

Processor



ENGINEERING
TOMORROW

Danfoss

Danfoss | Plate and shell heat exchanger

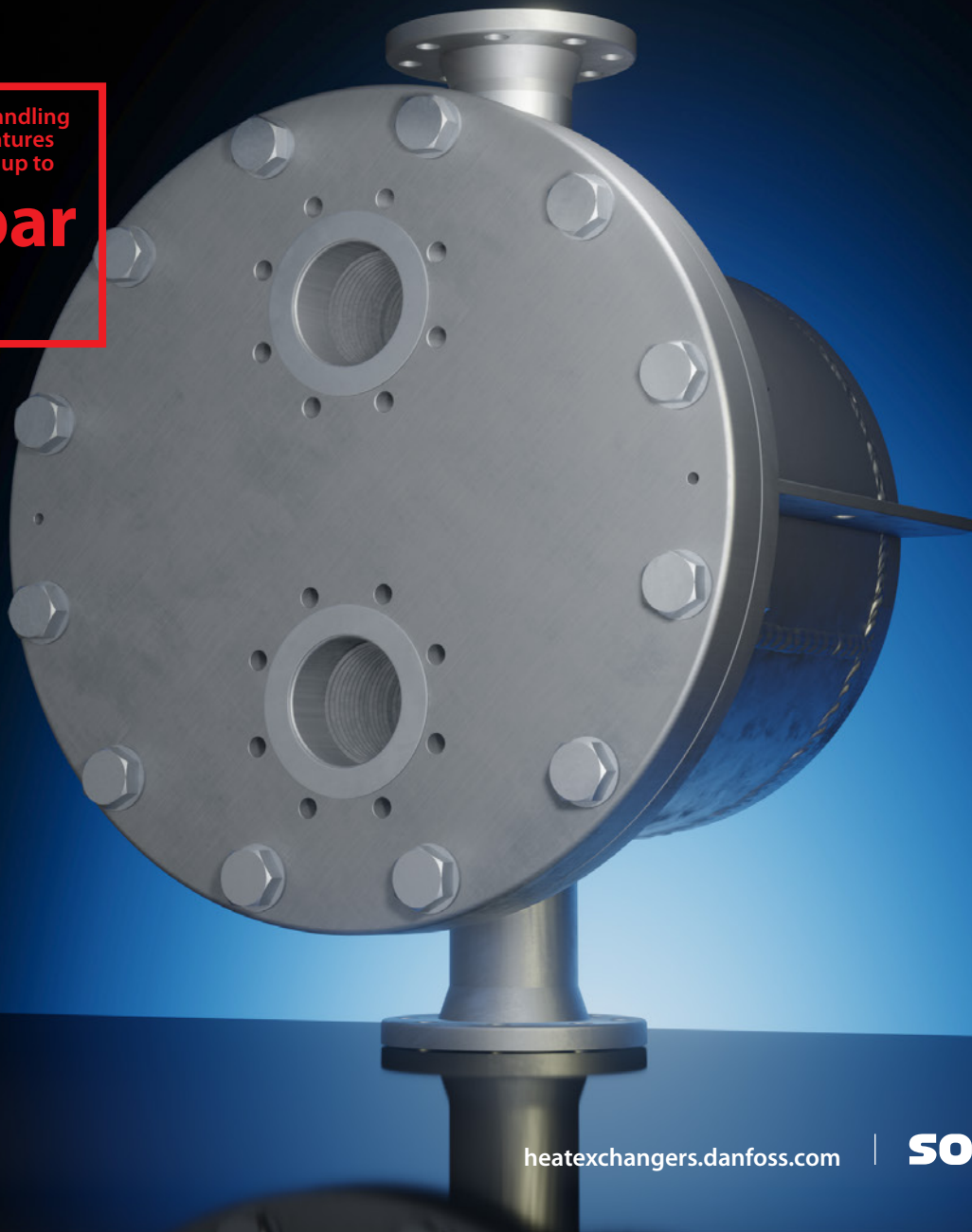
Maximum performance with compact welded heat exchangers

SONDEX® SPS plate and shell heat exchangers are the perfect solution for high pressure and high temperature applications thanks to their fully welded plate packs. The leak-proof construction makes them a great fit for steam heating and condensing applications, as well as handling aggressive media on the plate side.

The SONDEX® SPS heat exchangers offer a small footprint and great thermal performance that exceeds the capabilities of shell and tube heat exchangers.

Capable of handling
high temperatures
and pressure up to

40 bar



heatexchangers.danfoss.com

SONDEX®

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.



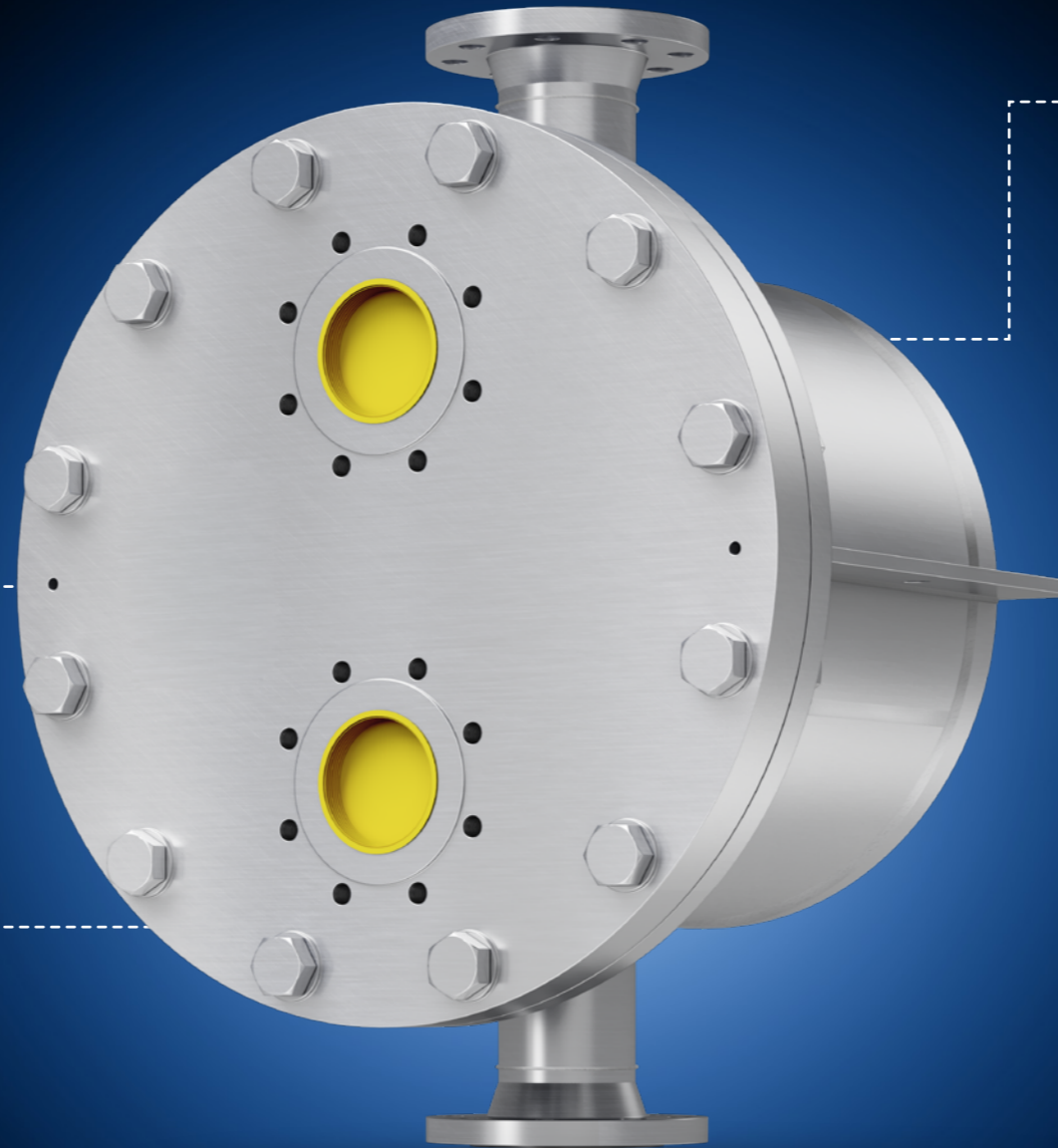
Deep application knowledge

- 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



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

SPS Type	SPS22	SPS 72	SPS 179	SPS 400	SPS 646	SPS 647	SPS 648	SPS 1200	SPS 1201	SPS 1203
Max. working pressure	Bolted: 25 bar by default (360 psi) / fully welded: 40 bar by default (850 psi)									
Max. operating temperature	Bolted: 250 °C (482 °F) / fully welded: 400 °C (582 °F)									
Min. operating temperature	-10 °C (14 °F)									
Plate side connection, DN	25 (1")	50 (2")	100 (4")	100 (4")	150 (6")	150 (6")	150 (6")	300 (12")	400/150 (16"/6")	300 (12")
Shell side connection, DN	25-50 (1"-2")	50-100 (2"-4")	50-200 (2"-8")	65-250 (3"-10")	100-250 (4"-10")	100-250 (4"-10")	100-250 (4"-10")	100-300 (4"-12")	100-300 (4"-12")	100-300 (4"-12")
Plate material	Stainless steel EN 1.4404 (AISI 316L), Stainless steel EN 1.4401 (AISI 304L), Titanium. Other materials available on request.									
Shell material	Carbon Steel P355GH, Stainless steel EN 1.4404 (AISI 316L), Stainless steel EN 1.4401 (AISI 304L). Other materials available on request.									
Sealing material for bolted models	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									
Number of passes	Up to 5									

Working principle

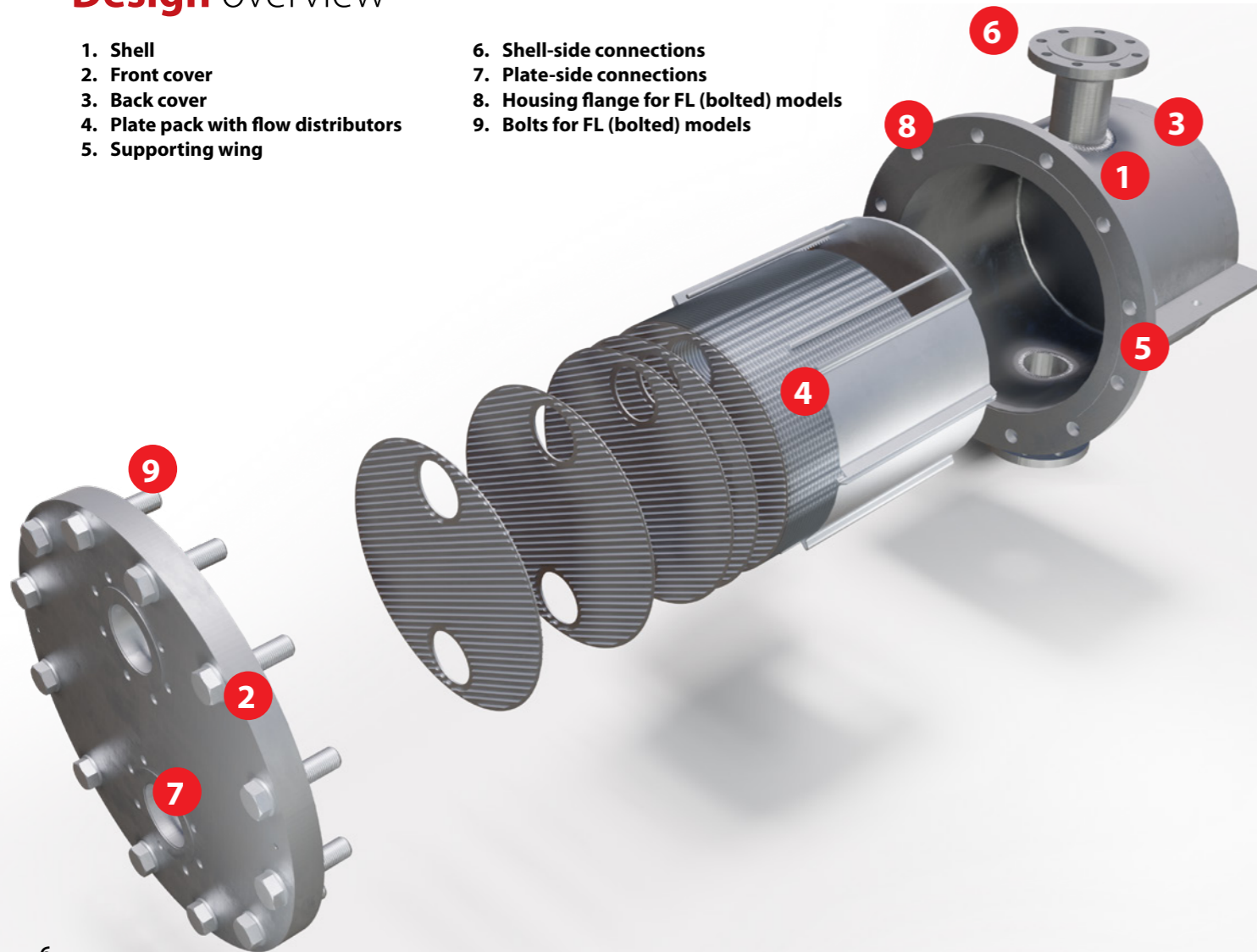
Learn more about the working principle of SONDEX® SPS heat exchangers. Click the button or scan the QR-code to watch the video on YouTube.



Design overview

1. Shell
2. Front cover
3. Back cover
4. Plate pack with flow distributors
5. Supporting wing

6. Shell-side connections
7. Plate-side connections
8. Housing flange for FL (bolted) models
9. Bolts for FL (bolted) models



SONDEX® - a quality heat exchanger brand from Danfoss

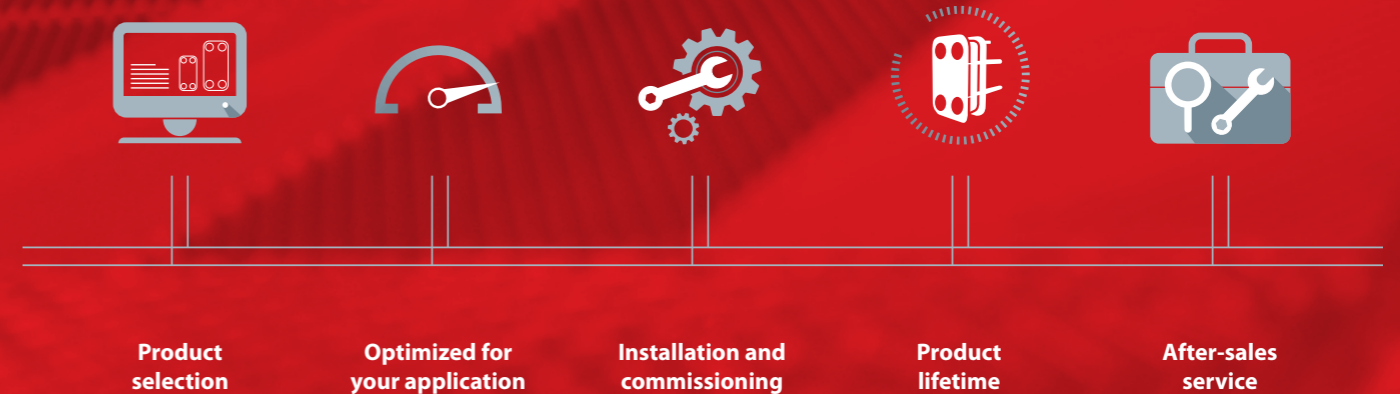
Sondex and Danfoss join forces

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

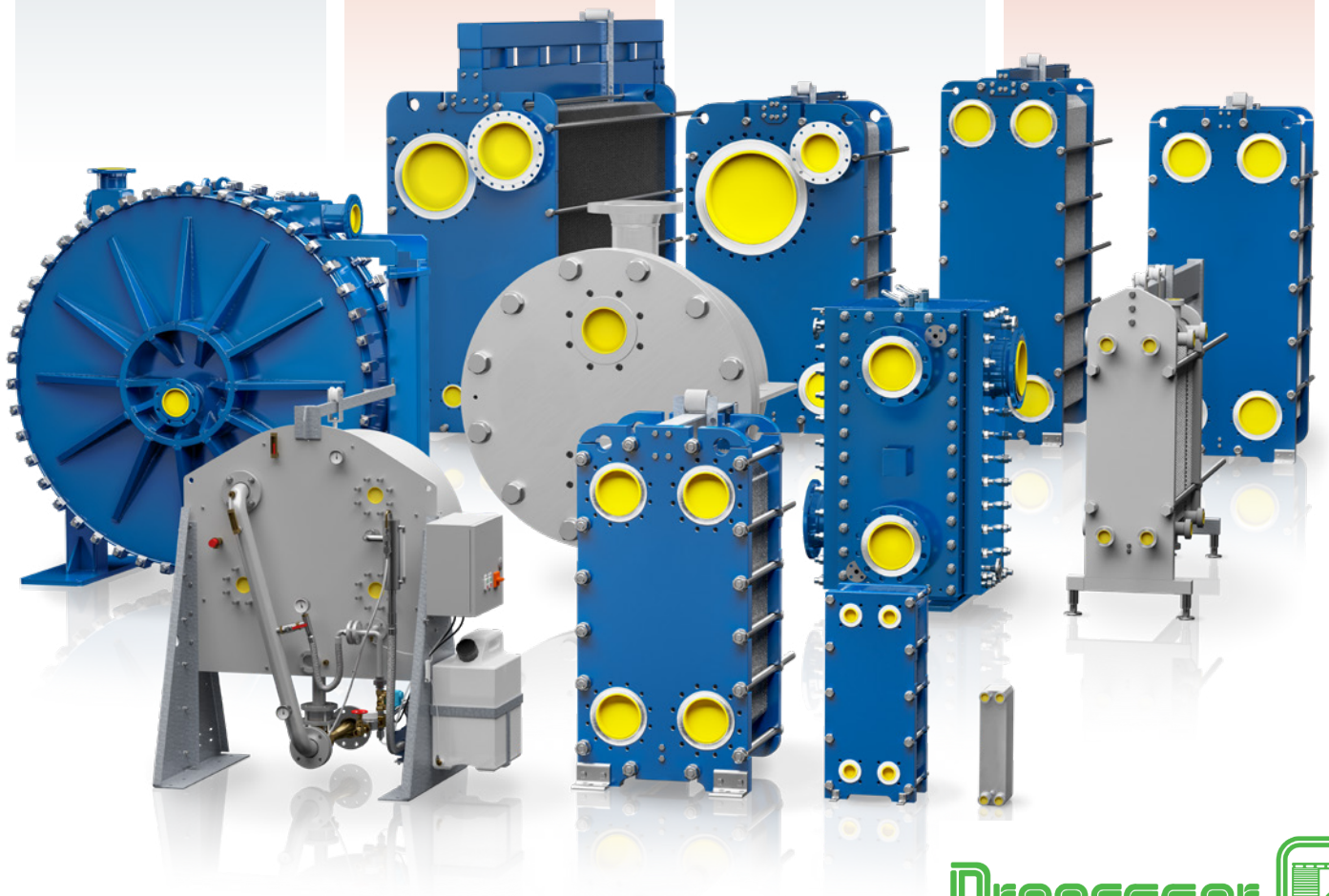
- Full welded plate HEX
- Plate and shell HEX
- SondBlock HEX
- Spiral HEX

Brazed HEX

- Fishbone brazed HEX
- Micro Plate™ brazed HEX

Fresh Water Distillers

- Single-stage FWD
- Multi-stage FWD



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