CASE STORY

Powerful and cost-effective heat exchangers bring 34 percent higher capacity to Glostrup's new energy transfer station

More power and less maintenance combined with reliable operation. The new energy transfer station in Danish Glostrup have found a cost-effective solution with two of SWEP's B649 brazed plate heat exchangers.

CHALLENGE_FEEICIENCY

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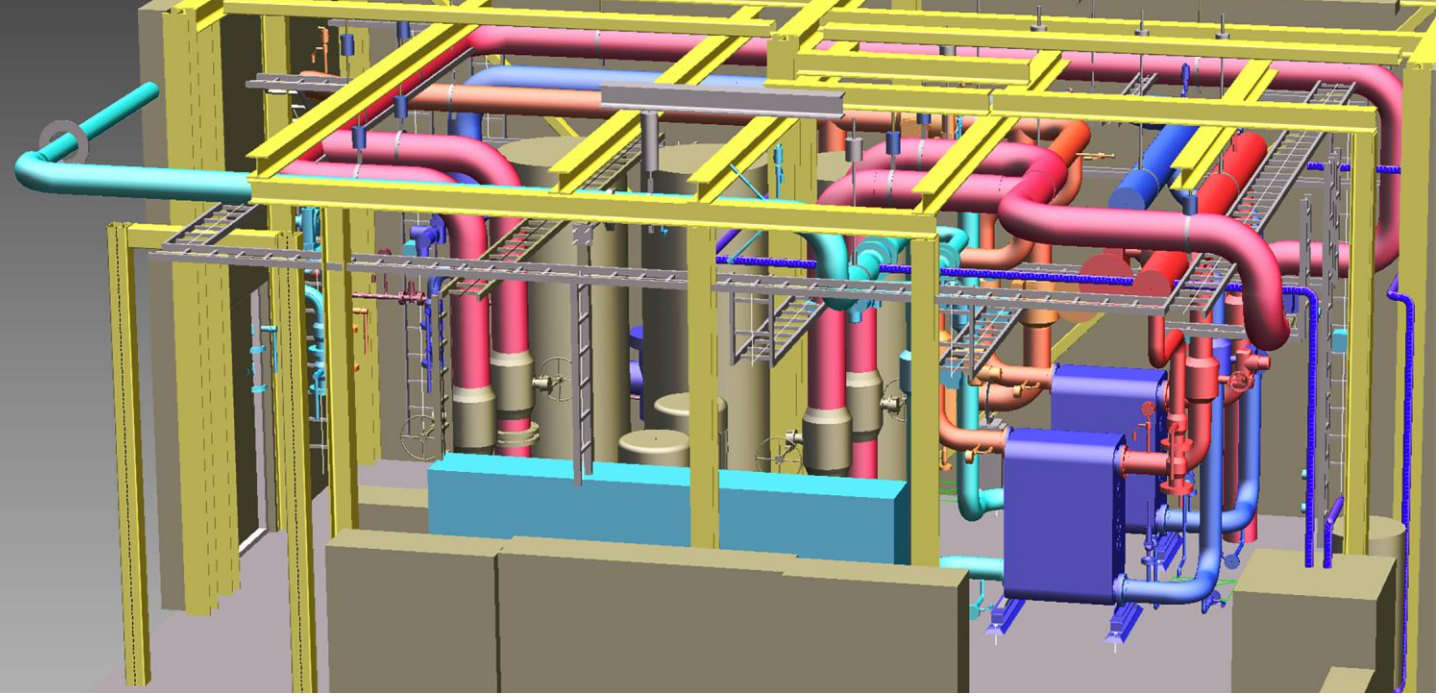


Installation at Ejby Mosevej 219, Glostrup, Denmark. Source: Damgaard AS

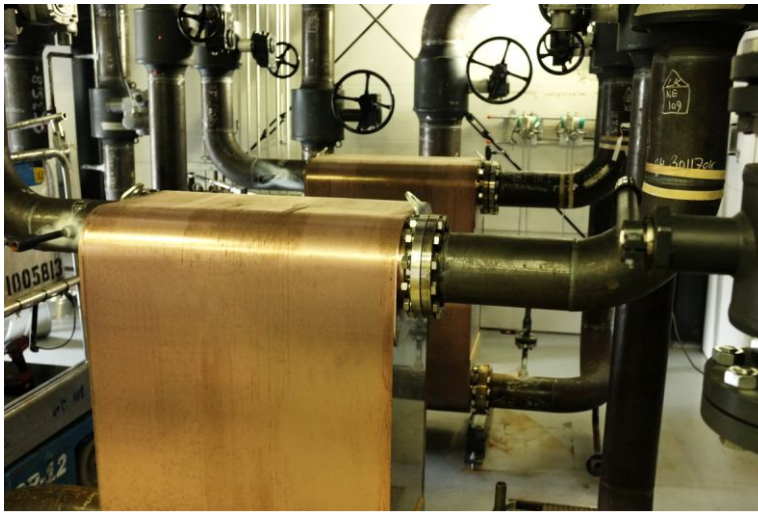
VEKS (Vestegnens Kraftvarmeselskab I/S) is a Danish transmission company that supplies heat to 21 local district heating companies in Vestegnen, Copenhagen. These then sell the energy to private consumers, companies and public institutions. VEKS was founded in 1984 to utilize surplus energy from combined heating and power stations and from waste incineration. VEKS meets the heating and hot water needs of 170,000 families. The transmission network includes a large number of pumping and energy transfer stations to ensure reliable distribution and operation.

When VEKS commissioned Damgaard A/S to build a new energy transfer station in Glostrup, brazed plate heat exchanger (BPHE) technology was their preferred choice. VEKS already has good experience with BPHEs, and considers them to provide safe operation and major savings on maintenance. In the past, however, the maximum capacity of approx. 4-6 MW has been a limitation.

The scope for the Glostrup site was to install 12 MW with sufficient redundancy to guarantee 2/3 (67%) capacity in the event of critical component failure. The initial specification called for a cluster of three heat exchangers plus pumps and valves: 2 x 4 MW (67%) + 1 x 4 MW (33%) = 12 MW (100%).

SWEP, keen to promote its high-capacity flagship model B649 BPHE, offered an alternative solution using only two heat exchangers: 1 x 8 MW (67%) + 1 x 8 MW (67%) = 16 MW (134%) installed capacity. It proved to be more cost-effective to install 134% capacity over two heat exchangers than to install 100% over three. Simplified piping and fewer key components such as heat exchangers, pumps, and valves delivered better value for money overall.

Lars Andersen of Damgaard AS (builder and project manager) says that SWEP's model B649 offers unprecedented opportunities to build larger, elegant, and cost-effective energy transfer stations with capacities well above the previous 4-6 MW limit.



Two of SWEP's B649 installed in parallel. Each with 364 channel plates. Design pressure 25 bar at 120 °C and DN150 connections.

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