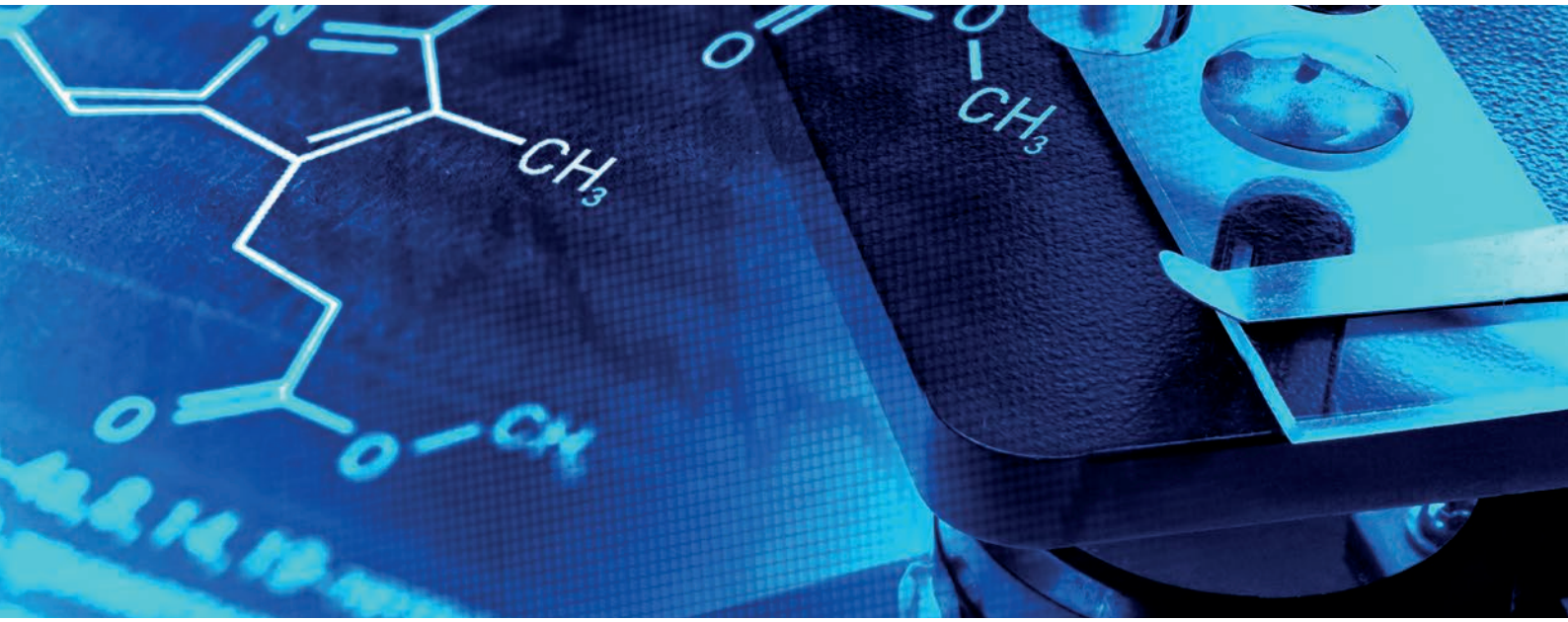

Calorex provide a scientific method on temperature control

When a Singapore based scientific and technology company needed a solution to match temperature and humidity control to one of its key projects, Calorex delivered the perfect answer.

This company drives mission-oriented research that advances scientific discovery and technological innovation throughout Singapore.

The organisation, who have been established since 1991, also play a key role in nurturing and developing talent and leaders for its Research Institutes and the wider research community, which has a major impact in economic growth in the Asian company.

The company has two technically advanced facilities, where they implement their research across many areas of industries, and often customise their facilities to suit a project.

A new project, running from three floors of their Jurong facility required "whole building" close temperature and humidity control.

The current equipment could not provide close humidity (50% +/- 3%) across all three floors, only selected areas. As it was not practical to separately dehumidify each room, a central system approach had to be adopted.

The proposed design required integration and remote monitoring of humidity control equipment into existing air handling units and a separate system to serve each floor.

Desiccant dehumidifies were ruled out due to their power consumption and regeneration air exhaust ducting requirements.

Calorex's Singapore distributor, Zoe International, proposed a system that pre-treats return air prior to entering each floors air handling unit.

The project involved converting the existing AHU plant rooms into plenum chambers by removing a section of the plant room and return air duct, and mounting dehumidifiers within what is now the AHU plenum chamber.

At the same time the new plenum rooms were sealed to prevent air leakage from outside and monitoring equipment was fitted across the building that feeds back information to the central BMS.

On each floor two DH 600 BY floor mounted refrigerant dryers were installed. At design conditions (21°C/50%RH) each DH 600 provides 13 litre/hr moisture removal and due to their small foot print could fit into available space without any need to reconfigure existing machinery. The project included equipment sizing, design, supply, installation, commissioning and ongoing maintenance.