"Critical Spaces" - Are High Ventilation Rates Driving Your System Costs Up and Setting the Bar For High Energy Usage for Your Customers?

From wet chemistry research to Vivariums to surgery suites and patient rooms, Vemco Inc. and Phoenix Controls have provided cost effective solutions across the board that are delivering validated savings coupled with safe environments. If speed of response, accuracy, and high turndown are factors, Phoenix Controls is the answer. Among many successful projects last year are the new Benefis Healthcare Tower with twenty two new isolation suites, the Petroleum Engineering Facility in Butte with a mix of wet chemistry labs, teaching spaces, and material processing labs, and the soon to be completed McLaughlin Research center with a newly renovated Vivarium wing. Though all successful projects, perhaps none are as impressive as the freshly renovated Gaines Hall in Bozeman.

By employing technologies such as Fan Wall Air Handlers, Magnetic Bearing Chillers, high turndown Phoenix valves and demand based ventilation from Aircuity, Gaines Hall is shaping up to be one of the leading laboratory spaces in the State of Montana from a reduced energy usage perspective. Initial design called for high ventilation rates to achieve recommended ASHRAE minimum air change rates in the lab spaces. After coupling a robust demand controlled ventilation system from Aircuity with the high turndown capabilities of the Phoenix Valves, the design engineer was able to achieve an average of around 4.2 ACH in the lab spaces. Fanwall air handlers provided the means to achieve the needed higher turndown in the fan system as well as a drastically reduced footprint. Shorter air handling units enabled the design engineer to fit all the mechanical equipment within the footprint of the existing roof negating the need to grow the space.

During the design phase, the Aircuity demand base ventilation system savings where compared to predicted savings of a run around heat recovery loop. The design engineer and owner determined that due to the revised lower ventilation rates the run around heat recovery loop was no longer feasible or necessary, thus offsetting the cost of the Aircuity system. Increases in efficiencies and lower overall ventilation rates are predicted to save the owner an additional $60,000 per year over traditional designs.

Why recover a percentage of energy used when you have the option to reduce the overall usage altogether?

Q: Phoenix Controls developed a unique approach to maintaining directional airflow. What is this simple concept called?

Prize: $50.00 AMEX gift card

CONGRATS to Glenn Sparks from GPD, Inc.—the refrigerant used in the McQuay/Daikin Pathfinder Chiller is HFC-134a, which has no phase out schedule.

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