

CASE STUDY:

MANUFACTURING FACILITY USES DEHUMIDIFICATION TO CONTROL HUMIDITY, MAINTAIN PRODUCTION AND REDUCE COSTS

Location: Illinois

Industry: Manufacturing

Equipment: Desiccant Dehumidifiers - Two - 15,000cfm units

Illinois –Even with an advanced HVAC system in place, a large manufacturing plant was struggling to contain losses to products sustained through high humidity. With product clumping, machines jamming and shutdowns on the lines costing the company dearly, a solution was critical.

Humidity Could Not be Controlled - Despite their best efforts, the high humidity inside the facility could not be controlled. The manufacturing facility was losing upwards of 70% of their product due to damage or poor quality, all from humidity levels that couldn't be controlled. After some conversations, REIC was contacted to review the situation and offer a solution.

Planning for Delivery of Rental Dehumidifiers - With the existing HVAC system and access points to the building, a proposal was developed. Using temporary desiccant dehumidifiers, the machines would pull fresh, outside air, dry the air through the desiccant wheel and deliver the treated air to the exterior entries of existing air handlers via temporary ducting.



Determining CFM to Deliver Results - After consulting with operations team on site, REIC proposed two 15,000cfm rental dehumidifiers, which was determined through many sizing variables and agreed upon by building engineers and all involved. Especially in situations like this, REIC will communicate and plan with operations and facility teams, as well as third-party vendors, such as mechanical contractors, to analyze and develop the best solution. The 30,000cfm would help lower the vapor pressure indoors and allow for the existing permanent system to deliver the cooling and air flow as usual.

Lowering Humidity, Raising Production - Working with building staff, the two rental dehumidifiers were placed and set up on site. Once operational, within hours the building operations team reported dramatic changes. The humidity levels decreased and the permanent HVAC system easily handled the influx of 30,000cfm of dehumidified air. Within one day the conditions were near ideal. The manufacturing and QA team reported that they lowered their numbers, from nearly 70% loss of product to below 10% (which was from other issues not related to humidity). The rental dehumidifiers were on site from June through December of that year.