

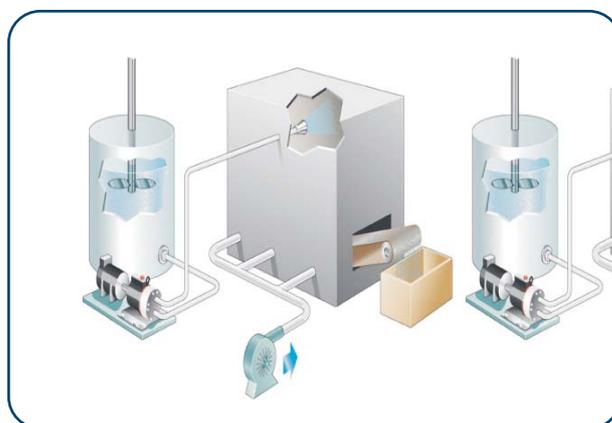


Drying in spray towers

Spray tower drying technology is used extensively in the food and pharmaceutical industries. Companies employing this technology prefer dry winter climates to humid summer climates because production and quality improves in winter.

In winter, the water content of the air is very low and this creates optimum operating conditions. In summer, humid conditions have a major impact on production quality, drying times, and the overall efficiency of operations.

Moreover, constant variations in the humidity levels of the exterior air during production can have a negative impact on product quality. During the atomization process, it is necessary to stabilize all the operating parameters in order to optimise production and improve efficiency. The use of desiccant dehumidifiers makes this possible.

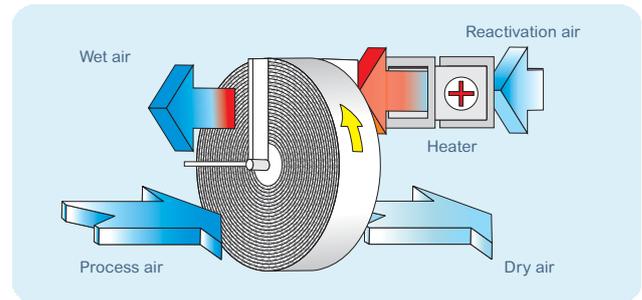




Process

Incoming air humidity is absorbed by the desiccant rotor. The dry air can be controlled so it reaches the desired level for drying. Since the process is exothermic, the increase in temperature is dependent on the quantity of humidity absorbed, but can reach up to 50°C. This results in an energy saving for the tower when achieving the desired incoming air temperature. In summer, the exterior air brings large quantities of water into the tower. For example, 85,000 m³/h of incoming air at 25°C and 60%RH means 1300 kg/h of water.

The standard range of FISAIR DFR air dehumidifiers dries this air to 125 kg/h, and has greater capacities in special systems. This means an entry of 225 kg/h of water in the tower and savings of almost 1100 kg/h, which significantly increases the quantity of product obtained. That is why FISAIR equipment has been used for a wide range of applications the world over.



Main advantages

- Consistent production all year round. Unaffected by exterior air conditions. Summer stoppages are avoided, and the need for frequent adjustments is eliminated.
- Constant incoming air quality means constant production quality.
- Reduction in cleaning operations. Less product stuck to the walls of the tower.



As an example of an application, FISAIR has supplied DFRA-0900-E units to Conesa, a large company transforming tomatoes in its processing plant in Badajoz, Extremadura. As a consequence, the plant is able to maintain levels of production efficiency, uniformity and hygiene all year round.