

# Case Study

## Gubba Cold Storage



### Gubba integrates DuCool unit with conventional equipment.

Gubba, a cold storage for seeds needed a simple and cost-effective solution to manage its humidity. Ducool Systems provided that solution with its liquid desiccant dehumidification systems. As a result, the company has been able to control humidity, reduce energy consumption, and save money on operating expenses.

### Background

GCS an Hyderabad based cold storage company started off with the distinction of being Andhra Pradesh's first commercial cold storage and have grown to become one of India's biggest cold storage. It is also the only cold storage in India to have low, high and normal humidity cold storage. They needed an energy efficient solution to store different seeds of various International and Indian Agro-commodity companies in good condition. The purpose of seed storage is to maintain the seed in good physical and physiological condition from the time they are harvested until the time they are planted.

### Challenge

The seeds are considered to be in storage from the moment they reach physiological maturity until they germinate or until they are thrown away because they are dead or otherwise worthless. The later part can be avoided by reducing the rate of deterioration to the degree required to maintain an acceptable level of quality for the desired period. To maintain initial seed quality viz., germination, physical purity, vigour etc., all along the storage period, Guuba had to maintain a temperature of 12°C and relative humidity of 45-50%. Earlier, they used energy guzzling and expensive capital equipments like boiler, cooling tower etc. However, they faced frequent condensation issues due to outside humidity. They then used Solid desiccant system for dehumidification but this increased the load on existing conventional system leading to very high energy bills.

We approached them with an eco-friendly, cost-effective and highly energy saving dehumidifying solution with our revolutionary liquid desiccant technology which could achieve the conditions required with precision.

### DuCool Advantage

Our solution consisted of 5 DuCool machines treating over 6 lac cubic ft. of area. After switching to DuCool's dehumidification solution, which is based on innovative liquid desiccant technology, Gubba cold storage saved around 50-60 % on their energy bills. Our systems didn't require overcooling and subsequent post heating resulting into such astronomical level of energy saving. Also they could increase their storage capacity without increasing the chiller capacity. Salt solution being non-toxic and a natural disinfectant, cleared the air of 91% of micro-organisms and 80% of particulates keeping the seeds healthy and their quality intact.

