CASE STUDY

Responding to COVID-19 with teamwork and determination

Copeland Digital Scroll compressors were equipped in the air conditioning systems for Huoshenshan Hospital

2020 was off to a challenging start when Zhong Nanshan, a respiratory expert and head of the high-level expert group of the National Health Commission investigating the outbreak, confirmed human-to-human transmission of the novel Coronavirus, COVID-19.

To better manage the spread of the virus, emergency specialty field hospitals, Leishenshan Hospital and Huoshenshan Hospital, were ordered to be constructed. Both hospitals were modeled after Beijing's Xiaotangshan Hospital, a field hospital quickly built in seven days during height of the 2003 SARS outbreak. A number of makeshift shelter hospitals (Fangcang Hospitals) were also ordered built in multiple cities across China within a month to combat COVID-19.

In partnership with TICA, Copeland contributed to the construction of these field hospitals by providing air conditioning solutions equipped with Copeland Digital Scroll compressors. These specialized air conditioning and air filtration sterilization systems provide precise temperature and humidity control to help hospitals prevent the spread infectious bacteria and viruses within their facility. Copeland Digital Scroll compressors are designed for ease of installation in air conditioning systems while delivering outstanding reliability.

TIPS: The importance of HVAC purification systems in hospitals

A key function of HVAC purification systems is filtering out aerosols and PM2.5, crucial to controlling the virus spreading. Hospitals in general have specialized HVAC systems that ensure precise temperature and humidity control throughout the facility. HVAC purification systems offer high reliability to secure patient and healthcare worker safety. Highly efficient systems also contribute to significant energy savings for hospitals.

COPELAND
Engineered for Sustainability

TICA setting up the medical purifying air conditioning equipment for Leishenshan Hospital

Axial and radial compliance technology ensuring great reliability

Copeland Scroll axial and radial compliance technology guarantees excellent reliability and high efficiency of the compressor.

Before the outbreak, Copeland Digital Scroll compressor solutions had already been adopted by multiple hospitals for their air conditioning systems, such as Xi'an International Medical Center Hospital and Nanjing Gulou Hospital North Yard.

Precise temperature/humidity control

The compressor uses advanced digital modulating technology and is capable of adjusting its capacity from 10% to 100%, which achieves precise control of temperature ± 1 ° C / humidity ± 5%. Maintaining accurate temperatures and humidity is crucial for slowing the activity of viruses and bacteria.

Reducing power and energy consumption

By matching the load requirements from 10% to 100%, Digital Scroll compressor technology consumes only the energy needed to meet the load requirement, which optimizes energy efficiency, saving on energy costs for hospitals.

Easy to install, debug and maintain

The compressor has a simple structure and does not require complex electronic components, which shortens the installation process. This was especially important in the construction of Huoshenshan, Leishenshan and other anti-epidemic hospitals.

Copeland Digital Scroll compressor

Epilogue

Time is of the essence during this unprecedented pandemic. When the order for compressors was made, Copeland's Suzhou plant quickly ramped up production and raced against the clock to meet the demanding construction schedule. Two days later, on February 12, 2020, the first compressor shipments were delivered to Wuhan, followed by additional shipments to Beijing, Zhengzhou and Xinjiang for the construction of other hospitals. By February 16, hundreds of hospitals had been renovated with new purification air conditioning systems installed under the partnership of TICA and Copeland. This project was a remarkable accomplishment from all stakeholders based its scale and speed of completion. Copeland, together with its partners, strives to ensure the health and safety of all patients and medical professionals on the front line of the containment and the final elimination of the virus. We will get through this and Copeland is fully committed to working together to end the COVID-19 disease.

COPELAND
Engineered for Sustainability