

High capacity industrial chillers no match for SWEP BHPEs



Industrial chillers come in a variety of sizes and models. Traditionally, shell & tube heat exchangers have been used for high capacity chillers, but SWEP BHPEs are changing that picture. Powerful yet small, they fit perfectly into most industrial applications.

Finding the most efficient solution

A global business with high standards, Nu Vu Conair regularly uses SWEP BPHEs as evaporators in its industrial chillers. Nu Vu Conair is a joint venture company of Nu Vu Conair USA, based at Ahmedabad-India, and one of the largest suppliers of auxiliary equipment for plastic processing. The company makes and markets over 450 different products, including resin-drying systems, gravimetric blenders, feeders, material conveying systems, belt conveyors, granulators and temperature control equipment, including portable and central water chillers. Nu Vu Conair manufactures air-cooled water chillers up to 100 TR and water-cooled water chillers up to 175 TR with Scroll & Screw compressor technology. The company offers solutions across the entire spectrum of auxiliary equipment and plastics processes and is represented all over the world, where the company's staff helps industries to solve problems, save energy, cut waste and generally do more with less.

"Nu Vu Conair chose to work with SWEP for a number of reasons", says Girish Kulkarni, Country Manager for SWEP India. "Apart from highly efficient products with the latest technology, we are able to offer technical and logistics support, as well as our advanced calculation software SSP, to Nu Vu Conair's technical team. Price and delivery times are of course also crucial factors when Nu Vu Conair chooses its partners."

A wide range of BPHEs

Nu Vu Conair has standard ranges of modular chillers, with different operating parameters and refrigerants. SWEP has been able to offer a wide range of BPHE sizes with different plate geometry and different distribution devices to suit the various chiller applications. A number of BPHE units have been selected and standardized, from sizes B25T to F400T.

BPHEs replace shell & tube heat exchangers

Traditionally, shell & tube heat exchangers have been seen as the only heat exchangers that can properly take care of problems with bad water quality and risk for freezing. Today, BPHEs can meet the

same challenges, saving time and money with the same life cycle expectancy as a shell & tube evaporator. Those are the main reasons why Nu Vu Conair recently replaced conventional shell & tube heat exchangers with BPHEs suitable for a higher capacity range industrial chillers.

The problem – and the solution

In most cases, the fluid flowing through a heat exchanger contains traces of dirt, oil, grease, chemicals or organic deposits. This can result in a coating collecting on the heat transfer surface, reducing the thermal efficiency of the heat exchanger and changing the pressure drop characteristics. Water quality is one of the biggest challenges faced by every water chiller manufacturer. Nu Vu Conair believes in training. "We start educating our customers before we finalize the project and to the end of execution", says Ajay Shah, Technical Director at Nu Vu Conair. "We recommend our customer to use only treated water in chillers, and we convince them that good water quality not only helps increasing the life expectancy of the evaporator, but also that of the main processing machinery, i.e. molds, die or gear box. We also recommend our customer to arrange for a water treatment consultation.". Nu Vu Conair recommends preventive Cleaning in Place (CIP) for harsher conditions, for example in applications which use water at high temperatures, or water with a high concentration of particles. CIP is an established method of cleaning interior surfaces of closed systems by the circulation of a chemical fluid. The



chemicals dissolve or loosen deposits from the equipment without disassembly of the BPHE, reducing costs for maintenance and downtime. SWEP supports Nu Vu Conair with CIP partners for further support on CIP units and procedures.

The issue of freezing is addressed with anti-freeze controls that are installed in the system, as well as temperature sensors on the BPHE. SWEP supplies units with an additional connection in the evaporator inlet for mounting the sensor.

"It is our privilege to have SWEP as a supplier of Brazed Plate evaporators. We selected SWEP as an exclusive supplier of BPHEs already in 2008, due to their world-class product quality and the excellent after-sales support we have received", says Ajay Shah. "We are very pleased with the performance of the SWEP BPHEs in terms of heat transfer capacity, reliability and extended lifetime."



SWEP

A DOVER COMPANY

www.swep.net