



Propane Chiller paired with SWEP evaporators deliver sustainable solutions for AC applications

SWEP's range of BPHEs (Brazen Plate Heat Exchangers) provide the perfect evaporator solution for Mayekawa's Propane Chiller, creating a high level of efficiency in Air Conditioning applications and utilizing natural refrigerants in the process.

A term that is currently gaining prominence in the business world today is ESG, which stands for Environmental, Social, and Governance. These issues are considered essential in companies, from the perspective of risk analysis and decision-making. This term is putting issues of extreme importance in the daily life of the business and industrial sectors on the agenda for companies worldwide.

The application of ESG standards by companies has already become a reality in a large part of the world. For almost 40 years, SWEP has been dedicated to efficient and sustainable heat-transfer solutions, which we continue to demonstrate in our products, activities, and ambitions. In recent years, we have made some changes in how we think about sustainability. We now embrace ESG as a framework for measuring, reporting, and shaping the way we work across the globe.

Mayekawa has also put a focus on our environment and has five answers to more sustainable refrigeration as part of their sustainability focus. All of their thermal solutions are built on five natural refrigerants; ammonia, carbon dioxide, water, hydrocarbons, and air. By committing to these environmentally-friendly approaches, they help to support sustainable development, eliminate ozone layer depletion and help prevent global warming.

When we talk about the environment and sustainability in the refrigeration and air conditioning sector, one of the aspects with the greatest impact is the use of refrigerant fluids. These refrigerants can be natural or synthetic and are immediately responsible for impacting global warming and the greenhouse effect.

Natural refrigerants have been used all around the world since the beginning of refrigeration. However, after the emergence of synthetic refrigerants in 1932, there was a decrease in the use of natural refrigerants for some applications over the years.

Between the 1980s and 1990s, the Montreal and Kyoto protocols founded the global commitment to slow down the depletion of the ozone layer, to reduce the emission of gases that produce the greenhouse effect. These acts were responsible for bringing the use of natural refrigerants back to the forefront.

Propane, a natural refrigerant, has been gaining prominence, especially in refrigeration, due to new regulations that aim to reduce the use of refrigerants with a high greenhouse effect potential by 2030.

Mayekawa's Propane Chiller is ideal for companies that want to adhere more thoroughly to a sustainable business model, as it offers a low load of natural refrigerant in the

refrigeration system, which aids in maintaining optimal performance.

Recently, a Mayekawa Chiller with a capacity of 100 TR was installed for laboratory air conditioning in a business complex located in the city of São Paulo, Brazil. With a shared mindset of providing more efficient, sustainable solutions for multiple markets, SWEP and Mayekawa were the perfect match for this project.



SWEP
DP300

For this project, two SWEP DP300 models from the L-series BPHE (Braze Plate Heat Exchanger) range were used. The DP300 is a highly effective, versatile True Dual evaporator and is the perfect choice for chiller applications. The DP300 is equipped with our patented AsyMatrix® technology and is an asymmetric evaporator that combines low water pressure drop with high performance. SWEP's AsyMatrix® technology features an innovative asymmetric plate design technology for BPHEs. The asymmetric channel configuration smartly combines maximum heat transfer on the refrigerant side with minimum pressure drop on the secondary side. The increased energy efficiency and better use of the structural material compared with conventional heat exchangers delivers a more sustainable solution in suitable applications such as chillers and domestic gas boilers.

Mayekawa chiller

