

ENGINEERING
TOMORROW

Danfoss

Case study | SONDEX® Heat Exchangers

Danfoss ensured the **right pool** **temperature** at the **right time**

In December 2017, the European Swimming Championships took place in the brand-new Royal Arena in Copenhagen. The arena normally hosts major names from the international music scene but for five days of competition, it was transformed into an international swim stadium.

When some of the greatest European athletes compete, the difference between winning a gold medal and disappearing into oblivion lies in the detail: from the athletes' form on the day to the facilities in the arena.

So, when the Royal Arena was transformed into a swim stadium, nothing could be left to chance – and that is why the Danfoss product brand SONDEX® was required to ensure that the water temperature was kept at a constant 26° Celsius.

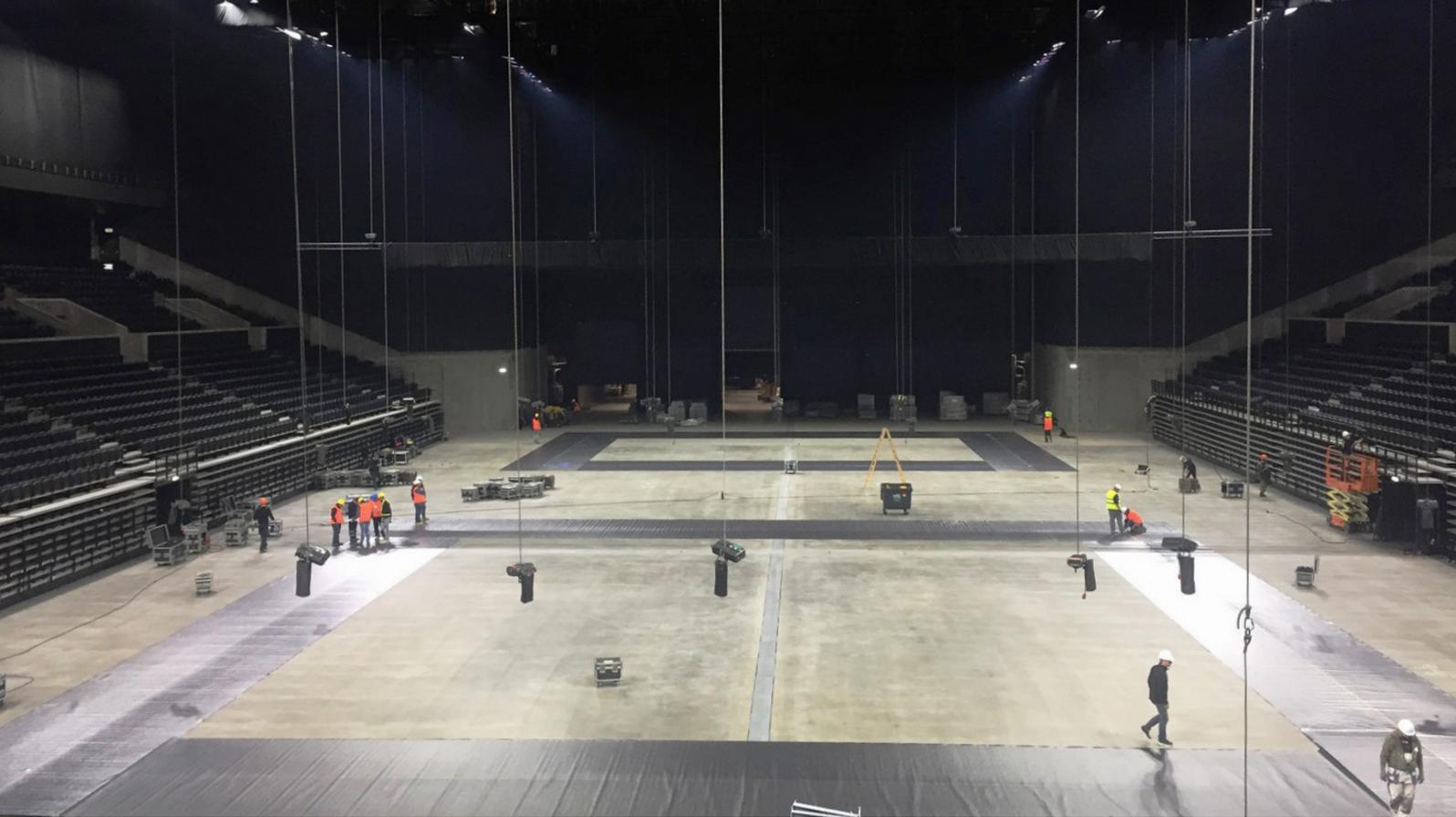
However, this was not the original plan. In this case study, we will turn back time and provide an insight into how and why Danfoss was called in by the installer to offer rapid support – and in doing so, how potential disaster was averted.

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SONDEX® S19IG
plate heat exchangers
heated the water
from 10 - 26° Celsius

heatexchangers.danfoss.com

SONDEX®



From Metallica to **swimming caps**

Since its opening in February 2017, the Royal Arena has hosted numerous international stars like Drake, The Weeknd, and Metallica. But for five days in December 2017, headbanging and bawling was replaced by swimming strokes and caps.

In only 13 days, the arena went through an incredible transformation from concert venue to swimming arena – and was ready to host its first-ever sports event: The European Swimming Championships. However, in the run-up to the event, the installers faced a stumbling block.

SONDEX® Sonder Safe Plates to the rescue

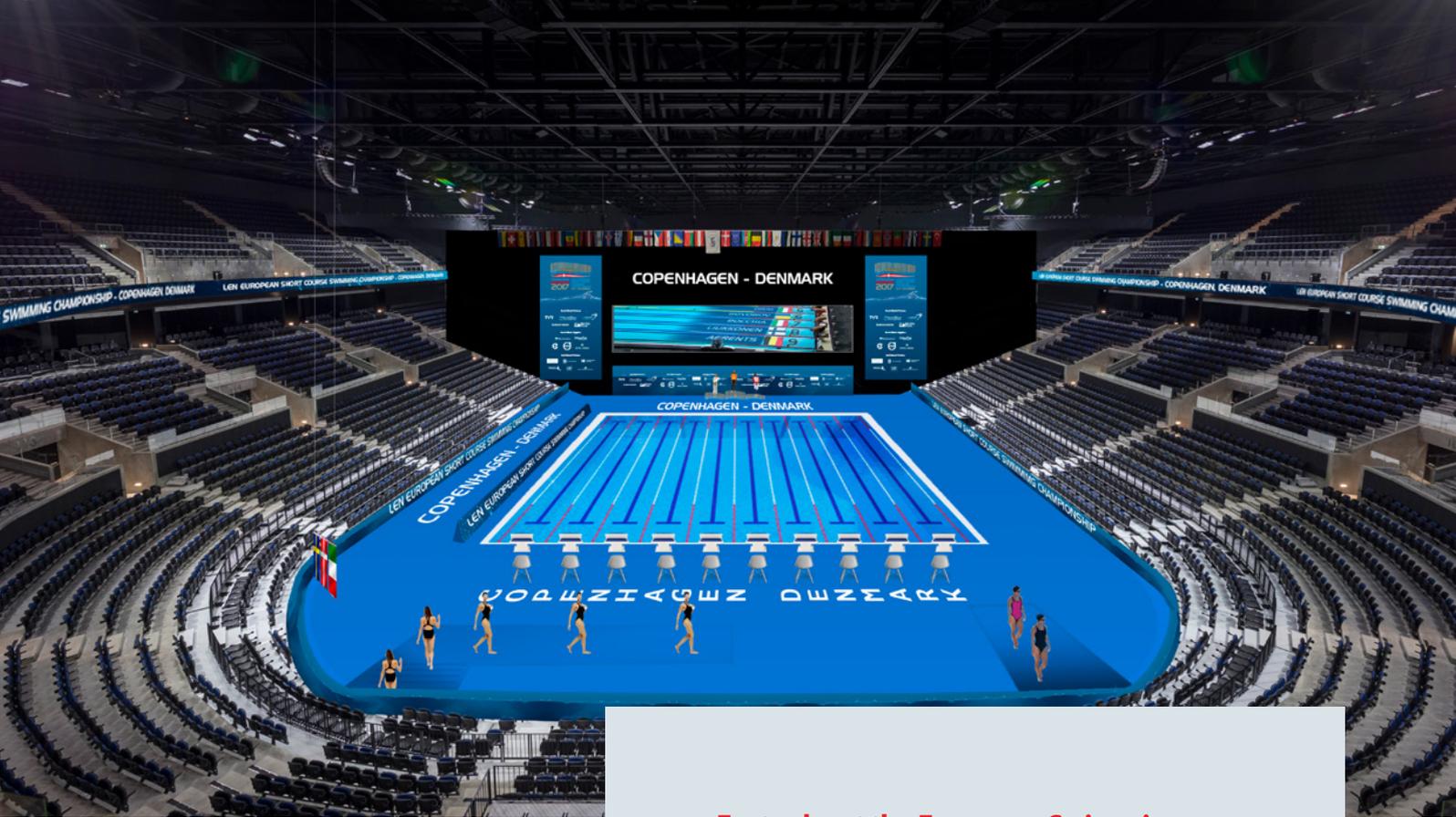
Two weeks prior to the competition, HOFOR – Greater Copenhagen Utility – which has more than 1,100 employees and supplies 1.1 million customers, could not approve the heat exchangers delivered for the championships by their original supplier. So, at the eleventh hour, just before the installer drowned in difficulties, they reached out to the Danfoss product brand SONDEX® for support. And the problem was solved.

“Despite the time pressure, we managed to find a solution with SONDEX® Sonder Safe Plates thanks to

a great team effort and fast action from the installer Tommy Kjejr, consulting engineer Henrik Holmsgaard, and Carsten Nielsen from HOFOR,” says Hans Dewald-Weidich, Consultant at Sondex, Danfoss.

The SONDEX® plate heat exchangers were installed to keep the water temperature in the two temporary pools at 26° Celsius – an interesting challenge on its own, but in this case the real challenge was the chlorination of the water, which placed a great demand on the SONDEX® solution.

Fortunately, the SONDEX® Sonder Safe system is the perfect set-up for heat transfer with chlorine as it consists of two thin flow plates pressed together. This allows any potential leakage of the chlorinated liquids to be seen from the outside to prevent potential harms.



Despite the time pressure, we managed to find a solution with SONDEX® Sonder Safe Plates thanks to a great team effort.

Hans Dewald-Weidich,
Consultant at Sondex, Danfoss



Faster delivery than expected

As previously mentioned, Danfoss was called in on a very tight deadline. But thanks to the fantastic teamwork and dedication of all parties involved, the plates arrived three days earlier than expected.

The fast delivery not only helped the installer deliver on their promise, but also ensured excellent conditions for all the fantastic swimmers at the European Championships.

Facts about the European Swimming Championships 2017

- The first sports event to be held in the brand-new Royal Arena, Copenhagen
- 35,000 swimming fans attended the event, which took place from December 13-17, 2017
- 700 swimmers from 45 countries participated
- The two temporary pools contained 2.1 million liters of water in total
- It only took 13 days to transform the Royal Arena into an international swim stadium

Facts about the SONDEX® solution

- Two SONDEX® S19IG plate heat exchangers with double thin flow plates heated the water in the two temporary pools from 10 - 26° Celsius
- District heating water was led through one side of the heat exchanger. The chlorine-containing pool water was directed in countercurrent on the secondary side
- Set up and running in less than two weeks



Want to learn more about the best-in-class plate heat exchangers?

At Danfoss, we help professionals all over the world reduce energy consumption and increase heating efficiency with our wide range of plate heat exchangers.

If you would like to know more about how we can help you succeed, please visit heatexchangers.danfoss.com or contact your local sales representative.

Facts about SONDEX® heat exchangers

Sondex is the leading global market player in heat transfer technologies and offers the world's most extensive product range in plate heat exchangers with connections from 25mm to 650mm in diameter.

SONDEX® plate heat exchangers offer both standard solutions and custom-made heat exchangers adapted for flow, pressure, and temperature in transmission and distribution grids.



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