

**Bry-Air**

# dry facts

...from BRY-AIR

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**NOW**

**Bry-Air**



an

**ISO 9002  
COMPANY**

We are proud to inform you that, Bry-Air India has recently received the ISO-9002 certification.

It is a matter of further pride that Bry-Air India is the only Dehumidifier manufacturing company in the world, with an ISO-9000 series certification with complete inhouse capabilities for marketing, designing as well as manufacturing of the product.

We thank you for your support, which has made it possible for us to reach this landmark achievement.

## A REWARDING QUARTER

**Bry-Air**



### Wins Export Excellence Award

Mr. Dinesh Gupta, Vice President Int'l, Bry-Air India, receiving the award from Sh. Tejendra Khanna.

In the last five years, Bry-Air has won this prestigious award four times.

It is indeed creditable for an engineering company in the airconditioning industry to get this honour.

Congratulations ! Exports Division, keep it up !

**Bry-Air**

### Wins ABCI Award for Bry-World 5

Bry-World 5, Bry-Air's International Newsletter was awarded the first prize by the Association of Business Communicators India for the year 1995.

This is the second time Bry-World has won this award.



**Bry-Air**

## "NEVER TOO FAR FROM YOU"

Kuala Lumpur, Dubai, Beijing, Melbourne, Bombay . . . . .

the Bry-Air team was on the move, participating in various tradeshows, networking with new friends and re-establishing rapport with the old.

With representation and sales offices in more than 120 countries and manufacturing plants in USA, Netherlands, India and Malaysia, Bry-Air is never too far from it's customers.

We take this opportunity to invite you to visit our booths at the following shows :

Wire and Cable'97	25-29 Jan.'97	Bombay, India
AHR'97	27-29 Jan.'97	Philadelphia, USA
ACREX'97	27Feb.-2Mar.'97	Bombay, India
Plastindia'97	1-6 Mar.'97	Delhi, India





**If Quality is your lifeline, we are the backbone !**

**PAHWA**  
ENTERPRISES

**Bry-Air**



**delair**



### Dehumidifiers for Moisture Control

Shown in the pic., dehumidifier model MVB 125E, was engineered for seed storage application for a seed company in Western India. Seed storage requires very specific conditions to be maintained to retain the germination potential of seeds. Proper 'drying' of seeds before storage is essential for safe preservation. Bry-Air dehumidifier for seed preservation/storage and dehumidification based seed dryers are extensively used worldwide, for seed drying and storage.

### Compressed Air Dryer

Drying of air under pressure is another area in which the company specialises in. Delair (a Pahwa Enterprise Co.), manufactures a wide range of standard and engineered compressed air dryers for general industry and also for specific application areas like telecommunications.

The Compressed Air Dryers System in the picture, is the high pressure dryer, engineered and manufactured for the first time in the country for a very sensitive defence application. Prior to Delair's engineering and manufacturing a system, at 190nm<sup>3</sup>/hr at 400 bar pressure, similar systems were being imported at high cost.



### Plastics Auxiliary Equipment

Bry-Air's experience in the plastic industry is job proven and has enabled it to build its range into a 'One Stop Shop' capability.

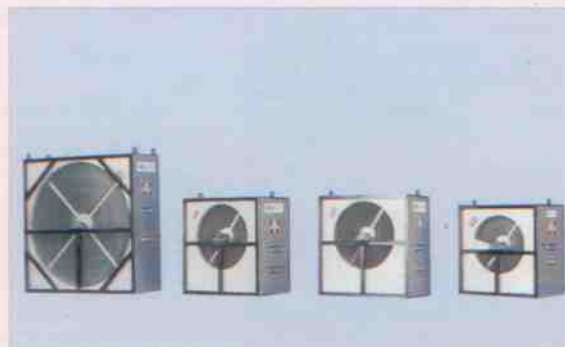
Drying, conveying, mold dehumidification, granulating, blending and dosing, Bry-Air provides the complete range.

Recently Bry-Air has supplied dehumidifying dryers to Dupoint for its plants in South India and China for nylon drying. Featured here are the Bry-Air dehumidifying type plastic dryers.

### Heat Wheels for Energy Recovery and IAQ

Arctic India Engineering, another Pahwa Group Company manufactures specialised hi-tech products like Flexible Barrier Systems for preservation, heat wheels, energy saving pre-conditioners and heat extractors.

The heat wheels manufactured by Arctic India Engineering are also exported to North America, S.E.Asia and Australia. The heat wheels in the picture have been recently sent to Australia for an indoor swimming pool job.





# 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.

## Chemical Warfare

### CHEMICALS + MOISTURE = AN EXPLOSIVE MIXTURE

Most chemicals need to be processed, stored and packed under humidity controlled conditions to avoid loss during production, storage and packaging.

Bry-Air Dehumidifiers and Delair Compressed Air Dryers play a major role in providing a 'Dry Solution' to the moisture problems faced by the chemical industry.

**Target : Moisture**

**Missile : Bry-Air Dehumidifier**



#### Titanium Dioxide

is industrially important as a white pigment for paints because of its high opacity, relative chemical inertness and comparative abundance. It has replaced all other white pigments in the paper, plastics, rubber, textile and vitreous enamel industries.

In bulk packaging and conveying of titanium dioxide, very low humidity and temperatures are required.



#### Gypsum Cement

used as a raw material for tire molds is highly hygroscopic in nature and, in the presence of moisture, coagulates and does not flow freely. It must, therefore, be stored in a low relative humidity area.



#### Calcium Chloride

used as an additive in the manufacture of white cement, is highly hygroscopic. In the presence of high relative humidity it converts into a liquid state, becoming ineffective for further use in the process. Storage of calcium chloride at less than 30% RH in ambient conditions avoids absorption of moisture and liquefaction.



#### Phenyl Glycerine

in the presence of moisture, reacts with water and emits MCL fumes which are corrosive in nature. A relative humidity of 10% to 5% at  $77 \pm 2^\circ\text{F}$  must be maintained in the storage and packaging areas. Many chemical raw materials, intermediates or

finished products are corrosive and toxic, and their composition may change in the presence of high moisture. Humidity control, with or without temperature control, becomes imperative in these and many other situations. Bry-Air designs systems for humidity and temperature control for safe, trouble free handling of chemicals, eliminating the hazards of moisture damage.

**Target : Moisture**

**Missile : Delair Compressed Air Dryer**

Compressed Air Dryers are widely used in the chemical industry in many specialised areas like drying, packaging, conveying apart from general plant air and instrumentation air.



#### Chlorine Storage

Chlorine is commonly used as a base or produced as a by-product in the chemical industry. Chlorine is conveyed to storage tanks using compressed air. It is imperative that the compressed air used for conveying is totally free of moisture, as chlorine reacts with water to form highly corrosive, hydrochloric acid which corrodes the piping.

Also, the chlorine storage tanks use compressed air as internal padding to protect storage tank wall from corrosive chlorine. Presence of moisture in the compressed air is unwelcome in this case too.

The only total solution to this problem is to keep the compressed air totally dry.



#### Instrumentation

General industry uses large quantities of compressed air for instrumentation and operation of pneumatic machines. Moisture in compressed air stream leads to clogging of valves, operation failure, equipment malfunctions and numerous other problems. Dry Quality Air is an absolute must for such application.

Delair designs and manufactures the complete range of compressed air dryers, i.e. both refrigeration dryers and adsorption dryers.



## AN INVITATION TO VISIT



### ONE STOP SHOP

At Plastindia'97

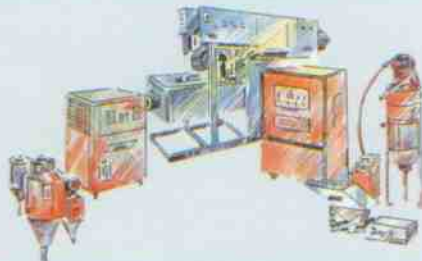


### On Display

- Crystalizer 'N' Dryer Package
- PET Dryer Package
- Dehumidifying Dryers
- Hot Air Dryers
- Vacuum Sequencing System
- Mold Dehumidification System
- Dosers and Blenders
- Granulators
- Compressed Air Dryers
- Auto Loaders & Hoppers

Bry-Air an ISO-9000 company designs, builds and sells quality equipments that increases the efficiency, productivity and profits of its customers.

It provides complete single source responsibility for plastics auxiliary equipment, from single stand alone units to custom designed plants.



## SPECIAL DISPLAY

### Crystalizer For PET Resins

Bry-Air will display it's Crystalizer for PET Resins at the Plastindia'97.

Bry-Air India, based on the experience of it's parent company Bry-Air Inc. USA, has developed a rotating paddle-type crystalizer and dehumidifying dryer system, which is customised for PET Industry.

Bry-Air Inc. USA has successfully installed a Crystalizer at Shanghai, China.

PET Industry in India is one of the fastest growing segments for the booming Plastics Industry.

### Why Do You Need A Crystalizer ?

To ensure final quality of PET products, it is

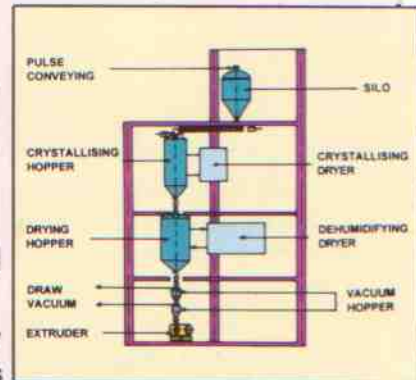
essential to dehumidify dry PET resins prior to processing, as PET is highly hygroscopic.

However, drying is only possible when the PET is in crystalline form. Typically, PET is in amorphous form when produced and has to be converted to crystalline state for drying. The process of conversion from amorphous to crystalizer is known as crystallizing. The process involves heating the amorphous resins between 130°C to 150°C. It is necessary to ensure that the resins do not agglomerate while being heated. Thus, the material has to be churned regularly to avoid lumping.

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
- Stretch Extrusion
- Injection Moulding



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