



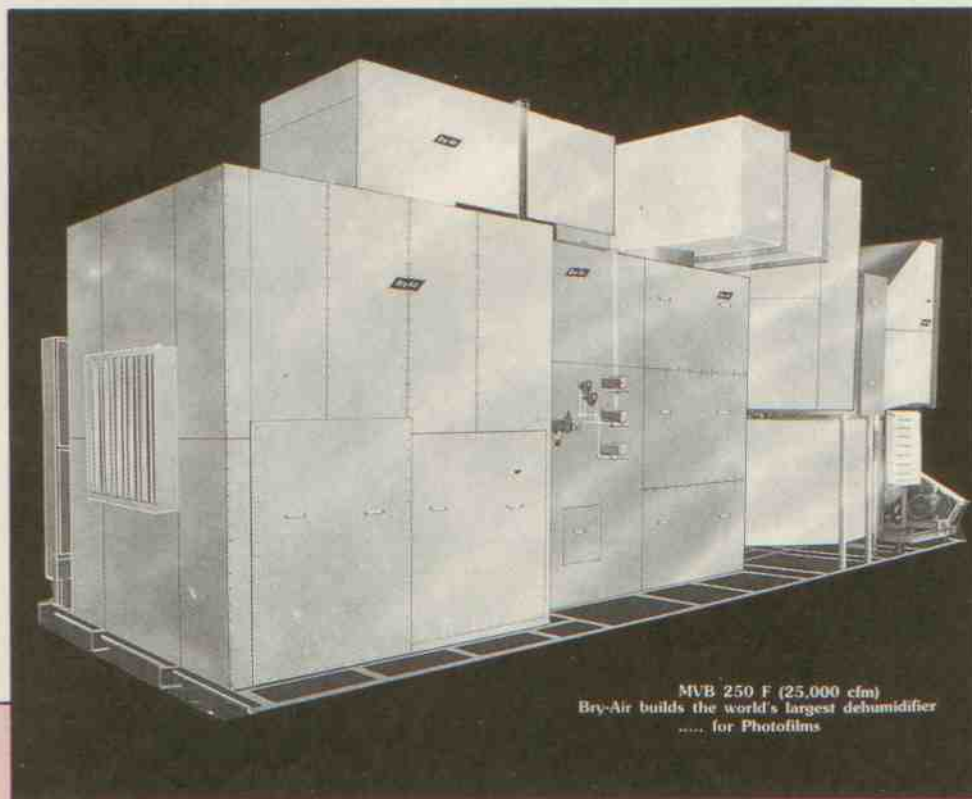
# Dry facts

...from Arctic India Sales

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## Bry-Air sets up world's largest Dehumidifier.



MVB 250 F (25,000 cfm)  
Bry-Air builds the world's largest dehumidifier  
..... for Photofilms

### FOR PHOTOFILMS

#### HPF TALE!!

Hindustan photofilms, manufacturers of popularly known Indu films is one of the six companies in the world and only one in India to manufacture photofilms from start to finish.

This high technology, high investment industry depends on a delicate manufacturing process highly sensitive to pollution through trace contaminants in raw materials, air, water and other inputs. The manufacture, processing and storage of sensitized photographic products requires that the temperature, humidity and quality of air be controlled.

#### For a better picture

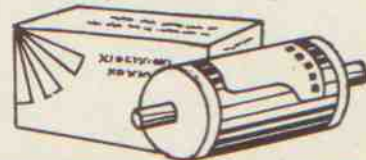
Light sensitive photographic film is laminated from several different emulsion and must be dried between each application. Since film is sensitive to temperature, heat cannot be used for drying. Hence dehumidified air is needed to accelerate the drying process.

#### Processing & Printing

During receiving operations, exposed film is removed from protective packaging for presplicing and processing. The presplice work area should be maintained at 21 deg c to 24 deg c and 40-45% RH. For printing and finishing also these conditions are ideal.

#### Storage

Colour film should be stored at condition 10 deg c or lower. Air-conditioning with relative humidity control would provide ideal condition for unprocessed photo materials. For archival storage film needs to be stored at condition of 15-30% RH and temp below 21 deg c.

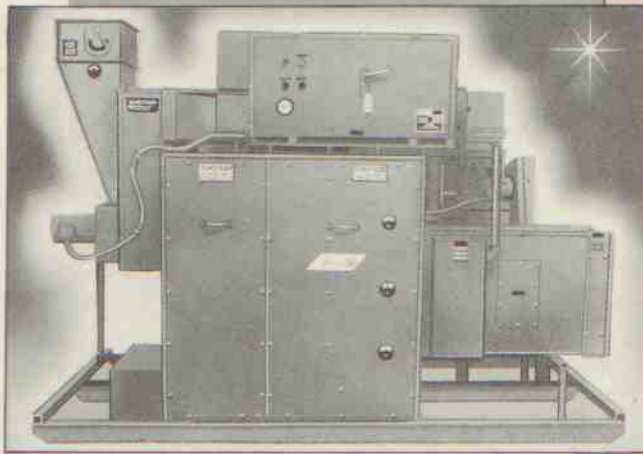


#### BRY-AIR steps in.....with the world's largest Dehumidifer

Bry Air dehumidifiers provides an ideal surrounding conditions for maintaining these stringent parameters necessary for a quality output.

Bry Air has engineered five of its largest models, (the biggest so far ever to be manufactured in the world), to maintain the humidity conditions, specified by HPF for its polyester based X-RAY film project. The new generation polyester X-RAY films for medical and industrial application is being manufactured by HPF in collaboration with Dupont of USA.

The dehumidifiers ranging from a capacity of 15,000 cfm to 25,000 cfm of air has a moisture removal capacity of 3135 lbs of water per hour.



### Clear Vision

Manufacturers of precision instruments like lenses demand controlled air and temperature conditions. Close temperature control prevents expansion and contraction of the material, where tolerances of manufacture are within .0002 inches. Ideal conditions for lens manufacturing process are:

Fusing ..... 24 deg. C;45% RH  
 Grinding ..... 27 deg. C;80% RH

Dehumidifiers help maintain necessary humidity condition.

### Towards a safer crash

A leading Malaysian car manufacturer has successfully employed Bry-Air dehumidifiers for safety glass lamination for automatic windshields. A special polyvinyl substance is used in between two sheets of glass for bonding and making safety glass for automotive and aircraft windshields. Dehumidification helps in the bonding process so no bubbles of moisture get trapped inside. Conditions to be maintained during the process are 19±1°C and 22-25% RH.

### Storage of leather garments

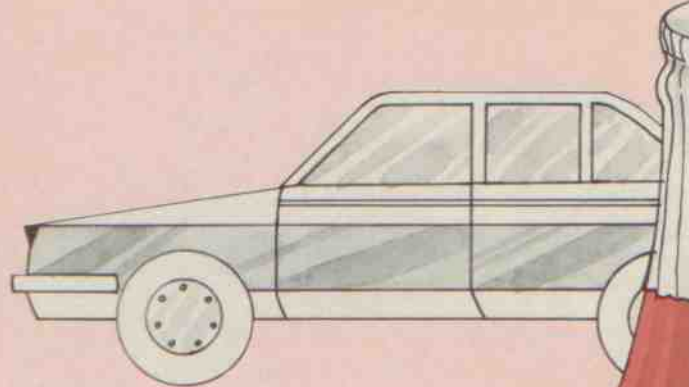
Finished leather products are prone to spoilage during storage due to mildew. It is very important to store leather in warehouses where humidity conditions are maintained at 35±5%RH at ambient temperature to prevent growth of mildew.

Bry-Air's BA 1.5A compact dehumidifier is helping Top Paint Leather, Calcutta to maintain humidity in it's store house and thus retain the gloss on leather garments exported to USA and Canada.

### The Smooth ride

This is a special application in the manufacture of steel belted radials where the bonding of rubber to steel radials takes place. The presence of moisture hinders the bonding process. Relative Humidity needs to be maintained at 45% or lower for quality radials. Bry Air dehumidifiers have been used by leading tyre manufacturers for this application.

# Did you know necess



# Why that Dry Air is Necessary for.....



### The Final Diagnosis

CT Body Scanners help doctors to pinpoint ailments effectively. For this highly sophisticated and sensitive medical equipment, to function properly, humidity and temperature need to be maintained at  $40 \pm 5\%$  RH and 25 deg. C.

Bry Air dehumidifier installed at Siliguri Diagnostic Centre help to maintain required conditions in the scanner room.

### Brewing Beer

'Products Contamination' is an inherent problem in any brewery and distillery.

The brewing process itself requires very low temperature but for growth of yeast, high heat, water and malted grain is an essential requirement. Yeast which is a beneficial fungus converts natural sugar to alcohol. The presence of high humidity due to frequent water usage for cleaning is conducive to condensation and growth of harmful bacteria and fungus apart from yeast, effects the product quality negatively.

Dehumidification keeps relative humidity level low and prevent spoilage from organic corrosion.

Bry Air dehumidifiers help Heineken, the famous brewers to maintain high hygiene standards.

### Dial Bry Air for.....

Sleek, good looking, push button, electronic telephones in all shapes and colours are fast replacing the old black coloured instruments. The finish of these phones are superb, operation easier and of course, they look much better. For moulded plastics to get a world class finish plastic resins need to be dried before being processed. Bry Air plastic dryers are being used by a leading PBT manufacturer to dry resins effectively.

**FORM IV** Statement of Ownership and Other Particulars of 'Dry Facts' Place of Publication 20, Rajpur Road, Delhi 110054 Periodicity of Publication: Quarterly. Name, Nationality and Address of Printer, Publisher and Editor: Vinita Pahwa, Indian, 20-Rajpur Road, Delhi 110054 Name and Address of Owner: **Arctic India Sales** | Vinita Pahwa, hereby declare that the particulars given above are true to the best of my knowledge and belief.

# 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)

## Gunning for colours

*Powder coating technology is finding increasing acceptance in India over traditional wet spray paint applications. This technique offers economical as well as environmental advantages.*

Powder coating spraying permits the painting of objects by using dry product with no solvent, thereby avoiding pollution. Over-spray or excess powder can be reclaimed through recovery system for reuse. Reliability of this technique is mainly a function of the compulsory control of the interactions between the product to be applied (chemical composition) and the various elements (charge-decay) of the equipment operating under the surrounding conditions (relative humidity & temperature) of the application.

In various methods of powder coating like electrostatic spray system, air static spray system, electro static fluidised bed method; electrostatic phenomena plays a vital role. And its a known fact that electrostatic behaviour depends markedly on the state of the atmosphere. The increase in humidity results in an increase in the electrical conductivity of the electric substances involved in electrical phenomena. Therefore, as relative humidity increases above 50%, layers of moisture clings to the surface on most solids, causing a pronounced increase in the conductivity of dielectric surfaces. Ion charge decay, particle deposition, irregularity of deposited thickness, caking or agglomeration are some of the few factors, which are directly effected by humidity and therefore results a negative effect on powder resistivity.

Bry Air engineered dehumidified system can accomplish complete control over relative humidity and temperature. The systems are engineered to control humidity either within the powder spray booth area and on some occasions in the entire coating room.

1. Lower humidities creates the ideal environment for the particles to sustain their charge, prior to impact with the target and retain the electrostatic adhesion of the particles to the target surface after spraying and prior to baking.
2. Lower humidity reduce the ability to agglomerate as most powders are hygroscopic in nature to varying degrees.

### The Benefits

1. More control over film thickness.
2. Reduce the powder's ability to adhere to the inside surfaces, leading to increased system fluidizing.
3. Upto 15% less powder required.
4. Transfer efficiencies increases by upto 25% reducing the powder particles, potential leakage from the time of discharge at the gun tip to target impact.
5. Upto 300% increase in system efficiencies because dry air entering the entire recovery system reduces the corona, gun build up, agglomeration and increases transfer efficiencies; especially beneficial when changing powder colours.

**Bry Air dehumidifiers help to reap these benefits which result in saving man hours and production time with better results.**

## For Smooth Surface

Paint manufacturers will not guarantee the life of a coating on a painted surface unless the surface prior to painting is clean and dry.

Blistering, blooming, peeling and caking are some of the common problem which we usually come across in paint jobs.

For instance in the ship building industry, rust begins to set in as soon as the surface is prepared prior to painting. Blasting and coating operations on metal surface encounter severe problems when RH is high or surface temperatures are low. High humidity in the environment condenses on the colder surface in the form of droplets. Therefore, metal surfaces begin to rust immediately after being blasted. A frequent consequences is that the coating do not adhere properly and the coating process has to be repeated.

Hence dehumidified air is essential to condition relative humidity and temperature variables. Dry air will keep cleaned surface free from condensation indefinitely and helpful in preparing the surface prior to painting so the adhesion of paint is proper.

**Bry-Air dehumidifiers helps in scheduling coating operations more economically and properly.**

