

Bry-Air

dryfacts

...from BRY-AIR

ISO 9001

Bry-Air

ISO 14001

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We've Been There . . .



FRIGAIR 2002, South Africa



AC & HV Show 2002, China



Defence Services Asia 2002, Malaysia



China Refrigeration 2002, China



HVACR EXPO 2002, Pakistan



Light & Building 2002, Germany



EEWAC 2002, India



HVAC-Asia 2002, Singapore

Thank you for your overwhelming response.

Another Job Well Handled

Priceless Artifacts at Don Bosco Museum preserved with Bry-Air Dehumidifiers



Bry-Air supplied 13 dehumidifiers to Don Bosco Centre for Indigenous

Cultures (DBCIC), Shillong, India for preservation of Artifacts. Helping the young generation to identify with their cultural heritage, DBCIC houses some unique and priceless treasure like paintings, handicrafts, costumes and armaments, musical instruments and statues. DBCIC is not only a museum but also a research center on the tribes of North-East India, with a comprehensive library of its own. DBCIC is one of many renowned Museums and Libraries using Bry-Air Dehumidifiers to save and preserve the priceless treasures of the world.

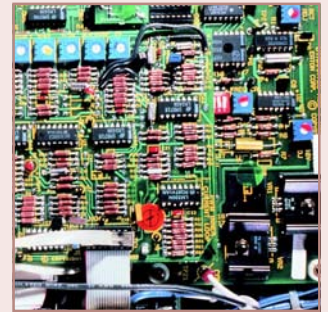
Believe it or not . . .

Bry-Air Dehumidifiers find usage in some unusual areas. We bring you just two of them.

Bry-Air Helps to Reduce Power Outage !

Moisture - A major cause for erratic power supply. In power distribution stations/sub stations, the power cables enter the switch gears from the generating point for distribution. These switch gears have paper core insulation. Due to high humidity, the paper core absorbs moisture and shorts the circuit. The switch gear is blown off leading to high cost replacements of the entire switch gears.

Bry-Air has installed number of Dehumidifiers, in India and abroad to maintain the desired conditions (50% ± 5% RH at ambient temperature) in Switch Gear Rooms.



Bry-Air

Maintains 'Dry Weather' atop a 90 meters high crane !

Shanghai Zhenhua Port Machinery Company manufactures very specialized cranes for use in shipyards and docks. These are exported worldwide and cost several millions US dollars per crane. The height of these cranes is 90 meters.

Since these cranes are used in the shipyards and docks near the seas, they operate in highly humid and corrosive conditions. It is very necessary to keep the control panel room and creel room of the cranes dry for safe, smooth and trouble free working.

Shanghai Zhenhua were facing the problem of keeping the control panel and creel room dry and contacted Bry-Air China for a solution.



The solution suggested by Bry-Air was to maintain less than 40% RH in the rooms. These conditions were achieved by installing Bry-Air Compact

desiccant dehumidifiers – 2 units per crane.

Initially, 4 dehumidifiers were ordered and after satisfactory installation, 6 more were ordered with many more to come. The current batch of cranes with Bry-Air Dehumidifiers are headed for Oman.



Showcased at



- **IICDES 2002** (The Defence Show) Sept. 4-6, 2002, New Delhi, India
Special Display : Flexible Barrier Storage System for Preservation of Military Hardware and Enviroliner - for safe preservation.
- **RAHV Indonesia**, Sept. 10-13, 2002, Jakarta, Indonesia.
- **Engineering Expo 2002**, Sept. 26-28, 2002, Manila, Philippines.
On display at the above shows : Bry-Air Dehumidifiers and Ecofresh Heat Wheel and Energy Recovery Ventilators.

WHEN MOISTURE IS TORTURE !

In this column we will share with you regularly our experience on major application areas where usage of dehumidification is both extensive and essential.

Right Moisture in Coffee Provides for Quality

Dehumidification helps to Retain Aroma - Increase Shelf Life

Moisture in coffee beans is a significant factor in the quality and cost of coffee. From harvesting to packaging, the effectiveness and economics of the process, and the taste of brewed coffee are all influenced by the moisture content of the beans, from green to roasted to ground.



Harvesting

At the time the bean is harvested, if the bean is not picked when the crop is within the optimum moisture content range (60%), it is at risk of deterioration from environmental conditions.

Drying

Before processing or shipment, coffee beans need to be dried to a moisture content of 12% from the initial moisture content of approximately 60%. It is recommended that coffee beans be dried at $35 \pm 5^{\circ}\text{C}$ to achieve a moisture content of 12%.



Shipping and Storage

Coffee Beans have a tendency to lose colour, aroma and flavour if not stored properly. Dried Coffee Beans (Green Coffee) being highly hygroscopic, absorb moisture from the surrounding air causing organic corrosion like growth of fungus and bacteria, which rapidly deteriorates the quality of coffee.

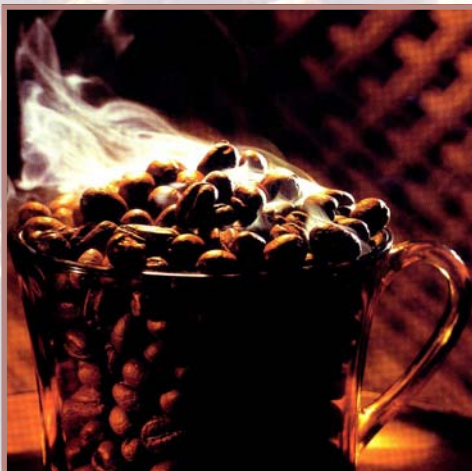
During shipping, coffee beans are exposed to wide variations of temperatures and humidity. These environmental changes often result in condensation. Because it is difficult to control these environmental factors during shipping, obtaining the correct moisture levels at the completion of the drying process is of paramount importance. If the beans are too dry (below 9% moisture), they will immediately begin to lose flavor. If the beans are too wet (above 13% moisture), they will mold easily.

Roasting

To maximize its flavour profile, the coffee should be dropped in the roaster when it still has a moisture content of 12%. However, in conditions of low humidity, the coffee may lose moisture and in conditions of high humidity, the coffee may gain moisture. So, it is of paramount importance that beans must be stored in the right climatic conditions.

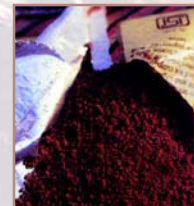
Grinding

The impact of moisture in the grinding process is twofold. At high moisture levels the beans will not pass through the grinder uniformly and can cause a clogging of the grinders. At lower moisture levels, dry grounds can create static electricity problems.



Packaging

Freshness and longevity of shelf life of roasted ground coffee is a function of moisture content and oxygen concentration in the headspace of the container / pouch.



Therefore, maintaining the right humidity conditions in the coffee packaging area is critical.

Bry-Air Solution

Bry-Air has provided solution to various coffee growers and processors around the world.

Bry-Air Desiccant Dehumidifiers are the most economical and reliable method of low temperature drying as it removes moisture from the air, through a process of continuous physical adsorption and can effectively maintain the required humidity conditions for Coffee during drying, storage, processing and packaging since they are capable of maintaining RH as low as 1% or even lower at a constant level, regardless of ambient conditions.





Representative in Pakistan



Captive Aire is synonymous with HVAC&R Industry in Pakistan. They represent some of the leading manufactures of HVAC&R products and components of the world in Pakistan. Captive Aire represents Bry-Air for its range of Dehumidifiers, Ecofresh Indoor Air Quality and Energy Recovery Systems. During more than two years of association with Bry-Air, Captive-Aire has done many interesting jobs in the region.

Under the able management of Mr. Sultan H. Rana and Mr. Amer Abbas (well known names in the HVAC&R Industry), Captive Aire has effectively developed the Pakistan market for Bry-Air Dehumidifiers and Ecofresh Energy Recovery Systems. Captive-Aire has trained engineers to support the Bry-Air's products. So, anywhere where Humidity, Moisture Control, Indoor Air Quality (IAQ) and Energy Recovery are the problems, Captive Aire has a Bry-Air product providing a solution.



Heat Pipe Heat Exchangers

for Industrial and HVAC Applications
comes of age

This equipment's ability to recover over 75% waste heat makes it ideal for furnaces, ovens, dryers, dehumidifiers, boilers, kilns and centrally air-conditioned space.

Feature Highlights

- Pays for itself in 6-12 months
- No moving parts
- No power required
- Unique integrated fin construction providing significant advantage over plate fin or duplex fin design
- Suitable for air-to-air heat recovery for exhaust temperature upto 800°F (245°C)



A Real All-Round Talent

Bry-Air FPU
(Fluted Packaged Unit)
Dehumidifier



- High performance, Metal Silicate Fluted Media
- CNC fabricated, powder coated finish
- Range - 250 cmh (150 cfm) to 1000 cmh (600 cfm)
- Single unit to control temperature, humidity and air cleanliness.
- Unit consist of desiccant dehumidifier along with pre-filter, pre-cooler, process bypass and after cooler



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