

Danfoss | SondBlock heat exchanger

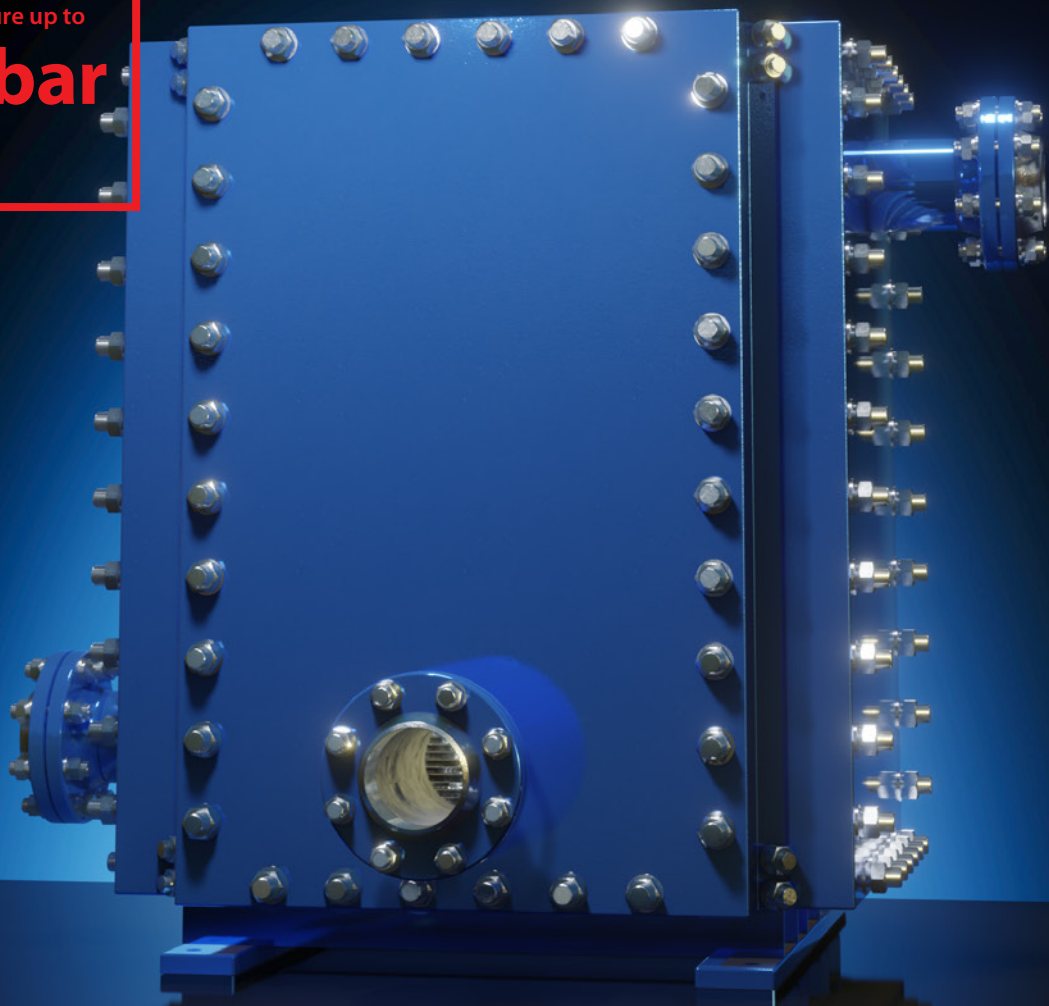
Robust and durable block heat exchangers offer maximum performance

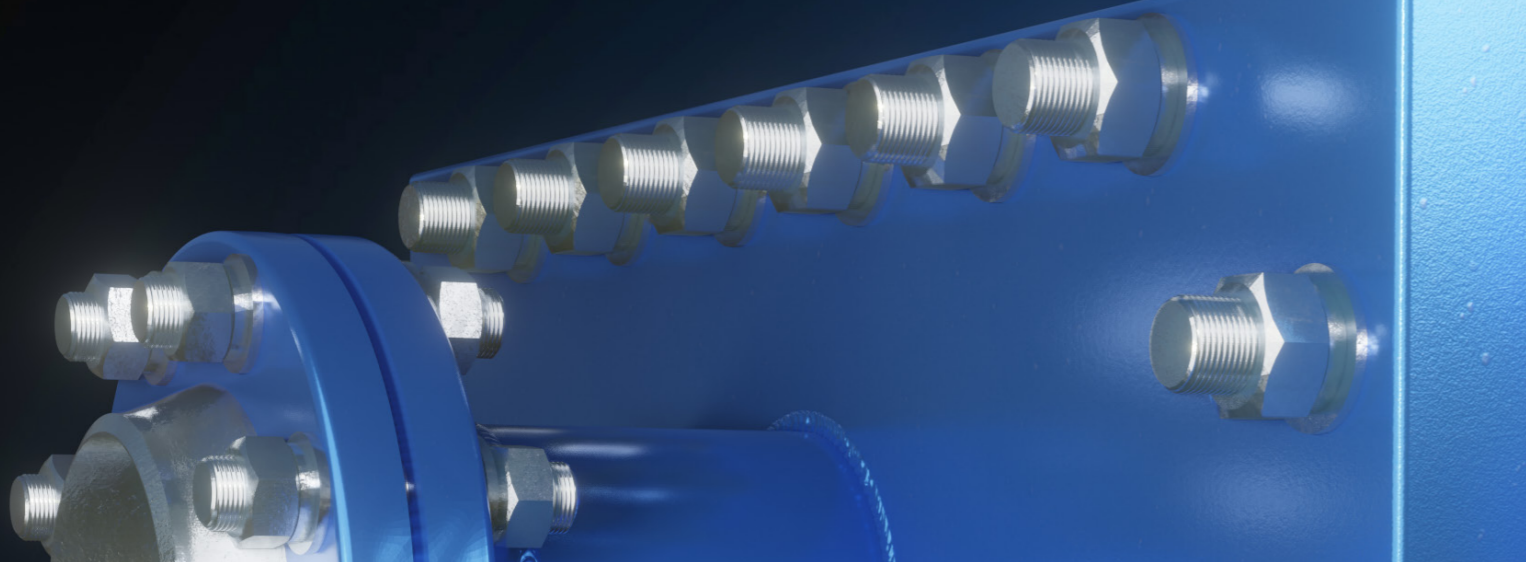
SONDEX® SondBlocks are welded heat exchangers that utilize plate technology in a cross-flow design. They are compact and robust and very well-suited for high temperature and high pressure applications, as the plate pack features no gaskets. Maintenance and cleaning is less time consuming and space demanding as all the panels on the heat exchanger can easily be removed making the plate pack accessible from all sides.

Block heat exchangers mark the beginning of a new era of efficient heat transfer, even for the most challenging applications, making shell and tube heat exchangers obsolete.

Capable of handling
high temperatures
and pressure up to

25 bar





Rising to the challenge

The core of the SondBlock is a fully welded plate pack. The corrugated plate pattern creates a turbulent flow that diminishes the risk of fouling considerably and greatly improves the performance of the heat exchanger, making SondBlock heat exchangers an excellent choice for extremely challenging duties.

Plates also provide a more even flow distribution and much better surface utilization, especially if the heat exchanger needs to be a multi-pass solution.

Maximum performance for challenging duties

The SONDEX® SondBlock heat exchangers (SB/SBL) are designed to handle challenging applications that require good thermal performance and involve aggressive media, high temperatures, and high pressure. Typically, large and ineffective shell and tube heat exchangers are used to handle such applications.

However, SondBlock heat exchangers offer better thermal performance and other distinct advantages over their shell and tube counterparts.

Besides cost, size, and performance, SondBlock heat exchangers are much less prone to fouling and clogging and only require occasional inspection and cleaning.

Suitable media and processes

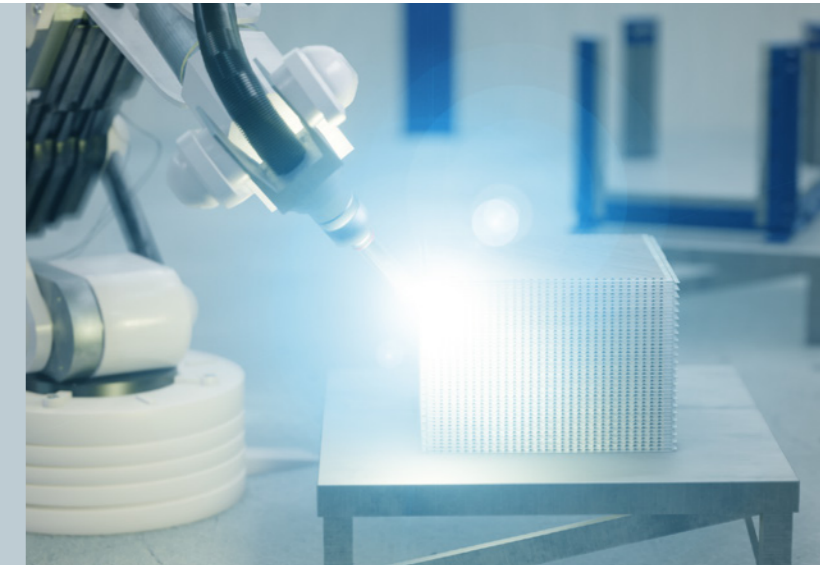


Typical/common industries



Constructed for challenging applications

- Safe operation with aggressive media, high temperatures, and high pressure
- Robot-precision ensures uniform, high-quality laser welding of the plate pack
- Fully welded plate pack without gaskets



Robust and durable

- Welded plate pack able to handle aggressive and fouling media on both sides
- Suitable for applications up to 300 °C / 25 bar (572 °F / 360 psi)

High performance, easy maintenance

- Fast and easy access to the plate pack for inspection or cleaning through removable side panels. Ease of access is much greater compared to other types of heat exchangers
- Increased production output thanks to the extended uptime of the heat exchanger due to very low maintenance and service requirements



Heat transfer specialists through and through

At Danfoss, we have specialized in the development and manufacturing of heat exchangers. We do all our own tooling and have our own hydraulic presses in-house for our plate production. This closed-loop production makes it easier to control and monitor the quality.

Developing optimized solutions is a core value of our design philosophy and we use our deep application knowledge and input from customers to create second-to-none heat exchanger solutions.

We can configure our heat exchangers to match the exact requirements of your application, thanks to our extensive plate range. This allows us to deliver a powerful solution that provides reliable, unmatched heat transfer while lowering the energy consumption of your connected systems.



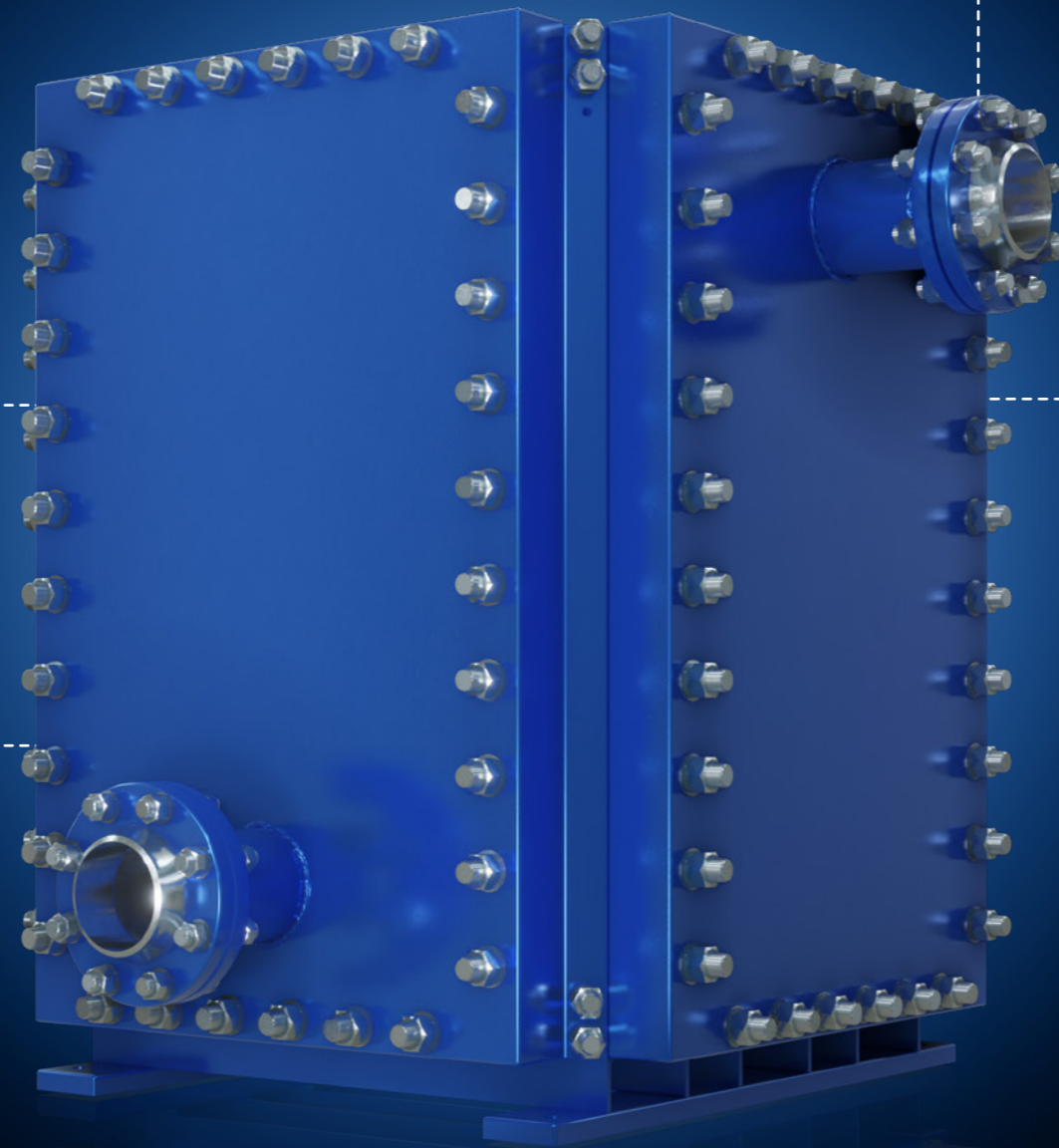
Deep application knowledge

- We use our deep application knowledge to configure each heat transfer solution and match the exact requirements of your application and systems
- We take your data into account when we dimension the heat exchanger to optimize your solution for maximum efficiency and energy utilization



Versatile product portfolio

- We have developed a very versatile product portfolio in close cooperation with our customers, offering solutions for any application
- We have different plate designs for different duties to ensure optimal heat transfer in all solutions
- All our SondBlocks are available in vertical or horizontal positions depending on the demanded process



The most efficient heat transfer

- Plate technology provides a high heat transfer coefficient that reduces the needed surface area
- Perfected flow distribution and corrugated plate patterns are key in generating the optimal turbulent flow
- Proven thermal performance



Sturdy construction and high quality

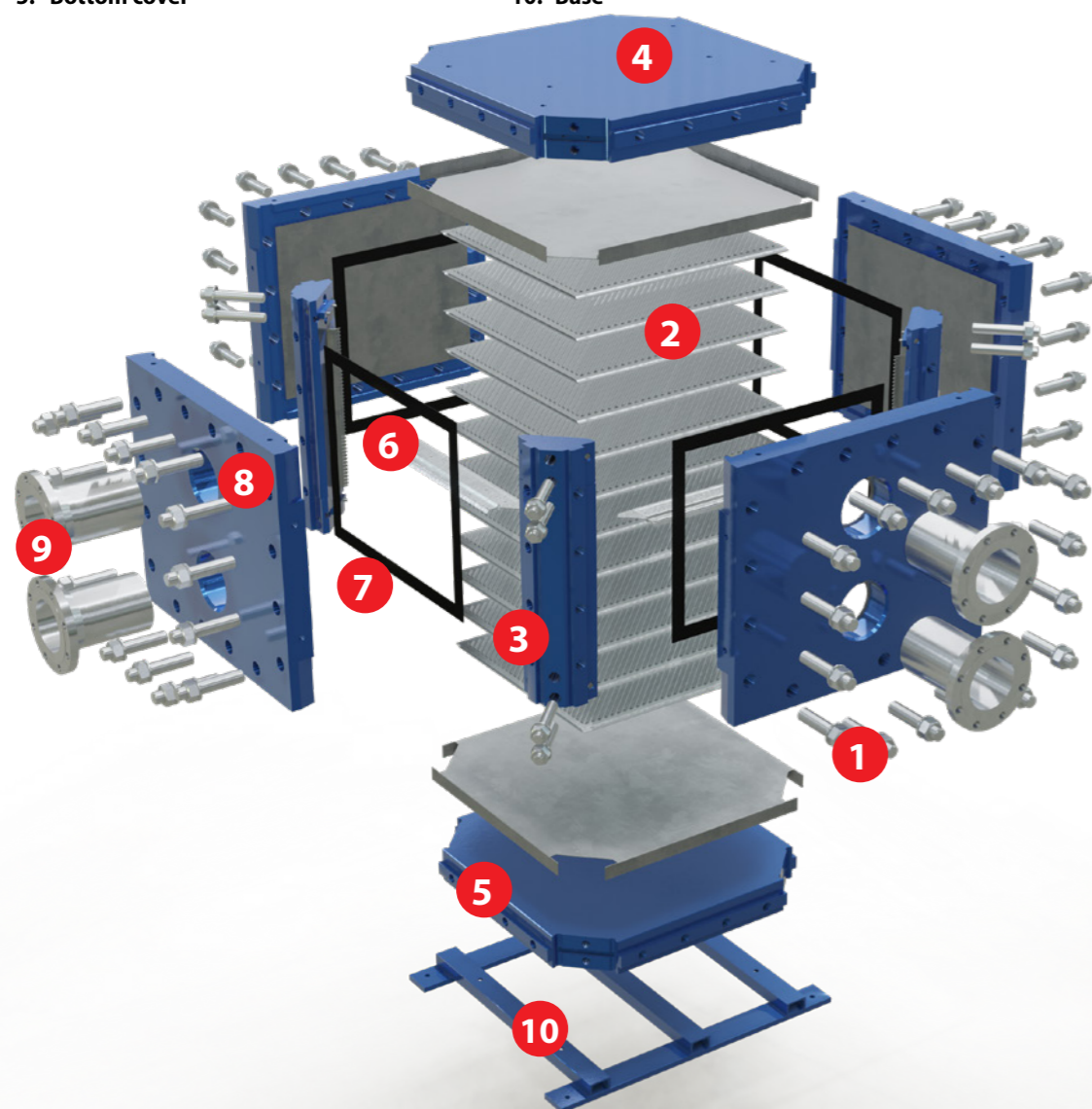
- Automated laser cutting and welding with robot-precision produces consistently high quality
- Safe operation with low internal media volume and minimal risk of leakage
- Exit-control to ensure only high-quality products reach our customers

Technical overview

SondBlock Type	SB300	SB500	SB750	SB800	SB1200
Max. working pressure	25 bar by default (360 psi). Higher pressures possible on request				
Max. operating temperature	300 °C (572 °F). Higher temperatures possible on request				
Min. operating temperature	-20 °C (-4°F). Lower temperatures possible on request				
Position	Vertical or horizontal				
Connection sizes	From DN50 to DN1000 (From 2" to 40")				
Connection types	According to all known standards				
Plate material	Stainless steel EN 1.4404 (AISI 316L), Stainless steel EN 1.4401 (AISI 304L), Stainless steel EN 1.4547 (SMO 254), Titanium. Other materials available on request				
Frame material	Stainless steel EN 1.4404 (AISI 316L), Carbon Steel P355GH. Other materials available on request				
Sealing material	PTFE, Graphite. Other materials available on request				
Frame painting specification	Painting available for corrosion categories C2L, C4M, C5M				
Design standards	PED, ASME, TR TS. Other approvals available on request				

Design overview

1. Stud bolts (including washers and nuts)
2. Welded plate pack
3. Column
4. Top cover
5. Bottom cover
6. Flow distributors
7. Cover sealing
8. Side cover
9. Flange connection
10. Base



SONDEX® - a quality heat exchanger brand from Danfoss

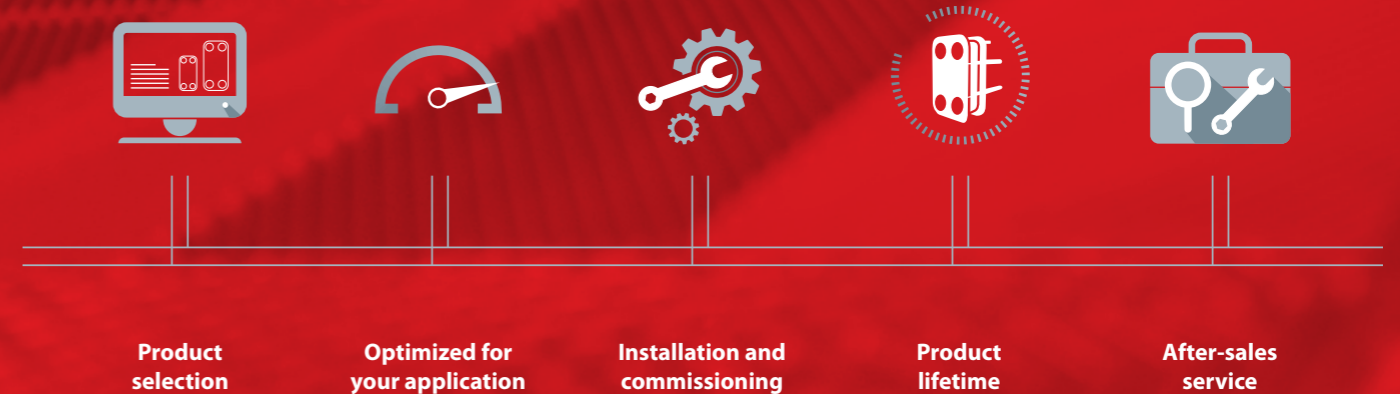
Sondex and Danfoss join forces

In July 2016, Danfoss acquired full ownership of Sondex. This step marked the merger of two strong players creating an even more powerful and agile heat exchanger partner.

Transition into a product brand

In 2018, Sondex became SONDEX® - a quality heat exchanger brand of Danfoss. Customers can now benefit from one-stop shopping and the powerful infrastructure of Danfoss, as well as the heat transfer expertise of SONDEX®.

Value throughout the entire project



Danfoss is with you every step of the way - from selecting the right product for you, to after-sales service.

Welcome to our world of heat exchangers

We have one of the most extensive heat exchanger (HEX) product portfolios on the market and we offer optimized heat transfer solutions for a wide range of applications and industries.

Want to know more?

Visit heatexchangers.danfoss.com to learn more about our heat exchanger solutions.

Gasketed HEX

- Standard plate HEX
- Semi-welded plate HEX
- Free Flow plate HEX
- Sanitary plate HEX
- Evaporators
- Condensers

Welded HEX

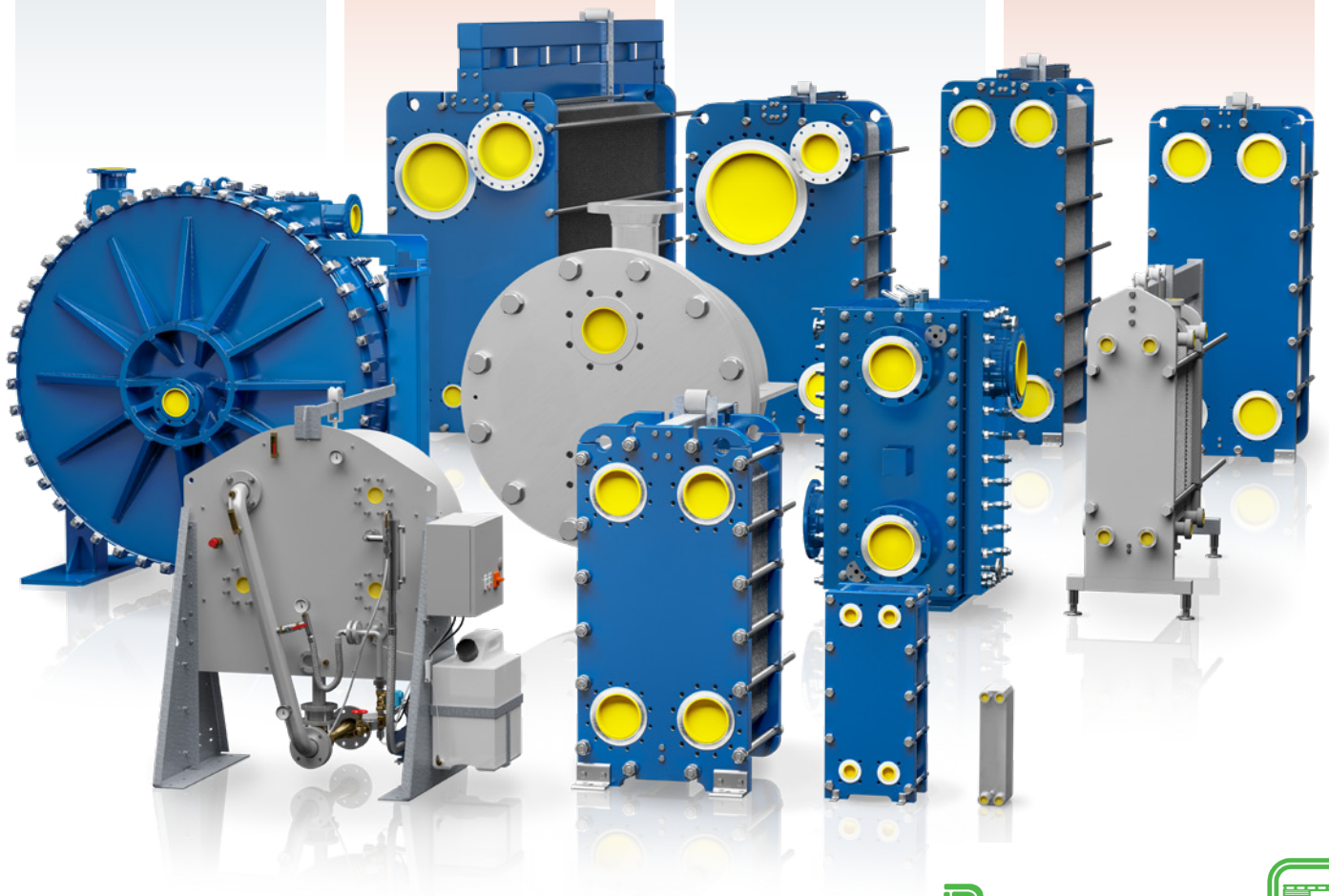
- Full welded plate HEX
- Plate and shell HEX
- SondBlock HEX
- Spiral HEX

Brazed HEX

- Fishbone brazed HEX
- Micro Plate™ brazed HEX

Fresh Water Distillers

- Single-stage FWD
- Multi-stage FWD



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