

## EcoDataCenter sets high standard for sustainability

Data storage is one of the world's fastest growing businesses as cloud storage becomes commonplace. Processing data consumes a great deal of energy and produces a lot of heat, so large-scale data centres need powerful and reliable cooling to ensure optimum running of their IT equipment.



Estimates from various sources suggest that data centres account for between 2 and 5 per cent of global greenhouse gas (GHG) emissions. And cooling systems are responsible for almost 40% of the power consumed in a typical data centre.

Installing and maintaining an efficient cooling system will greatly reduce operational costs and energy use. And key components for many of the best optimised data centres across the world are SWEP Brazed Plate Heat Exchangers (BPHEs).



SWEP B220H as media cooler.

EcoDataCenter, owned by Swedish real estate company Areim, are at the forefront of a new generation of data centers. Their business focus is sustainability, world-class security and performance, and delivering a highly competitive total cost of ownership (TCO). The company has its main site in Falun, northwest of Stockholm, plus two city centre sites in Stockholm and a further two arctic sites in the far north of Sweden.

By combining various services to customers, the company can adapt availability, sustainability and cost efficiency to customers' specific needs. Customers range from Swedish public sector bodies with high security demands through to automotive sector leaders that undertake High Performance Computing (HPC) which require a great deal of data processing power.

Applying high ethical standards across all aspects of its operations,



Examples of different cooling methods of a Data Center.

EcoDataCenter do not take on clients in the Crypto currency business.

Timy Vikström, sales and marketing at EcoDataCenter's Falun operation explains: "In addition to environmental sustainability, EDC is also fully focused and committed to diversity and equality across the organization, applying high ethical standards across all aspects of its business".

The energy used by EcoDataCenter in Falun is 100% renewable, 75% from hydropower and 25% from wind power. SWEP is playing an important role in helping maximise the energy efficiency of the Falun data center, by providing 10 BPHEs from its B220, B320 and B85 ranges, some of these perform a process known as 'free cooling'.

Free cooling involves lowering the air temperature in a data centre by utilising naturally cool water instead of mechanical refrigeration. The ambient outdoor air at manv latitudes and elevations can be considerably cooler during certain seasons and times of the day than the air that is warned by data centre equipment. By filtering and humidifying cooler outdoor air and converting it to a water circuit through a heat exchanger for use inside into the data centre, it is possible to reduce or eliminate the use of mechanical cooling for the majority of operating hours, particularly in drier and cooler climates.

Another application for SWEP BPHEs is heat recovery from the condenser, belonging to the chiller which produce cold water to the low temperature cooling circuit which then will be used to the cool buffer tank, battery room and office A/C. At Falun the BPHEs enable surplus heat of between 30 and 32C to be transported from the data center to nearby Falu Energi & Vatten AB, the municipal utility company, for production of pellets. A future option is to include heat pumps, which would boost the hot water temperature to 90C, suitable for municipality district heating.

EcoDataCenter's drive for sustainable accountability is industry-leading. By taking into account all significant factors affecting the climate, the company is able to prove the Falun site's climate impact, using climate calculations based on the Greenhouse Gas Protocol.

Any downtime in data centre operations is highly detrimental to business operations, so the provision of highly efficient and reliable cooling is a rapidly growing market. And key technologies like SWEP BPHEs are playing a vital role in maximising the efficiency of the industry, now and in the future.



