

dry facts

...from BRY-AIR

JAN -FEB -MAR '97

VOL.7 NO.1

3 GREAT SHOWS !!

ASHRAE '97 SHOW

Jan. 27-29 '97

Philadelphia, USA



Desiccant Rotors International (DRI), a group company of Pahwa Enterprises, was the first and only Indian company to participate in the ASHRAE '97 Expo. DRI has several man years' of experience in the field of rotors, to create the ideal honeycomb/ fluted media best suited for all types of rotor applications.

The Rotors received excellent response at the show and compared favourably with products from Japan, Europe and U.S.A.

ACREX '97

Feb. 27-Mar. 2 '97

Mumbai, India



The Arctic India - Bry-Air booth is a 'regular' at all ACREX shows. ACREX '97 was no different.

The theme this year was 'Indoor Air Quality (IAQ) Solutions'. Two new 'IAQ' products displayed at the booth which received exceptional response were the Fresh Air Treatment (FAT) Units from I.V. Produkt, Sweden and Inline Duct Fans from AB C.A. Ostberg, Sweden. Both these products are being marketed by Arctic India Sales.

More on our IAQ range on the back page.

PLASTINDIA '97

Mar. 1-6 '97

Delhi, India



PLASTINDIA '97 - Another Great Show !

The Bry-Air booth enjoyed a vantage location and received more than 3000 visitors during the 6 days of the exhibition. Spiroflux, France and Cumberland, U.K., whose products are marketed by Arctic India Sales, had taken up adjoining booths and their range of dosers and granulators were on display along with Bry-Air's A to Z range of Plastics Auxiliary Equipments like Plastic Dryers, Auto loaders, Mold Dehumidification Systems, Centralised Conveying Systems, etc.

More on page 2.

We take this opportunity to thank everyone who stopped by at our booths and look forward to their continued support in our future projects.

**POCKET
HANDBOOK FOR
DEHUMIDIFICATION APPLICATIONS
RELEASED AT ASHRAE SHOW**

Bry-Air Inc., U.S.A. is a regular participant at ASHRAE. This year the Bry-Air booth had representations from all its four plants; USA, Holland, India and Malaysia.



Bry-Air Inc. U.S.A. booth at the ASHRAE '97 Show

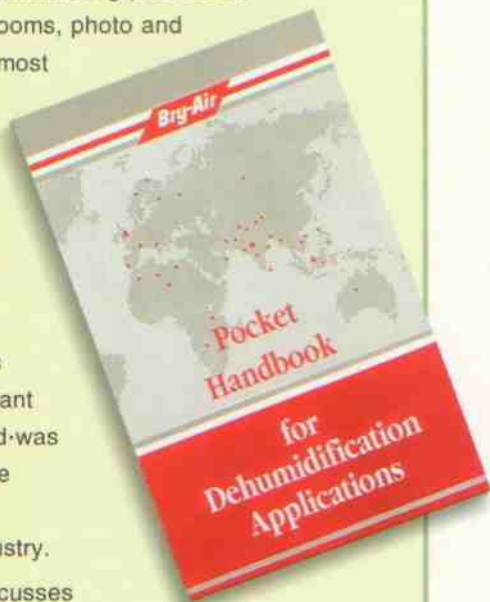
Handbook Released at Bry-Air Booth

The Bry-Air Pocket Handbook for Dehumidification Applications contains over four decades of collective environmental control application experience.

This pocket-sized publication features recommended temperatures and humidity levels for over 350 applications in food processing and packaging, pharmaceuticals, storage, coating operations, water treatment plants, manufacturing processes, conveying air, cold rooms, photo and film processing and most applications which require humidity control at or below 45% RH. This book is intended as a quick reference guide for several hundred applications which require desiccant dehumidification, and was an instant hit with the sales engineers and air conditioning industry.

The booklet also discusses recommended moisture barrier techniques for new construction, moisture regain of various materials, English to Metric conversions, a psychrometric chart and various calculation formulas.

**The Bry-Air Dehumidification Application Handbook is now available .
Ask for your copy today !**



NEW

Bry-Air PRODUCTS UNVEILED AT PLASTINDIA'97

Bry-Air F'N'F PET Dryer

... In Pace With Your PET Drying Needs

The Bry-Air F'N'F PET Dryer ensures delivery of PET resins to the moulding machines at a moisture level less than 100 ppm.

Design Features

- ◆ Built-in compact pre-cooling coil (chilled water fed).
- ◆ Digital controlled circuit.
- ◆ New synchronous timer with memory back-up and lapse time indication.
- ◆ Audio-visual indication of dryer malfunction.
- ◆ Easily openable filter access door with better filter media.
- ◆ Seven days programmable timer.
- ◆ Heater column at the inlet of the dryer hopper.
- ◆ A better air distribution arrangement in the hopper



Bry-Air Crystalizer

... In Pace With Your Crystalizing Needs

The Bry-Air Crystalizer and Dryer package is designed to meet all the needs of the PET processor.

PET resin is widely used in the industry for various applications viz:

- ◆ Yarn Extrusion
- ◆ Sheet Extrusion
- ◆ Film Extrusion
- ◆ Injection Moulding



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.

DEHUMIDIFIERS FOR HUMIDITY CONTROL IN OSTRICH EGG INCUBATORS

The Incubation Process ...

State-of-the-art hitech incubators are being increasingly used by Ostrich and Emu breeders with research facilities to ensure profitability in production. These incubators are fully automatic with precise temperature and humidity control and



are labour saving, with capacities to hatch more than 1000 eggs per batch.

The eggs are placed in a holding cabinet for several days. The conditions maintained inside the cabinet are 50% RH at 10⁰ C to prevent weight loss. The eggs are then placed in the incubators, in specially designed trays. A batch of eggs takes about 44 days of incubation to hatch. During this period, it is absolutely essential to maintain temperature and humidity to control and prevent mortality.

Imagine the impact on the ultimate profitability even if a single egg in each tray does not hatch !

For effective Ostrich egg incubation, strict temperature and humidity control becomes paramount. The optimum recommended condition is 20% RH at 36⁰ C.



Dehumidifiers Ensure Humidity Control In Ostrich Egg Incubation

Bry-Air dehumidifiers provide the simplest and most cost effective method of humidity control.

It ensures that humidity levels are maintained at specified temperature all year round irrespective of the weather.

Fresh Air is required to be introduced into the incubator, usually at about 72 CMH (42 CFM) per 100 eggs. This air contains more moisture than permissible in the incubator, hence it must be removed.

At the same time weight loss of the eggs must also be controlled over the incubation period to prevent wet, sickly chicks. Accurate, low humidity control allow for higher hatchability and quality chicks; they are birds from semi-desert after all. Air conditioning or refrigeration type dehumidifiers cannot achieve such stringent conditions.

Bry-Air desiccant dehumidifiers not only maintain the required humidity level but also ensure a cleaner production environment.

"Desiccant dehumidifiers from Bry-Air provide the ultimate in air quality whilst controlling humidity in the incubators."

What Do Dehumidifiers Have To do With Ostrich Eggs?

You may ask.

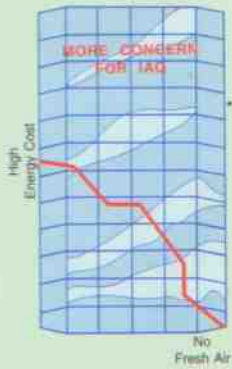
A lot ! Actually ! Believe it or not the market value of an Ostrich egg can be as high as \$100 to \$300 and a fully grown Ostrich could fetch almost \$1000 to \$5000. Almost every part of the Ostrich - the bones, feathers, the hide ... is commercially saleable.

This makes Ostrich, the non flying bird, a 'one bird' industry. Commercial breeding or Ostrich farming is a viable and



profitable business in many countries, such as Australia, Kenya, South Africa, the U.S.A and even Malaysia.

IAQ SOLUTIONS



Poor indoor air quality leads to an increased incidence of health related symptoms, which in turn can lead to an increase in absenteeism and a loss of productivity. To combat the problem of indoor air quality (IAQ), many IAQ products have been introduced by our company to improve the indoor air quality of conditioned spaces.

NEW IAQ RANGE AT ACREX '97

Fresh Air Treatment Units (FAT) With Energy Recovery

- ◆ Energy efficient
- ◆ Modular
- ◆ Available in different configurations
- ◆ Various energy recovery options :
 - * Enthalpy wheel
 - * Plate heat exchanger
 - * Heat pipe heat exchanger
 - * Recovery coil

Fresh Air Treatment Unit



Inline Duct Fans

From one of Europe's largest manufacturers of fans for ventilation:

- ◆ Circular Inline Centrifugal Duct Fan
- ◆ Rectangular Duct Fan
- ◆ Insulated Duct Fan

Circular Inline Centrifugal Duct Fan



Our 'IAQ' range



Heat Recovery Wheel (HRW)

Inline Duct Fan

Heat Pipes

Energy Saving Preconditioner (ESP)

(CO₂) Monitor



CELEBRATING 50th ANNIVERSARY OF INDEPENDENCE

KNOW YOUR INDIA

DID YOU KNOW THAT INDIA IS THE MOTHER OF MANY INVENTIONS?

MATHEMATICS

ZERO - THE MOST POWERFUL TOOL

India invented the Zero. Without the zero there would be no binary system and no computers. Counting would be clumsy and cumbersome. The earliest recorded example, an inscription of zero on *Sankedha* copper plate, was found in Gujarat, India in 585 CE. In *Brahma - Phuta - Siddhanta* of Brahmagupta (7th Century CE), the zero is lucidly explained and was rendered into Arabic books around 770 CE. From there it was carried to Europe in the 8th Century. However, the concept of zero is referred to as a *Shunya* in the early Sanskrit text of the 4th Century BCE and clearly explained in the Pingala's *Chandh Sutra* of the 2nd Century.

To write the distance between the Earth and the sun, the Romans would have had to write M⁸ many times. In the Indian system, it is written as 93,000,000 miles. *8 M in Roman Numerals = 1000*

THE DECIMAL SYSTEM - FLOURISHED IN INDIA (100 BCE)

"It was India that gave us the ingenious method of expressing all numbers by means of 10 symbols (decimal system)... a profound and important idea which escaped the genius of Archimedes and Appollonius, two of the greatest men produced by antiquity."

Laplace :

The highest prefix used in today's maths, for raising 10 to a power is 'D' - 10³⁰ (from the Greek 'Decca'). As early as 100 BCE, Indian mathematicians had exact names for figures up to 10⁵³.

ekam = 1

lakshaha = 100000 (10⁵)

bahulam = (10²³)

tallakshanam = (10⁵³)

In Anuyogdwar Sutra written in 100 BCE, one numeral is raised as high as 10¹⁴⁰

Bry-Air

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