CASE STORY

TELE2 ARENA – POWERFUL TECHNOLOGY FOR A MODERN VENUE

Image source: SGA Fastigheter AB

The awarded-winning Tele2 Arena in the Swedish capital of Stockholm can easily host both major concerts and all kinds of sports competitions. Powerful brazed plate heat exchangers (BPHEs) from SWEP allow for a swift and reliable laying of good-quality ice for winter sports events.

CHALLENGE_FEEICIENCY

SWEP
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Opened in August 2013, the Tele2 Arena in Stockholm is one of Sweden's most modern multi-venues and was awarded the prize of "Best Arena" in the 2014 Stadium Business Awards, this in competition with global arenas such as Madison Square Garden in New York and Wembley in London. It offers free high-quality Wi-Fi, 600 digital screens, Stadium Vision technology, a retractable roof and a transparent façade. With a capacity of 30,000-40,000 spectators depending on venue, the Tele2 Arena requires top-notch technology to switch between different kinds of events.

The property owner SGA Fastigheter AB sought to improve the arena's ability to change the climate and surface depending on the sport to be practiced, for example to transfer the football pitch to an ice rink in a quick and reliable way. The customer was very clear about the temperature requirements. With a mean temperature difference of 1°C, or even lower if possible, SGA wanted shorter time for laying the ice and better ice quality. This demanded a lower system temperature and with the existing ethanol mixture in the system there would be a risk for freezing in the chillers. To solve this issue there was a need for heat exchangers to separate the chiller circuit with a small amount of ethylene glycol. SGA evaluated several different options among gasket plate heat exchangers, but finally decided to go for the highest capacity brazed plate heat exchanger on the market from SWEP.

This solution saved the destruction of the total volume of ethanol mixture. "The temperature transition had to be possible without major changes to the system, such as the replacement of ethanol and that the installation could be done in the available utility room", says Daniel Docekal, Product Development Engineer at SWEP. "We managed to help them with this with our unique technology so that they could maintain the system and sagging dispose of a large amount of ethanol."

With the largest brazed plate heat exchanger on the market the B649, SWEP is unique in offering the BPHE technology for even the largest installations. The B649s offer many advantages over the traditional gasket plate heat exchangers which are normally used within these types of applications, such as financial and environmental savings through greater energy efficiency, compact design and reduced maintenance.

For the Tele2 Arena and SGA, SWEP offered 4 SP units of the powerful BPHE B649H/SP 840 with a total cooling load of 2600 kW (740TR). The units were delivered through a door opening of 90 cm (36 inches) within an hour, and then installed in a modular mode. The compact BPHEs were easily positioned with a hand truck in one hour. "It was the product's unique values, such as how easy it is to install, environmental benefits, and SWEP's ability to deliver quickly that determined our choice of supplier", says Conny Håkansson, Head of Real Estate Operations at SGA Fastigheter AB.