

Bry-Air

dry facts

...from BRY-AIR



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Mr. Deepak Pahwa – elevated as Fellow - ASHRAE



Fellow ASHRAE (American Society of Heating Refrigerating and Air-Conditioning Engineers) is a membership grade that recognizes distinction in the arts and science of environmental technology. The honor is earned

through achievement as a researcher, designer, educator or engineering executive and is conferred upon approval by the Society's Honors and Awards Committee and the Board of Directors.

Since its inception, ASHRAE has honored about 525 of its 55,000 (current) members, worldwide, as "Fellows" (currently, about 250 of the 525 are living). In India, six (6) HVAC&R stalwarts have been honored as "Fellows", Mr. Pahwa being one of them.



Frost and Sullivan Award for **Bry-Air** MiniPACs

Bry-Air Inc. USA wins Frost & Sullivan Marketing Strategy Leadership Award 2005 for its superior approach in evolving marketing strategies for MiniPAC Series dehumidifiers which have been designed and engineered by Bry-Air (Asia) in India. Bry-Air (Asia) ships out over 300 miniPACs to USA. These are also being marketed in the rest of the world including Japan, as FEBs.



Bry-Air Dehumidifiers showcased in FOOMA 2005, Japan

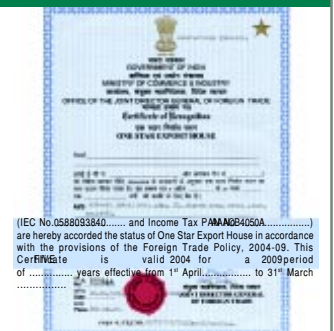
Bry-Air's FEB Series Dehumidifiers were displayed at FOOMA 2005, JAPAN by our associates Amefrec. The Bry-Air FEB has made a good impact in the Japanese market and Amefrec is all set to capture the market.



Export House Status

Bry-Air Now a "ONE STAR EXPORT HOUSE"

For its continuous and consistent increase in exports, Joint Director General of Foreign Trade (DGFT) has certified Bry-Air (Asia) as a 'ONE STAR EXPORT HOUSE'.



(IEC No.0588093840..... and Income Tax PAN:AGD4050A.....) are hereby accorded the status of One Star Export House in accordance with the provisions of the Foreign Trade Policy, 2004-09. This Certificate is valid 2004 for a 2009 period of years effective from 1st April..... to 31st March.....

Some amazing Dehumidification Applications

RADAR ROOMS

There are five primary types of radar systems :

- Surface search radar
- Tracking Radar
- Missile Guidance Radar
- Approach radar and Airborne radar.

A radar room has many high precision instruments / components-critical for its functioning, e.g.

- Synchronizer
- Transmitter
- Antenna/ Duplexer
- Indicator
- Power Supply
- Receivers
- Waveguides etc.

Uncontrolled humidity in radar rooms can cause microscopic corrosion leading to malfunction/ failure of these sophisticated electronics instruments.

For example, water molecules and dust in transmission lines lead to waveguide imperfections and hence, impair the quality of transmission in radiolinks and transmission systems.

Energy losses, reflection, blackouts, arcing etc. in **Radar systems** are all as a result of trapped water vapour in the system. Also, the medium inside the waveguide must be kept free of any humidity to prevent a capacitive effect that causes the energy to actually arc over inside the line and increase SWR (Standing Wave Ratio) beyond tolerances of the transmitter. Extremely high SWR caused by such a problem will quickly kill a transmitter either due to overheat or component failure.

The cost effective and single solution is to install a Bry-Air Desiccant Dehumidifier in Radar room to maintain relative humidity to the required level.



BIOTECHNOLOGY INDUSTRY

Biotechnology Industry being a highly knowledge-intensive industry, relies heavily on strong R & D infrastructure - scientific, medical, industrial and agricultural.

From agriculture to pharmaceuticals to zoology, biotechnology is providing products and services that are revolutionizing the way we live. The cornerstone behind the industry is the time and resources that is dedicated to research and testing that yields extraordinary results. But so much of Biotech work depends on accuracy in the discovery, testing and review processes. **Many of these procedures depend on maintaining precise, consistent environmental conditions for computers and test equipment within the test facilities.**

Like research laboratories, pilot facilities involved with clinical trial and other testing require consistent temperature and humidity.

Temperature, humidity and airborne particulate can have a detrimental effect on critical processes, equipment, computers and analysis. As biotech laboratories and production facilities grow with more and more critical equipment, the need to maintain precise environmental conditions becomes even more critical.

Bry-Air Desiccant Dehumidifiers offer the simplest and most cost effective solution to moisture/ humidity control in Biotech labs and production facilities.

Bry-Air Dehumidifiers have been installed at Peerless Biotech Pvt. Ltd., Chennai.



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.

Moisture problems in Powder Coating Areas !



Powder Coating has opened a new horizon in the product finishing industry all over the world, providing the user improved coating quality, efficiency and economy. Powder

coating permits the painting of objects by spraying a dry product with no solvent, thereby avoiding pollution of the water or the atmosphere. From an economical standpoint, over-spray or excess powder can be reclaimed through a recovery system and reused.

The Process

Efficiency and reliability of powder coating is mainly a function of the compulsory control of the interactions between the product to be applied i.e. its chemical composition and the various elements e.g. charge decay of the equipment operating under the surrounding conditions of the application.

Moisture Problems

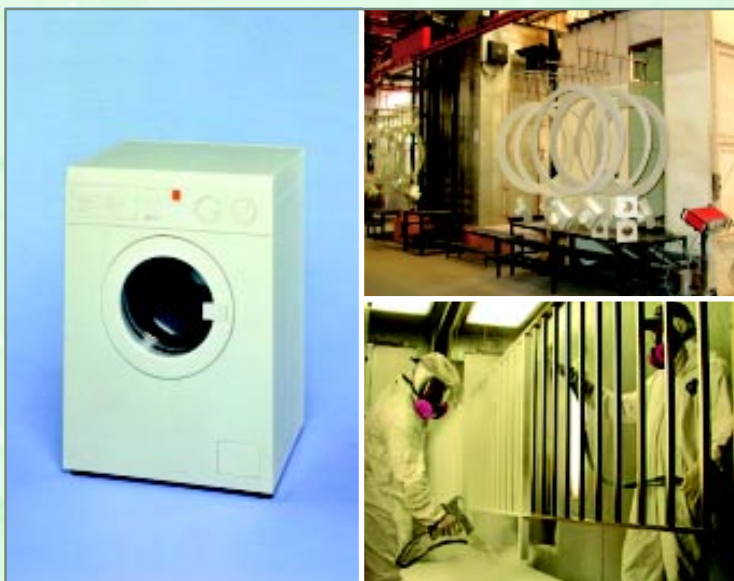
In powder coating areas, humidity has a direct relationship with ion charge decay, particle deposition, regularity of deposited thickness, adjustments required of the operating conditions of the spray guns, caking or agglomeration (clustering) of the powder particles and have a measurable negative effect on powder resistivity. High humidity may cause the powder particles to stick to the corona electrode and thus quench the corona. In severe cases, powders have been exposed to high humidity, cannot deposit at all.

Solution

It is generally recommended that relative humidity in powder coating areas should be maintained at $40\pm 5\%$ RH at $24\pm 5^\circ\text{C}$. Utilization of Bry-Air Dehumidifiers helps in controlling relative humidity to the required level within the powder spray booth area and often the entire coating room.

Benefits of installing Dehumidifiers

- **Upto 15% less powder is required** – due to uniform control of film thickness and reduced losses from powder coating build-up and agglomerates.
- **Increased control over film thickness** – by controlling the electrostatic field more precisely, the ability to coat the target more uniformly is achieved (particle deposition coupled with long term ion decay)
- **Increased system fluidising** – the recovery system works nearer its peak performance level due to reduced powder build-up in the duct, filter and tubing.



- **Reduced Agglomeration** – dehumidified air reduces the powder's ability to adhere to the inside surfaces.
- **Reduced spray gun build-up** – a noticeable, marked improvement in quality

The advantages stem from two basic points –

- Lower humidity will provide the ideal environment for the powder particles to sustain their charge prior to impact with the target.
- Since most powders are hygroscopic to varying degrees, high humidity will cause agglomerates to form on the walls of the recovery duct, filters and tubing. The filter bay house becomes less efficient requiring frequent attention.

Bry-Air has installed many dehumidifiers in powder coating areas and has recently bagged an order for 2 Desiccant Dehumidifiers - model FLBs [Total air capacity of 10807 cmh (6848 cfm)] from DEFY APPLIANCES Ltd., South Africa to maintain $30\pm 5\%$ RH at 20°C in their two paint shops.

HAVE YOU SENT IN YOUR NOMINATIONS



FOR...



AWARDS FOR EXCELLENCE IN HVAC&R

New-Innovative Systems Design

BEST SYSTEM : RS. 1,00,000.00 + TROPHY

SECOND BEST : RS. 50,000.00 + TROPHY

New-Innovative Product Design

BEST PRODUCT : RS. 1,00,000.00 + TROPHY

SECOND BEST : RS. 50,000.00 + TROPHY

THE AWARDS

Excellence in Systems Design

is intended for innovative system Design which has been commissioned and should

- Be a forerunner of new trend
- Create an opportunity to expand the market
- Can be benchmarked with current international system(s)
- Be innovative in design, aesthetics, safety, functional ease, in replacement of conventional materials, energy conservation and environment friendliness.
- Be suitable in application to the Indian sub-continent

Excellence in Product Design

is intended for product innovation, which should have reached the market place and should

- Have created a new market of significantly developed an existing market
- Complete successfully internationally on the basis of novelty, price, quality, functionally and reliability
- Have a significant impact on energy saving/efficiency
- Be unique in design, innovation, use of new-existing materials, safety in manufacturing & use, functional ease, replacement of conventional material, energy conservation and environment friendliness.

The Bry-Air Awards will be presented annually to individuals or a corporate that have made an outstanding contribution in the two categories mentioned above.

HURRY — Nominations Deadline : Wednesday, November 30, 2005

Download Nomination forms from : <http://awards.bryair.com>

The Award Function : Sunday, February 19, 2006 - Air Force Auditorium, New Delhi

Bry-Air's FFB Series - The ideal Dehumidification Solution for Smaller Facilities

FFB Series can be installed as a stand-alone unit or attached to any central air-conditioning system to provide reliable humidity control or mold and mildew protection. The compact, high capacity, precision desiccant system provides simple and separate humidity control and is ideal for a wide range of applications :

- Critical material storage ● Control Rooms, Instrumentation Rooms, R & D and QC labs ● Museums, archives and libraries
- Restaurants ● Silo Drying ● Retrofit existing systems for mold control.

Benefits

- Half the energy consumption of over-cooling or reheat.
- Space saver- low footprint.
- Multiple installation options.
- Low operating costs.
- Quiet operation and guaranteed performance of desiccant rotors.
- Simple installation procedure.

Features

- Permanent, washable filters with easy to remove access panels (no tools).

- Round duct collars with heavy duty hand adjusted volume damper.
- Convenient front-mounted controls and safeties.

- Trouble-free, water washable *Ecodry* desiccant rotor.
- Available in six models (170, 300, 600, 1000, 1500 and 2000 CMH).



Bry-Air

BRY-AIR (ASIA) PVT. LTD.

21C, Sector-18
Gurgaon-122015
INDIA
Phone : 91-124-5091111
Fax : 91-124-5091100
E-Mail : enquire@pahwa.com
Website : www.bryair.com

BRY-AIR (MALAYSIA)

Sdn. Bhd. (1977 12-W)
Lot. 11 Jalan P/7, Bangi Ind. Est.
43650 Bandar Baru Bangi,
Selangor-MALAYSIA
Phone : 60-3-89256622
Fax : 60-3-89259957
E-Mail : bryair@bryair.com.my
Website : www.bryair.com.my

BRY-AIR, INC.

10793 St. Rt. 37 W
Sunbury,
Ohio 43074
USA
Phone : 740-965-2974
Fax : 740-965-5470
E-Mail : bryair1@bry-air.com
Website : www.bry-air.com

BRY-AIR (THAILAND)
BRY-AIR (INDONESIA)
BRY-AIR (KOREA)
BRY-AIR (CHINA)
BRY-AIR (DUBAI)
BRY-AIR (AFRICA)

Phone

66-2-6616536
62-21-45844310
82-2-4140629
86-21-64480631
971-4-2868669
27-11-6150458

Fax

66-2-6657268
62-21-45846578
82-2-4172622
86-21-64480633 Ext.8001
971-4-2868645
27-11-6166485

E-mail

info@bryair.co.th
atrima@uninet.net.id
drikorea@hanmail.net
bryairc@online.sh.cn
info@bryair.ae
bryairafrika@telkomsa.net

Website

www.bryair.co.th
www.bryair.com.cn
www.bryair.com/uae
www.bryair.co.za