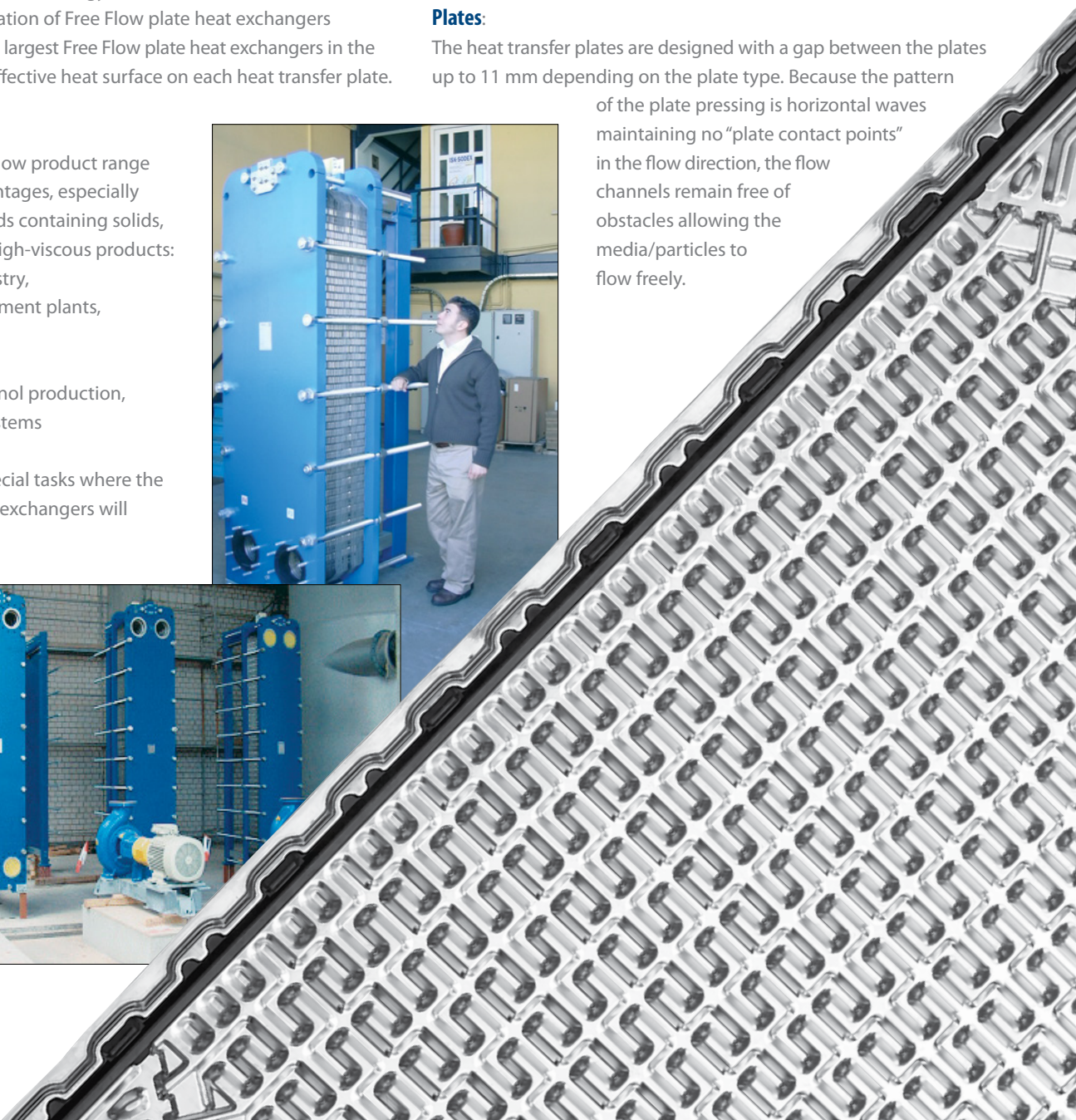
and many other special tasks where the "normal" plate heat exchangers will usually block.

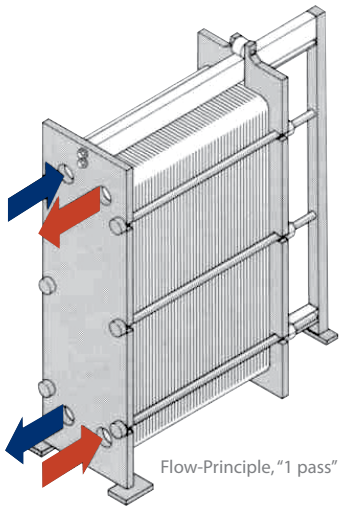
Shell and Tube heat exchangers are often too expensive and physically too large compared to our Free Flow plate heat exchangers. The plate pattern on the "main" heat transfer surface also grants optimal turbulent flow, which increases the efficiency and minimizes fouling. An important advantage compared to shell & tube heat exchangers.



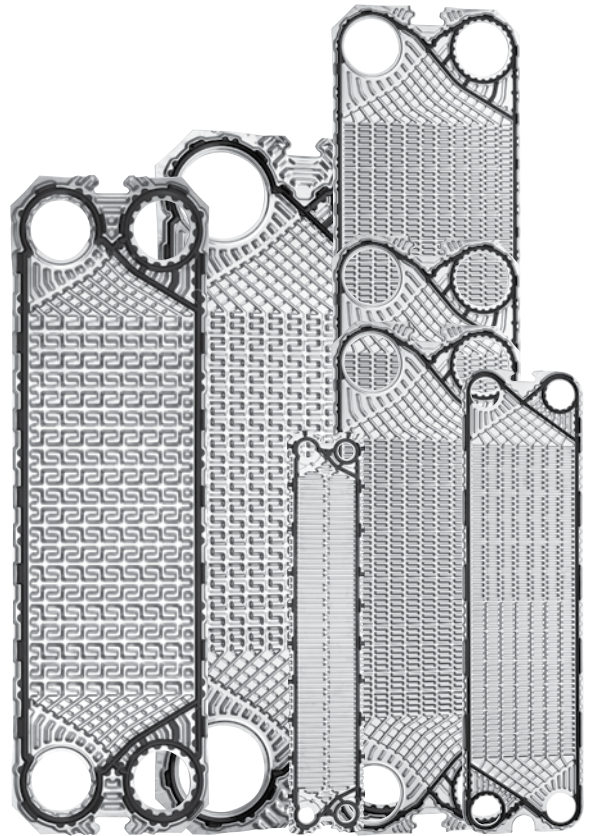
Plates:

The heat transfer plates are designed with a gap between the plates up to 11 mm depending on the plate type. Because the pattern of the plate pressing is horizontal waves maintaining no "plate contact points" in the flow direction, the flow channels remain free of obstacles allowing the media/particles to flow freely.

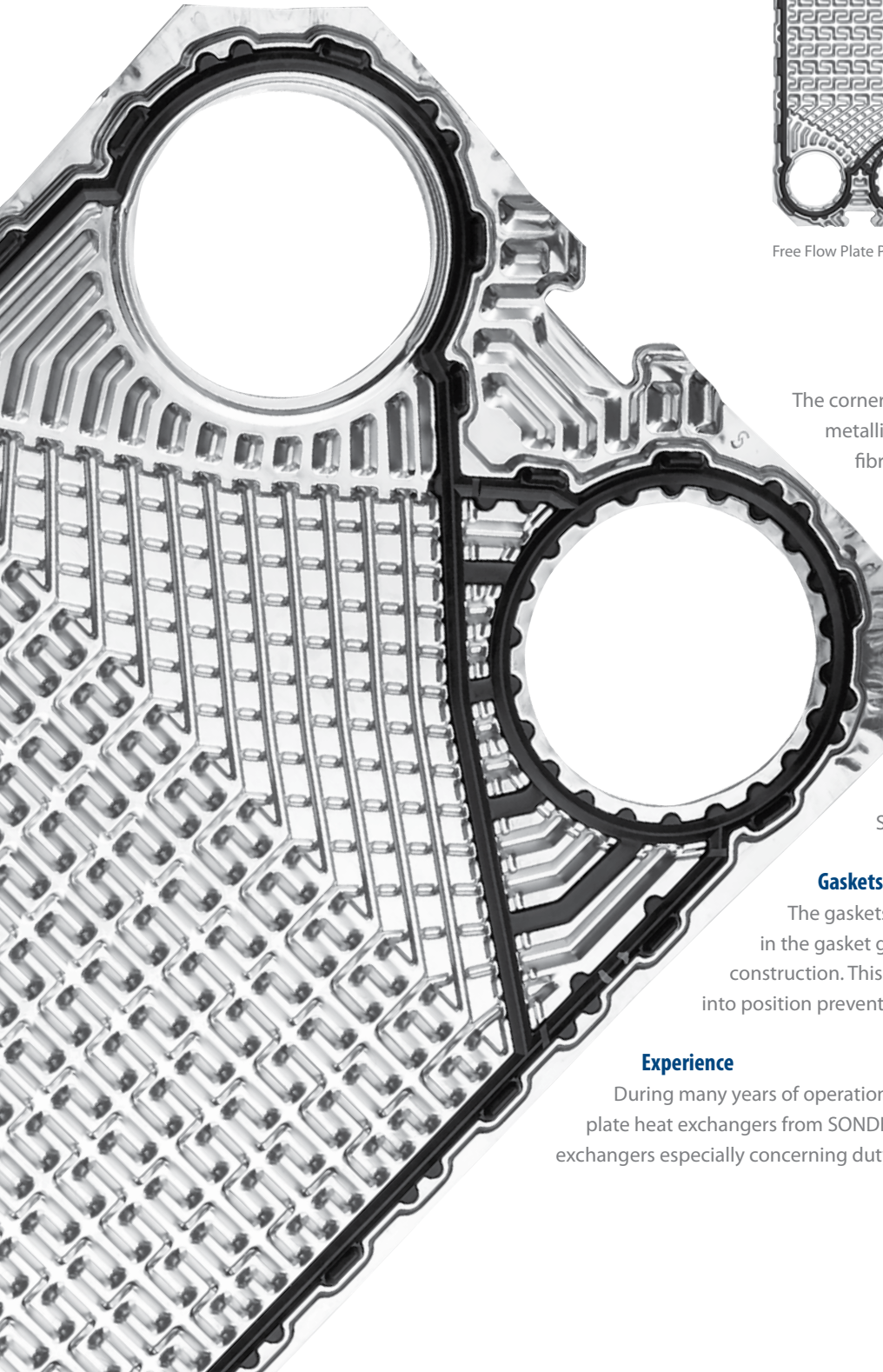




The slim design of the plates creates a high thermal efficiency gaining high "thermal length". This often results in a "single pass" solution for solving many tasks, and allows for all of the connections to be located on the head of the frame plate. This makes pipe work easier, as the unit can be opened without removing the pipe work, easy draining, effective CIP-cleaning and the possibility of "backflushing" for cleaning purposes.



Free Flow Plate Programme



The corner hole inlets of the channels are without any metallic contact points. This ensures no place for fibres etc. to "hang" or collect. In addition the inlet area is designed for optimal turbulent flow, resulting in high thermal efficiency and therefore a lower number of heat transfer plates in the solution.

The Sondex Free Flow product range starts with our smallest model SF25A and steps up to our largest model SF229, which can manage fluid range up to 1,400,000 l/h. For applications in the Food industry Sondex can supply the types SF25A and SF53 with stainless steel clad frame.

Gaskets

The gaskets are the Sonder-Lock type and firmly located in the gasket grooves. Special devices are used in the gasket construction. This ensures that plates and gaskets will be "locked" into position preventing any misalignment.

Experience

During many years of operational experience, we have proved that Free Flow plate heat exchangers from SONDEX A/S surpass other free flow or wide gap exchangers especially concerning duty and operation safety.

It is wise to choose **SONDEX** solutions!

Gasketed Plate Heat Exchangers

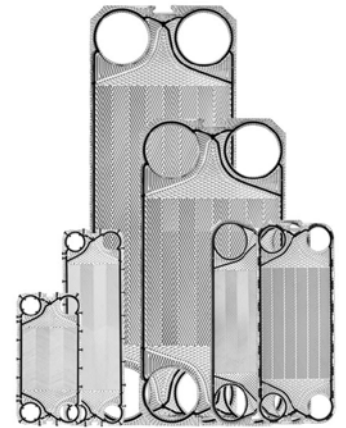
Gasketed plate heat exchangers are applicable in many areas for heating/cooling i.e. in the food industry, the chemical area, by heat recovery, in HVAC units and many other areas.

Pressure rating up to 25 bar.
Temperature up to 200°C.



Semi-Welded Plate Heat Exchangers

Useful for high temperatures and high pressure applications as well as for refrigeration and aggressive products. The plate pack is built up in plate cassettes (2 plates welded together) and can be easily disassembled and cleaned on the secondary side.



Brazed Plate Heat Exchangers

Contrary to the traditional plate heat exchanger, the brazed plate heat exchanger does not contain rubber gaskets and can thus operate continuously at temperatures from minus 180°C up to plus 200°C. The operating pressure can be as high as 30 bar.



Plate and Shell Heat Exchangers

This heat exchanger works in the same way as an ordinary tubular unit. However, it is more efficient because plates have been used instead of tubes. The plates are laser/TIG welded to form a plate pack which is then mounted inside a traditional cylindrical shell.

Pressure rating: PN16/PN25.
Max temp.: Up to 250°C.



Well-known for:

- High operation safety
- Exact energy transfer
- Low running costs
- Environmentally acceptable
- Energy saving

Gasketed Plate Heat Exchangers

Semi-Welded Plate Heat Exchangers

Brazed Plate Heat Exchangers

Plate and Shell Heat Exchangers



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