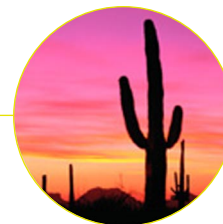


# Desiccant

## Dryers



## Technology in Action

Constar - West Chicago, IL

“

*Without a mold dehumidification system, we'd probably not be running.*

”

**Fred Coppes**  
Constar, Plant Manager

### Benefits Realized

- Increased Quality
- Reduced Scrap and Waste
- Faster Cycle Times
- Increased Life of Prod. Equip.
- Consistent Production
- Cost Savings

### What was Installed

Manufacturer: Kathabar, Inc.  
Type: Full Room Conditioner  
Gas Company: Nicor

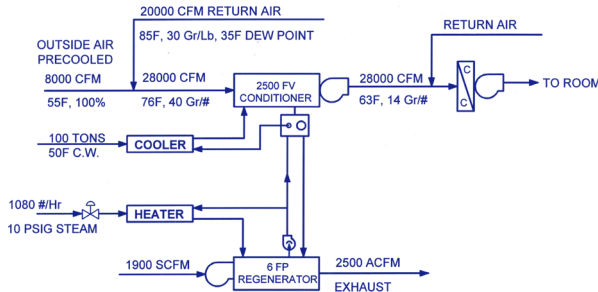
### Technology on Location

Constar, a West Chicago subsidiary of Crown Cork & Seal, is one of the largest blow molders in the United States. They operate three 600-ton and four 300-ton preform injection machines and three Sidel blow molders. Constar uses these ten machines to manufacture plastic bottles for applications such as oil, soft drinks, liquor, and water. From May through September, they were having problems with mold-sweating or condensation caused by the humid conditions.

Mold sweating occurs when the dew point of the surrounding air is higher than the temperature of the mold cooling water. This causes moisture to form on the molds which in turn causes numerous quality problems.

To solve this problem, Constar chose a Kathabar liquid desiccant dehumidifier system and has experienced:

# Desiccant Dryers



## Kathabar Inc.'s Typical Full Room Conditioning

In full room conditioning, a Kathabar system is sized with other handling units to control room temperature.

This Kathabar application combines outside air for room pressurization and return air condition. This maintains the room at 35°F dew point thereby preventing condensation on all 40°F surfaces.

## action Technology in Action

### Increased Quality

“Preform quality problems are virtually non-existent,” says plant manager Fred Copes. The elimination of condensation has allowed Constar to achieve zero mold sweat defects. This has eliminated streaks and imperfections in their product.

### Reduced Scrap and Waste

The increased product quality has resulted in less scrap and waste. In fact, Constar now consistently realizes scrap rates below their monthly corporate standard.

### Faster Cycle Times

Dropping the dew point of the ambient air has given Constar the ability to drop their cooling-water temperatures from 55°F to 44°F. This has allowed them to speed up the forming process resulting in quicker cycle times and increased productivity.

### Increased Life of Production Equipment

The reduced humidity has eliminated rusting on guide pins and other equipment areas. This reduces the maintenance and retooling costs and results in greater equipment longevity.

### Consistent Production

Constar is now able to maintain the same production rates through the summer as it does in the winter. This results in higher yearly production.

### Cost Savings

An economic analysis of the liquid desiccant system yielded in excess of 50% total annual energy savings over other forms of dehumidification for Constar. Constar will also see increased profit margins from the decreased cycle times, lower reject rates, and reduced equipment maintenance, retooling, and replacement costs.

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- Resin Dryers
- Thermoforming Ovens



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