



Recovering Heat From a Dehumidification Process

A major international pharmaceutical company manufactures prescription medications and specializes in cancer care products. Their production process is sensitive to moisture because in several phases, the drugs are in hygroscopic form, meaning they absorb moisture. Exposure to moisture can lead to problems such as difficulty in forming drugs into tablets.

To maintain proper humidity levels in its manufacturing environment, the company installed an air handling unit several years ago with a desiccant wheel for dehumidification. When the desiccant becomes saturated with moisture, hot air is run through it to regenerate the medium.

The system worked well for several years, but Munters recognized an opportunity to make the system more efficient. A Munters Z-Duct® air-to-air heat exchanger

was placed downstream of the desiccant wheel to recover heat from the discharge during the regeneration cycle. The captured heat is then used to heat outside air coming into the reactivation side of the dehumidifier. This decreases the

amount of steam required for heating the regeneration air which reduced the fuel needed at the plant's gas-fired boiler. As a result, the heat exchanger paid for itself shortly after the unit went into operation.

